IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 04.0007X** Issue No.: **0**

Status: **Current**

Date of Issue: **2004-04-02** Page **1** of **4**

Applicant: **Micro Motion, Inc.**
Boulder, Co. 80301
United States Of America

Electrical Apparatus: **Sensor type CMF*** *******I******
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ib IIB/IIC T1 - T5/T6**

Approved for issue on behalf of the IECEx Certification Body: Dr.-Ing. Michael Wittler

Position: Head of Testing Laboratory

Signature:
(for printed version)

Date: 02.04.2004

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3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

EXAM BBG Prüf- und Zertifizier GmbH
Fachstelle für Sicherheit elektrischer Betriebsmittel – BVS
Dinnendahlstrasse 9
44809 Bochum
Germany

EXAM
BBG Prüf- und Zertifizier GmbH

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2004-04-02** Issue No.: **0**

Manufacturer: **Micro Motion, inc.**
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
Ave. Miguel de Cervantes 111
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture'rs quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR: **DE/BVS/04/2024**

File Reference: **A 20020547**

[redacted]

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Certificate No.: **IECEx BVS 04.0007X**

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EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The flow sensor in combination with a transmitter is used for flow measurement.
The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, resistors, temperature sensors and terminals and connectors.
The sensors type **CMF*** *****(A, B, Q or V)*I****** have an enclosure with an inside mounted processing device type 700 (IECEx BVS 04.0002U).
These variation will have classification code Ex ib IIC T1-T5.
The sensor **type CMF*** *****(R or H)*I****** have an enclosure with inside mounted terminal blocks.
These variation will have classification code Ex ib IIC T1-T6.

Alternatively a transmitter type *700********** (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination **type CMF*** *****C*I****** and **type CMF*** *****F*I******.

CONDITIONS OF CERTIFICATION: YES as shown below:

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I****	CMF200 *****C*I****
	CMF025 *****C*I****	CMF300 *****C*I****
	CMF050 *****C*I****	CMF200 *****F*I****
	CMF100 *****C*I****	CMF300 *****F*I****
	CMF010 *****F*I****	CMF400 *****F*I****
	CMF025 *****F*I****	CMF400 *****C*I****
	CMF050 *****F*I****	
	CMF100 *****F*I****	
Transmitter type *700*11*******	Ex ib IIB+H2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2004-04-02** Issue No.: **0**

Additional information:

Subject and type
Sensor type **CMF*** *******|****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:

type **CMF**aaa bbbbbcd|bbbbb

where

a	type of sensor
b	marking without influence to the type of protection
c	electronic interface:
	A = 4-wire stainless steel integral signal processor for remotely mounted transmitter
	B = 4-wire stainless steel integral signal processor with extended mount for remotely mounted transmitter
	C = with transmitter type *700****
	F = with transmitter type *700**** with extender
	R = 9-wire epoxy painted aluminum junction box
	H = 9-wire epoxy painted aluminum junction box with extended mount
	Q = 4-wire epoxy painted aluminum integral signal processor for remotely mounted transmitter
	V = 4-wire epoxy painted aluminum integral signal processor with extended mount for remotely mounted transmitter
d	conduit connection

Annexe: Annex.pdf

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Subject and type (continued)

Sensor type CMF*** *******I****

The sensors type CMF*** *****(A, B, Q or V)*I**** have an enclosure with an inside mounted processing device type 700 (IECEx BVS 04.0002U). These variations will have classification code Ex ib IIB/IIC T1-T5. The sensors type CMF*** *****(R or H)*I**** have an enclosure with an inside mounted terminal blocks. These variations will have classification code Ex ib IIB/IIC T1-T6.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination type CMF*** *****C*I**** and type CMF*** *****F*I****

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I**** CMF025 *****C*I**** CMF050 *****C*I**** CMF100 *****C*I**** CMF010 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I****	CMF200 *****C*I**** CMF300 *****C*I**** CMF200 *****F*I**** CMF300 *****F*I**** CMF400 *****C*I**** CMF400 *****F*I****
Transmitter type *700*11*******	Ex ib IIB+H_2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
.Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

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Parameters

1 Type CMF*** *****R*I**** and type CMF*** *****H*I****

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W

Effective internal capacitance negligible

sensor type	inductance [mH]	coil resistance at -20 °C [Ω]	serial resistor at-20 °C [Ω]
CMF010 *****R*I**** CMF010 *****H*I****	2,51	86,8	946,6
CMF025 *****R*I**** CMF025 *****H*I****	2,51	86,8	170,4
CMF050 *****R*I**** CMF050 *****H*I****	2,51	86,8	170,4
CMF100 *****R*I**** CMF100 *****H*I****	6,7	64,5	89
CMF200 *****R*I**** CMF200 *****H*I****	10,4	65,7	24,7
CMF300 *****R*I**** CMF300 *****H*I****	9	74,8	5,9
CMF300A ****R*I**** CMF300A ****H*I****	8,5	63,2	31,3

for type CMF400 *****R*I**** and type CMF400 *****H*I****

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance at -50 °C [Ω]	Serial resistor at-50 °C [Ω]
CMF400 *****R*I**** CMF400 *****H*I****	4,4	15,72	38,56

1.2 Pick-Off circuits (Terminals 5/9 and 6/8 or wire colour green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Effective internal capacitance negligible

sensor type	inductance [mH]	coil resistance at -20 °C [Ω]	serial resistor at -20 °C [Ω]
CMF010 *****R*I**** CMF010 *****H*I****	2,51	86,8	0
CMF025 *****R*I**** CMF025 *****H*I****	2,51	86,8	0
CMF050 *****R*I**** CMF050 *****H*I****	2,51	86,8	0
CMF100 *****R*I**** CMF100 *****H*I****	0,441	12,2	0
CMF200 *****R*I**** CMF200 *****H*I****	0,61	19,6	0
CMF300 *****R*I**** CMF300 *****H*I****	0,61	19,6	0
CMF300A ****R*I**** CMF300A ****H*I****	0,393	35,1	31,3

for type CMF400 *****R*I**** and type CMF400 *****H*I****

Effective internal capacitance negligible

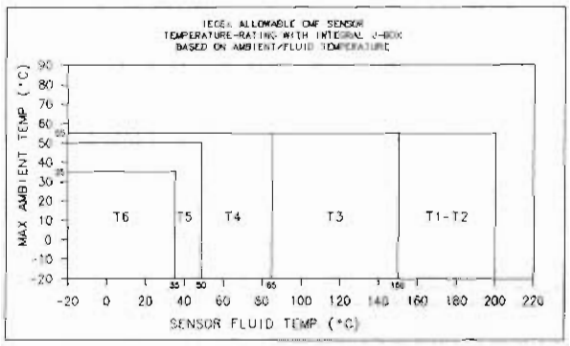
Sensor type	Inductanee [mH]	Coil resistance at -50 °C [Ω]	Serial resistor at -50 °C [Ω]
CMF400 *****R*I**** CMF400 *****H*I****	6,9	99,52	569,2

1.3 Temperature circuit (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC 30	V
Current	Ii	101	mA
Power	Pi	750	mW
Effective internal capacitance	Ci	negligible	
Effective internal inductance	Li	negligible	

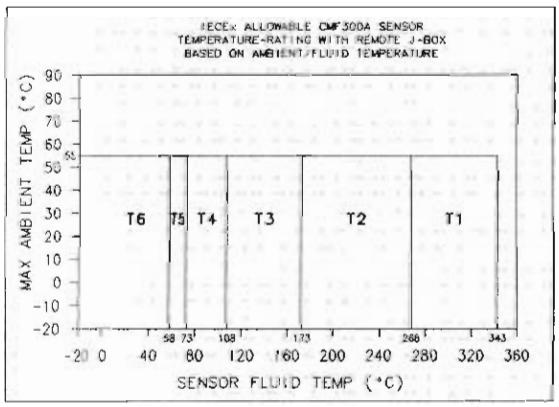
1.4 Regulation of temperature class

1.4.1 for all types CMF*** *****(R or H)*1**** except CMF300A ****(R or H)*1**** and except CMF400 *****(R or H)*1****
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –20°C.

1.4.2 The classification of the sensors type CMF300A ****R*1**** and type CMF300A ****H*1**** into a temperature elass depends on the temperature of the medium taking into aecount the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –20°C.

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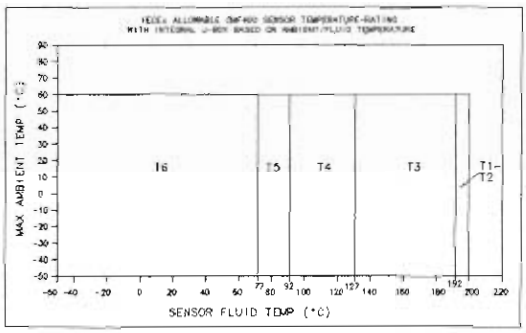
1.4.3 The classification of the sensors type CMF400 *****(R or H)*1**** into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –50°C.

1.5 for all types CMF*** *****(R or H)*1**** except CMF400 *****(R or H)*1****

Ambient temperature range	Ta	-20 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into aceount the temperature classification and the maximum operating temperature of the sensor.
The ambient temperature of the sensor may be less than –20°C provided the temperature of the medium is not less than 0°C.

for Type CMF400 *****(R or H)*1****

Ambient temperature range	Ta	-50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

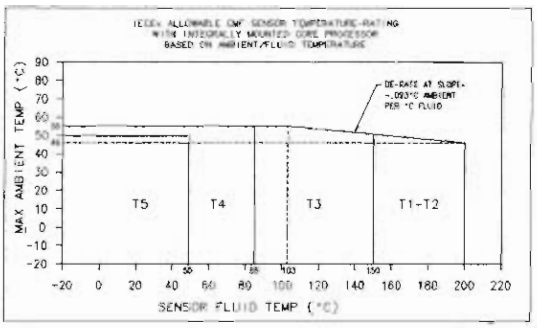
2 for all types CMF*** *****(A, B, Q or V)*1**** except CMF300A *******1****

2.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17,3	V
Current	Ii		484	mA
Power	Pi		2,1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

2.2 Regulation of temperature class

2.2.1 for all types CMF*** *****(A, B, Q or V)*1**** except CMF400 *****(A, B, Q or V)*1****
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



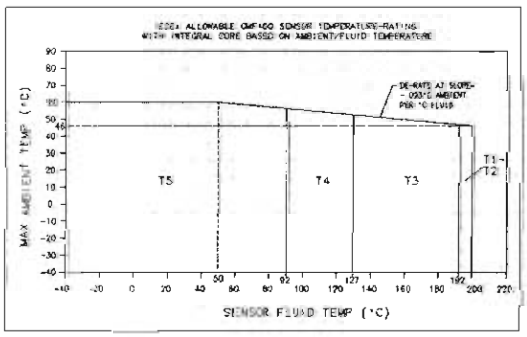
Minimum medium temperature is –20°C.

Ambient temperature range	Ta	-20 °C up to +55 °C

The ambient temperature of the sensor may be–40°C provided the temperature of the medium is not less than 0°C.

2.2.2 Type CMF400 *****(A, B, Q or V)*1****

The classification into a temperature elass depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –40°C.

Ambient temperature range	Ta	-40 °C up to +60 °C

3 for all types CMF*** *****(C or F)*1**** except CMF300A *******1****

3.1 Electrical parameters see IECEx BVS 04.0006X for the transmitter type *700**********

Certificate No.: **IECEx BVS 04.0007X**
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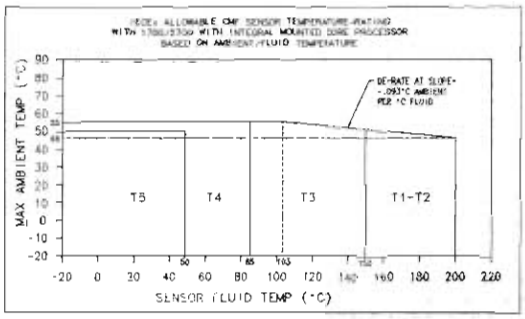
3.2 Regulation of temperature class

3.2.1 for all types CMF*** *****(C or F)*I**** except CMF400 *****(C or F)*I****
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

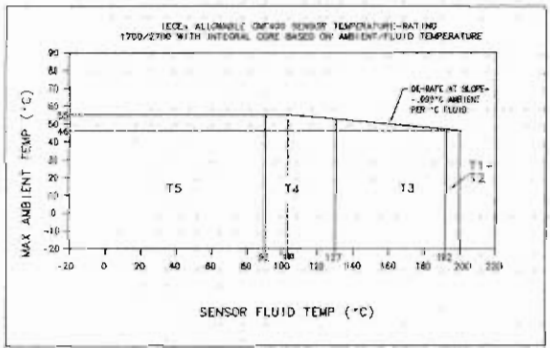


Minimum medium temperature is –20°C.

Ambient temperature range Ta -20 °C up to +55 °C

3.2.2 Type CMF400 *****(C or F)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –20°C.

Ambient temperature range Ta -20 °C up to +55 °C

Certificate No.: **IECEx BVS 04.0007X**
Annex
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Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient temperature range
CMF010 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300A ****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[1]*I****	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF010 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[2]*I****	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF010 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C

[1] at this place the letter R or H may be inserted

[2] at this place the letter A, B, Q or V may be inserted

[3] at this place the letter C or F may be inserted

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INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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Date of Issue: **2005-03-01** Page **1** of **5**

Applicant: **Micro Motion, Inc.**
Boulder. Co. 80301
United States Of America

Electrical Apparatus: **Sensor type CMF*** *******I****
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ib IIB/IIC T1 - T5/T6**

Approved for issue on behalf of the IECEx Certification Body: Dr. R. Jockers

Position: Head of Certification Body

Signature:
(for printed version)

Date: 01.03.2005

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Fachstelle für Sicherheit elektrischer Betriebsmittel – BVS
Dinnendahlstrasse 9
44809 Bochum
Germany

EXAM
BBG Prüf- und Zertifizier GmbH

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Date of Issue: **2005-03-01** Issue No.: **1**

Manufacturer: **Micro Motion, inc.**
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
Ave. Miguel de Cervantes 111
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

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IECEx ATR:	File Reference:
DE/BVS/04/2024	**A 20020547**
DE/BVS/04/2024/N1	**A 20040753**

IECEx Certificate of Conformity

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These variation will have classification code Ex ib IIC T1-T5.
The sensor **type CMF*** *****(R or H)*I**** have an enclosure with inside mounted terminal blocks.
These variation will have classification code Ex ib IIC T1-T6.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination **type CMF*** *****C*I**** and **type CMF*** *****F*I****.

CONDITIONS OF CERTIFICATION: YES as shown below:

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I****	CMF200 *****C*I****
	CMF025 *****C*I****	CMF300 *****C*I****
	CMF050 *****C*I****	CMF200 *****F*I****
	CMF100 *****C*I****	CMF300 *****F*I****
	CMF010 *****F*I****	CMF400 *****F*I****
	CMF025 *****F*I****	CMF400 *****C*I****
	CMF050 *****F*I****	
	CMF100 *****F*I****	
Transmitter type *700*11*******	Ex ib IIB+H2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2005-03-01** Issue No.: **1**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Description

The flow sensor can be modified and additional variations are available.

The flow sensor can be mounted to the transmitter type *700*12******* or the transmitter type *700*15******* alternatively.

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.

Parameters and marking see Annex Product Description Issue 1.

The sensors can also have an alternative 9-wire feed-through.

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2005-03-01** Issue No.: **1**

Additional information:

Subject and type
Sensor type **CMF***** *******I****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:

type **CMF**aaa bbbbbcdIbbbbb

where

a type of sensor

b marking without influence to the type of protection

c electronic interface:
- A = 4-wire stainless steel integral signal processor for remotely mounted transmitter
- B = 4-wire stainless steel integral signal processor with extended mount for remotely mounted transmitter
- C = with transmitter type *700****
- F = with transmitter type *700**** with extender
- R = 9-wire epoxy painted aluminum junction box
- H = 9-wire epoxy painted aluminum junction box with extended mount
- Q = 4-wire epoxy painted aluminum integral signal processor for remotely mounted transmitter
- V = 4-wire epoxy painted aluminum integral signal processor with extended mount for remotely mounted transmitter

d conduit connection

Annexe: Annex.pdf; Annex Product description Issue1.pdf

Certificate No.: **IECEx BVS 04.0007X Issue 1**
Annex
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Details for Certificate Changes (for Issue 1)

Subject and Type
Sensor type CMF*** *******I****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:
type **CMF**aaa bbbbbcd**I**bbbb

where

a type of sensor
b marking without influence to the type of protection
c electronic interface:
A = 4-wire stainless steel integral signal processor for remotely mounted transmitter
B = 4-wire stainless steel integral signal processor with extended mount for remotely mounted transmitter
C = with transmitter type *700****
F = with transmitter type *700**** with extender
R = 9-wire epoxy painted aluminium junction box
H = 9-wire epoxy painted aluminium junction box with extended mount
Q = 4-wire epoxy painted aluminium integral signal processor for remotely mounted transmitter
V = 4-wire epoxy painted aluminium integral signal processor with extended mount for remotely mounted transmitter
d conduit connection

Alternatively a transmitter type *700********** (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination type CMF*** *****C*I**** and type CMF*** *****F*I****.
By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I**** CMF025 *****C*I**** CMF050 *****C*I**** CMF100 *****C*I**** CMF010 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I****	CMF200 *****C*I**** CMF300 *****C*I**** CMF200 *****F*I**** CMF300 *****F*I**** CMF400 *****C*I**** CMF400 *****F*I****
Transmitter type *700*I [1)]*******	Ex ib IIB+H_2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*I [2)]*******	Ex ib IIC T1-5	Ex ib IIB T1-5

1) at this place the numeral 1 or **2** can be inserted (new version in bold)
2) at this place the numeral 4 or **5** can be inserted (new version in bold)

Certificate No.: **IECEx BVS 04.0007X Issue 1**

Annex

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.

The sensors can also have an alternative 9-wire feed-through.

Modified parameters

1 Drive coil (Terminals 1/2 or wires red/brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
effective internal capacitance			negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]
CMF200 *****[1]*I**** CIC A3 CMF200 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	9,5	102,6 at -20 °C	0
CMF300 *****[1]*I**** CIC A3 CMF300 *****[2]*I**** CIC A3 CMF300 *****[3]*I**** CIC A3	9,5	102,6 at -20 °C [Ω]	0
CMF400 *****[1]*I**** CIC A3 CMF400 *****[2]*I**** CIC A3 CMF400 *****[3]*I**** CIC A3	11,75	79,2 at -50 °C [Ω]	19,8 at -50 °C [Ω]

[1] At this place the letter R or H will be inserted.

[2] At this place the letter A, B, D, E, Q, V, W or Y will be inserted.

[3] At this place the letter C or F will be inserted.

2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]
CMF200 *****[1]*I**** CIC A3 CMF200 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	2.0	46,3 at -20 °C	0 - 567,9 at -20 °C
CMF300 *****[1]*I**** CIC A3 CMF300 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	2.0	46,3 at -20 °C	0 - 567,9 at -20 °C
CMF400 *****[1]*I**** CIC A3 CMF400 *****[2]*I**** CIC A3 CMF400 *****[3]*I**** CIC A3	12,4	121,8 at -50 °C	0 - 566,4 at -50 °C

[1] At this place the letter R or H will be inserted.

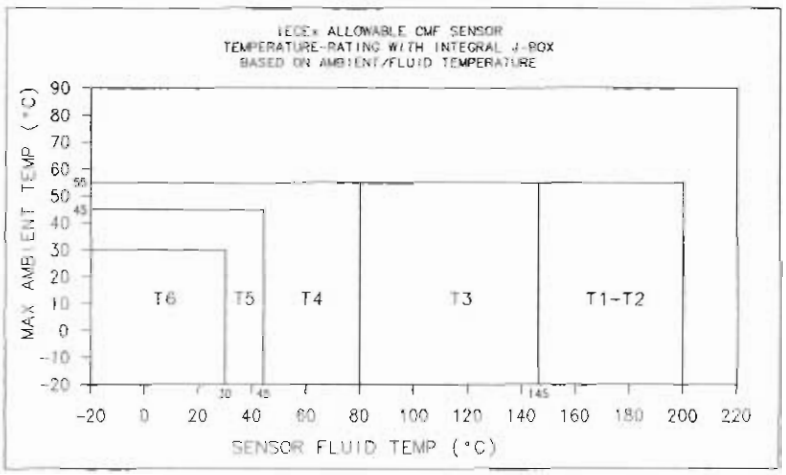
[2] At this place the letter A, B, D, E, Q, V, W or Y will be inserted.

[3] At this place the letter C or F will be inserted.

3 Thermal data
Regulation of temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

3.1 Type CMF*** *****R*I**** or CMF*** *****H*I**** with Construction Identification Code (CIC) A3, except for CMF300A *****R*I****, CMF300A *****H*I**** and CMF400 *****R*I****, CMF400 *****H*I****



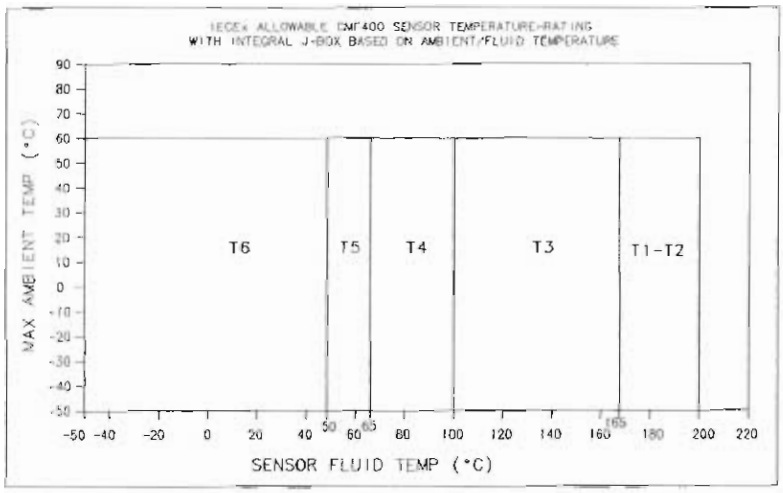
Minimum medium temperature is -20°C.

Ambient temperature range Ta -20 °C up to +55 °C

The use of the sensor at higher ambient temperature is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

The ambient temperature of the sensor may be less than –20°C provided the temperature of the medium is not less than 0°C.

3.2 Type CMF400 *****R*I**** or CMF400 *****H*I**** Construction Identification Code (CIC) A3:



Minimum medium temperature is -50°C.

Ambient temperature range	Ta	-50 °C up to +60 °C

The ambient temperature of the sensor may be less than –50°C provided the temperature of the medium is not less than 0°C.

The use of the sensor at higher ambient temperature is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

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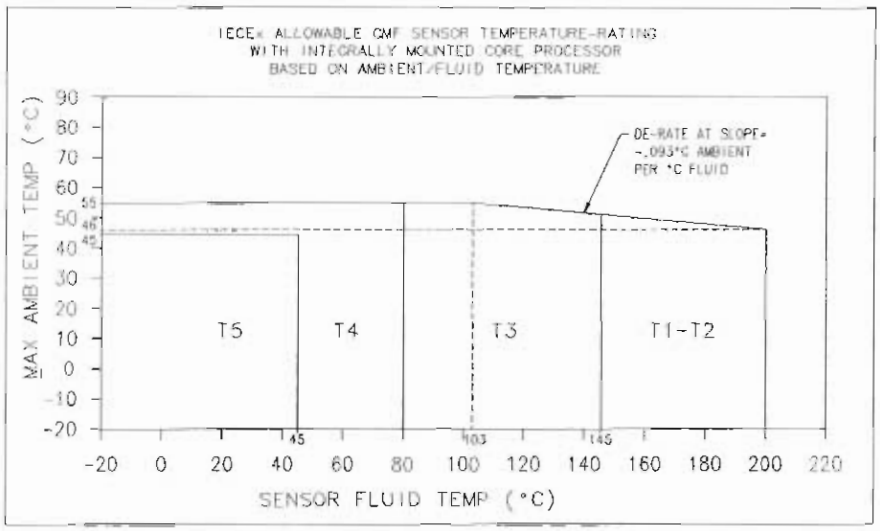
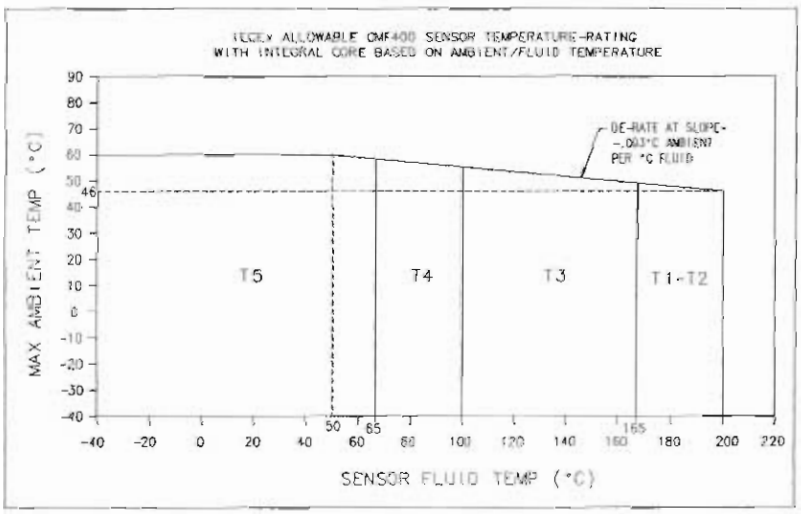
3.3 Type CMF*** *****(A, B, D, E, Q, V, W or Y)*I**** with Construction Identification Code (CIC) A3, except for CMF300A *****(A, B, D, E, Q, V, W or Y)*I**** and CMF400 *****(A, B, D, E, Q, V, W or Y)*I****:



Minimum medium temperature is -20°C.
Ambient temperature range Ta -20 °C up to +55 °C
The ambient temperature of the sensor may be –40°C provided the temperature of the medium is not less than 0°C

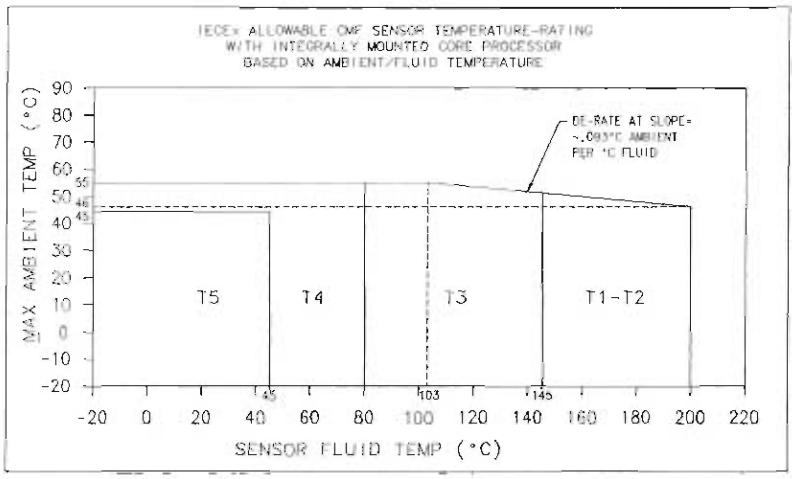
3.4 Type CMF400 *****(A, B, D, E, Q, V, W or Y)*I**** Construction Identification Code (CIC) A3



Minimum medium temperature is -40°C.

Ambient temperature range Ta -40 °C up to +60 °C

3.5 Type CMF*** *****C*I**** or CMF*** *****F*I**** Construction Identification Code (CIC) A3, except for CMF300A *****C*I****, CMF300A *****F*I**** and CMF400 *****C*I****, CMF400 *****F*I****

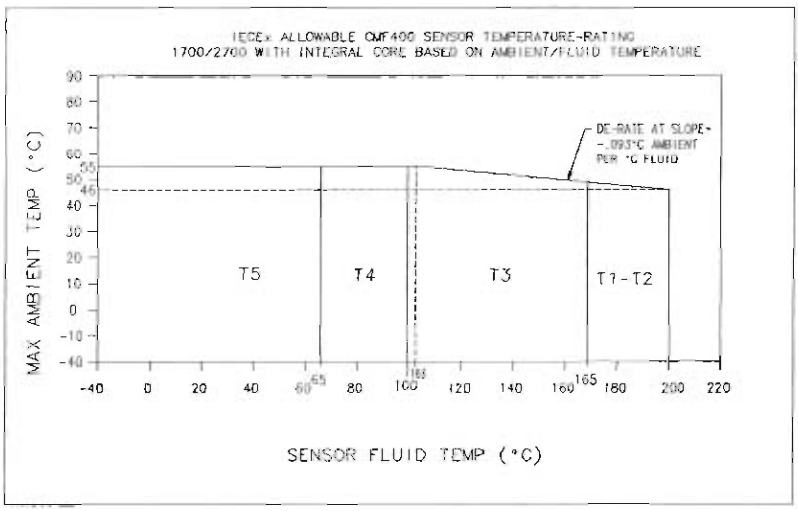


Minimum medium temperature is -20°C.

Ambient temperature range Ta –20 °C up to +55 °C

The ambient temperature of the sensor may be –40°C provided the temperature of the medium is not less than 0°C

3.6 Type CMF400 *****C*I**** or CMF400 *****F*I**** Construction Identification Code (CIC) A3



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Minimum medium temperature is -40°C.

Ambient temperature range Ta –40 °C up to +55 °C

Marking
The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient temperature range
CMF010 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF100*****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[1]*|**** incl. CMF200 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[1]*|**** incl. CMF300 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300A ****[1]*|****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[1]*|**** incl. CMF400 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF010 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[2]*|**** incl. CMF200 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[2]*|**** incvl. CMF300 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[2]*|**** incl. CMF400 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF010 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[3]*|**** incl. CMF200 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[3]*|**** incl. CMF300 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[3]*|**** incl. CMF400 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C

[1] at this place the letter R or H may be inserted
[2] at this place the letter A, B, Q or V may be inserted
[3] at this place the letter C or F may be inserted

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 04.0007X** Issue No.: **2**

Status: **Current**

Date of Issue: **2006-06-02** Page **1** of **5**

Applicant: **Micro Motion, Inc.**
Boulder, Co. 80301
United States of America

Electrical Apparatus: **Sensor type CMF*** *******|*****
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ib IIB/IIC T1 - T5/T6**

Approved for issue on behalf of the IECEx Certification Body: Dr. R. Jockers

Position: Head of Certification Body

Signature:
(for printed version)

Date: 2.6.02

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

EXAM BBG Prüf- und Zertifizier GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

EXAM
BBG Prüf- und Zertifizier GmbH

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2006-06-02** Issue No.: **2**

Manufacturer: **Micro Motion, inc.**
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
Ave. Miguel de Cervantes 111
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture'rs quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:	File Reference:
DE/BVS/04/2024	**A 20020547**
DE/BVS/04/2024/N1	**A 20040753**
DE/BVS/04/2024/N2	**A 20050737**

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2006-06-02** Issue No.: **2**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The flow sensor in combination with a transmitter is used for flow measurement.
The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, resistors, temperature sensors and terminals and connectors.
The sensors type **CMF*** *****(A, B, Q or V)*I****** have an enclosure with an inside mounted processing device type 700 (IECEx BVS 04.0002U).
These variation will have classification code Ex ib IIC T1-T5.
The sensor **type CMF*** *****(R or H)*I****** have an enclosure with inside mounted terminal blocks.
These variation will have classification code Ex ib IIC T1-T6.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination **type CMF*** *****C*I****** and **type CMF*** *****F*I******.

CONDITIONS OF CERTIFICATION: YES as shown below:

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I****	CMF200 *****C*I****
	CMF025 *****C*I****	CMF300 *****C*I****
	CMF050 *****C*I****	CMF200 *****F*I****
	CMF100 *****C*I****	CMF300 *****F*I****
	CMF010 *****F*I****	CMF400 *****F*I****
	CMF025 *****F*I****	CMF400 *****C*I****
	CMF050 *****F*I****	
	CMF100 *****F*I****	
Transmitter type *700*11*******	Ex ib IIB+H2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2006-06-02** Issue No.: **2**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Description (for Issue 1)

The flow sensor can be modified and additional variations are available.

The flow sensor can be mounted to the transmitter type *700*12******* or the transmitter type *700*15******* alternatively.

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.

Parameters and marking see Annex Product Description Issue 1.

The sensors can also have an alternative 9-wire feed-through.

Description (for Issue 2)

The junction box can be out of stainless steel, these variations gets the denomination type CMF********S*I****.

The coils of types CMF200*****(R, H, S)*I****, CMF300*****(R, H, S)*I**** and CMF400*****(R, H, S)*I**** have been modified and are suitable for use in group IIC; these variations get the Construction Identification Code (CIC) A4.

Instead of the junction box (type CMF********(R, H, S)*I****) an enclosure with an integral mounted signal processing device type 700 can be used; this variation gets the denomination type CMF********(A, B)*I**** for a steel enclosure and CMF********(Q, V)*I**** for an aluminium enclosure.

When used with an integral mounted enhanced signal processing device type 800 (IECEx BVS 05.0010U); the variation gets the denomination type CMF********(3, 5)*I**** for a steel enclosure and CMF********(2, 4)*I**** for an aluminium enclosure.

The high temperature version CMF*** (A, B, C, E)******I**** can be executed with a junction box, or transmitter, or core processor, or enhanced core processor.

Parameters and marking see Annex Product Description Issue 2.

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X**

Date of Issue: **2006-06-02** Issue No.: **2**

Additional information:

Subject and type
Sensor type **CMF***** *******|****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:

type **CMF**aaa ebbbbcdlbbbbb

where

a type of sensor

b marking without influence to the type of protection

c electronic interface:

- A = stainless steel enclosure with 4-wire integral signal processor for remotely mounted transmitter
- B = stainless steel enclosure with 4-wire integral signal processor with extended mount for remotely mounted transmitter
- C = with transmitter type *700****
- F = with transmitter type *700**** with extender
- R = 9-wire epoxy painted aluminum junction box
- H = 9-wire epoxy painted aluminum junction box with extended mount
- Q = epoxy painted aluminum enclosure with 4-wire integral signal processor for remotely mounted transmitter
- V = epoxy painted aluminum enclosure with 4-wire integral signal processor with extended mount for remotely mounted transmitter
- *S = 9-wire stainless steel junction box*
- *2 = aluminium enclosure with integral signal processor type 800 (IECEx BVS 05.0010U)*
- *3 = stainless steel enclosure with integral signal processor type 800 (IECEx BVS 05.0010U)*
- *4 = aluminium enclosure with integral signal processor type 800 (IECEx BVS 05.0010U) and with extender*
- *5 = stainless steel enclosure with integral signal processor type 800 (IECEx BVS 05.0010U) and with extender*

d conduit connection

e High temperature versions

- *A = Stainless Steel Tube 350°C*
- *B = HY Tube 350°C*
- *C = Stainless Steel Tube 427°C*
- *E = HY Tube 427°C*

Changes are made in *italic letters*.

Annexe: Annex.pdf; Annex Product description Issue1.pdf; Annex Product description Issue2.pdf

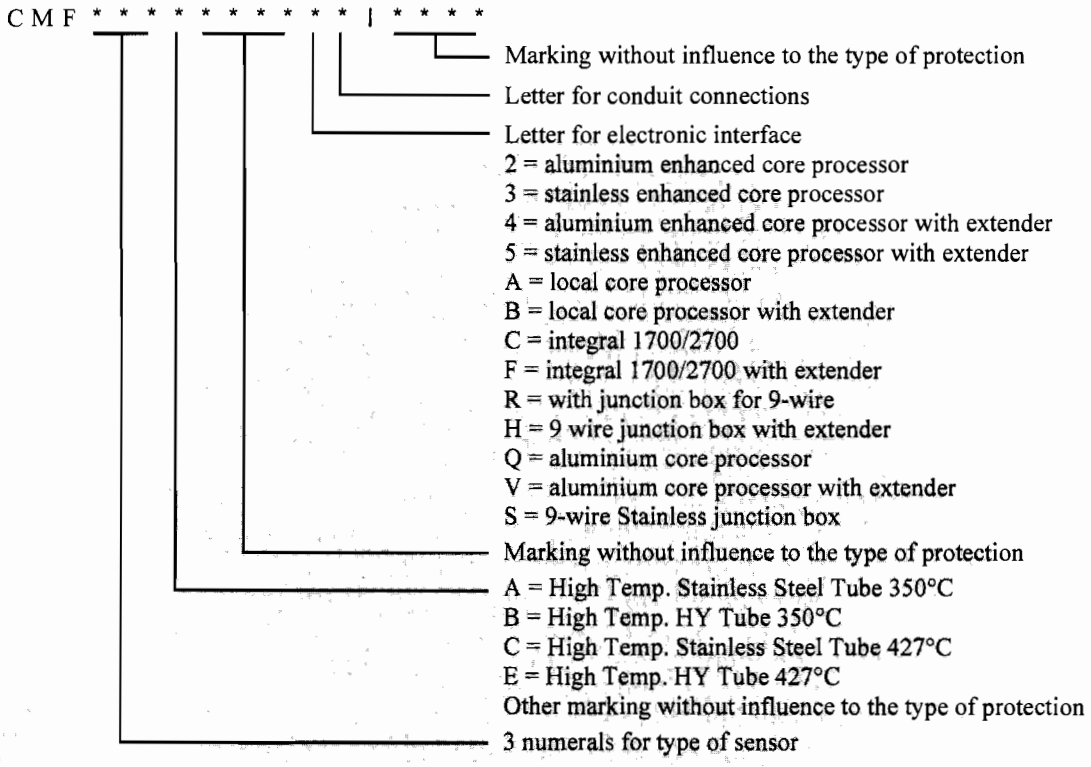
IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 2**
Annex

Details for Certificate Changes (for Issue 2)

Subject and Type
Sensor type CMF*** *******I****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:



Alternatively a transmitter type *700********** can be mounted directly to the sensor CMF********(C, F)*I****; the use of the unit will be modified according to the following table:

Transmitter type	CMF010*****(C, F)*I**** CMF025*****(C, F)*I**** CMF050*****(C, F)*I**** CMF100*****(C, F)*I**** CMF100*****(C, F)*I**** C.I.C. A4 CMF200*****(C, F)*I**** C.I.C A4 CMF300*****(C, F)*I**** C.I.C A4 CMF400*****(C, F)*I**** C.I.C A4	CMF200*****(C, F)*I**** CMF300*****(C, F)*I**** CMF400*****(C, F)*I**** CMF200(A, B, C, E)*****(C or F)*I**** CMF300(A, B, C, E)*****(C or F)*I**** CMF400(A, B, C, E)*****(C or F)*I****
*700*1[1)] *******	EEx ib IIB+H_2 T1-T5	EEx ib IIB T1-T5
*700*1[2)] *******	EEx ib IIC T1-T5	EEx ib IIB T1-T5

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3, 4 or 5 will be inserted.

IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 2**
Annex

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and get the Construction Identification Code (CIC) A4 and canbe used in IIC areas.

Modified parameters

I Type CMF********(R, H, S)*I**** inclusive Construction Identification Code (C.I.C) A4 except type CMF(A,B,C,E)****(R,H,S)*I****

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
Effective internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum ambient/Fluid Temperature [°C]
CMF010*****(R, H, S)*I****	2,51	78,7 0	948,9 945,1	-40 -240
CMF025*****(R, H, S)*I****	2,51	78,7 0	170,8 170,1	-40 -240
CMF050*****(R, H, S)*I****	2,51	78,7 0	170,8 170,1	-40 -240
CMF100*****(R, H, S)*I****	6,7	58,4 52,4	89	-40 -60
CMF100*****(R, H, S)*I**** CIC A4	6,7	0	177,0	-240
CMF200*****(R, H, S)*I**** CIC A3	9,5	92,9 85,8	0	-40 -55
CMF200*****(R, H, S)*I**** CIC A4	9,5	0	177,0	-240
CMF300*****(R, H, S)*I**** CIC A3	9,5	92,9 85,8	0	-40 -55
CMF300*****(R, H, S)*I**** CIC A4	9,5	0	177,0	-240
CMF400 *****(R, H, S)*I**** CIC A3	11,75	83,5 71,4	19,8	-40 -68
CMF400 *****(R, H, S)*I**** CIC A4	11,75	0	187,1	-240

IECEx Certificate of Conformity

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Annex

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF010*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF025*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF050*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF100*****(R, H, S)*I****	0,441	11,1 9,9	0	-40 -60
CMF100*****(R, H, S)*I**** CIC A4	0,441	0	0 to 567,9	-240
CMF200*****(R ,H, S)*I**** CIC A3	2,0	41,9 38,7	0 to 567,9	-40 -55
CMF200*****(R, H, S)*I**** CIC A4	2,0	0	0 to 567,9	-240
CMF300*****(R, H, S)*I**** CIC A3	2,0	41,9 38,7	0 to 567,9	-40 -55
CMF300*****(R, H, S)*I**** CIC A4	2,0	0	0 to 567,9	-240
CMF400*****(R, H, S)*I**** CIC A3	12,4	128,3 109,8	0 to 566,4	-40 -68
CMF400*****(R, H, S)*I**** CIC A4	12,4	0	0 to 566,4	-240

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

1.4 Thermal data
Regulation of temperature class

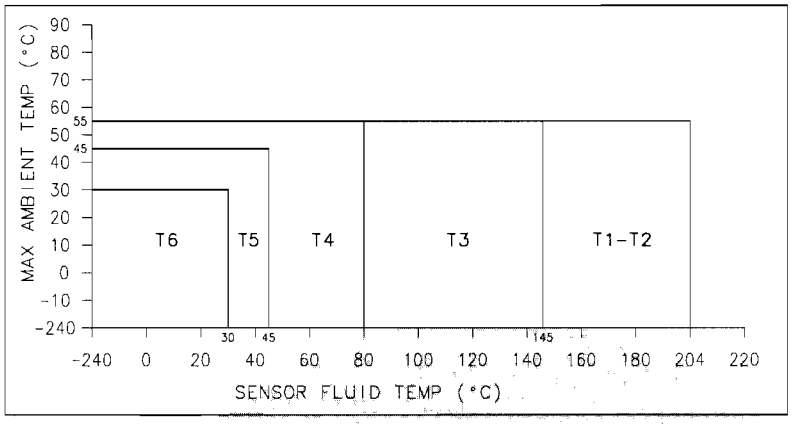
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 2**
Annex

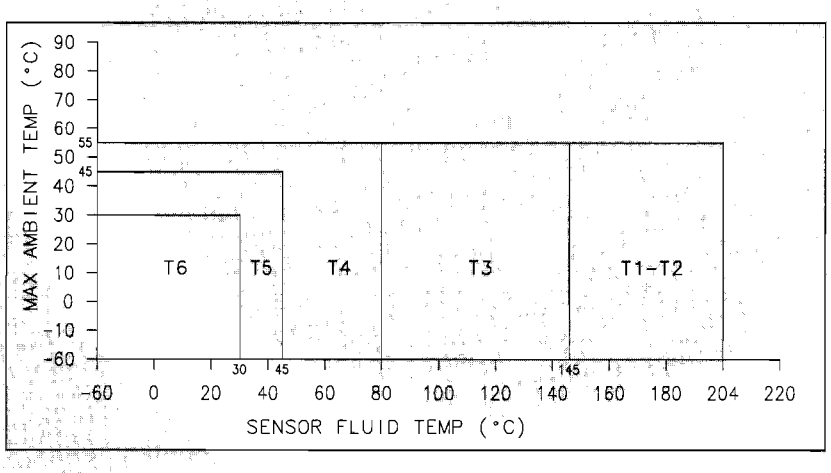
1.4.1 For types CMF010*****(R, H, S)*I****, CMF025*****(R, H, S)*I**** and CMF050*****(R, H, S)*I**** with J-box



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

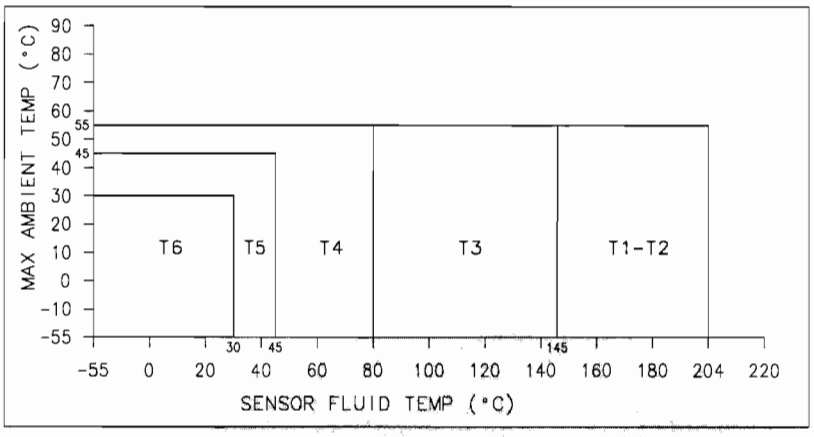
1.4.2 For type CMF100*****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

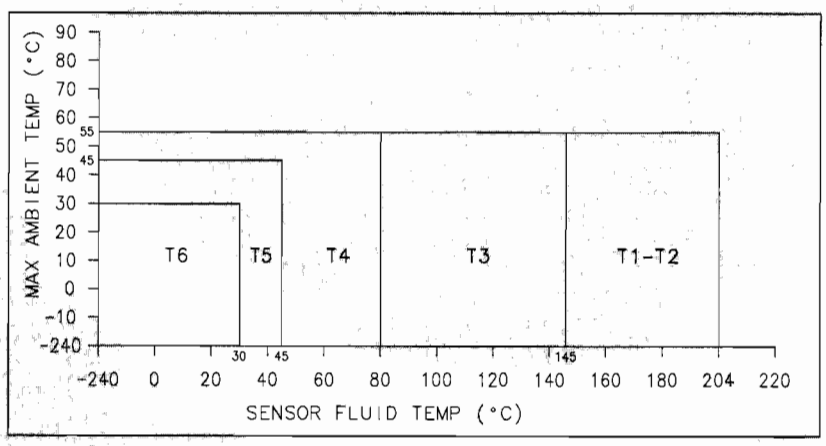
1.4.3 For types CMF200*****(R, H, S)*I**** and CMF300*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

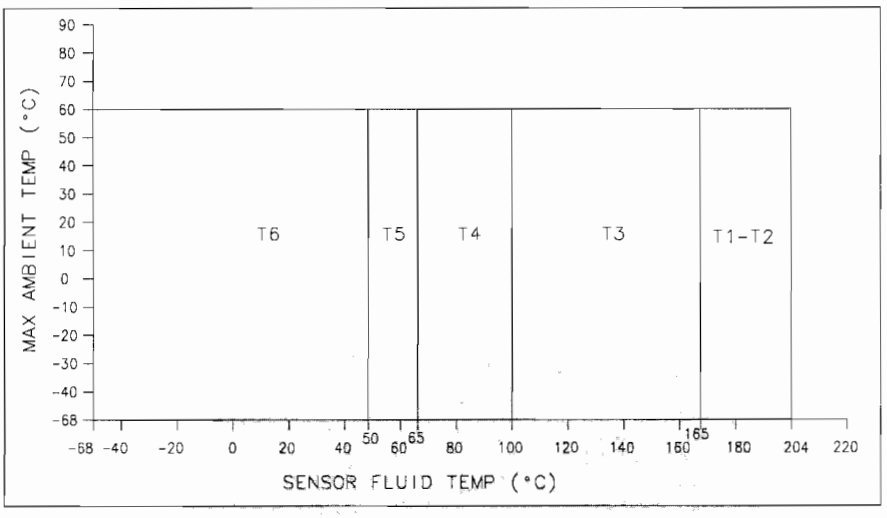
1.4.4 For types CMF200*****(R,H,S)*I**** and CMF300*****(R,H,S)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

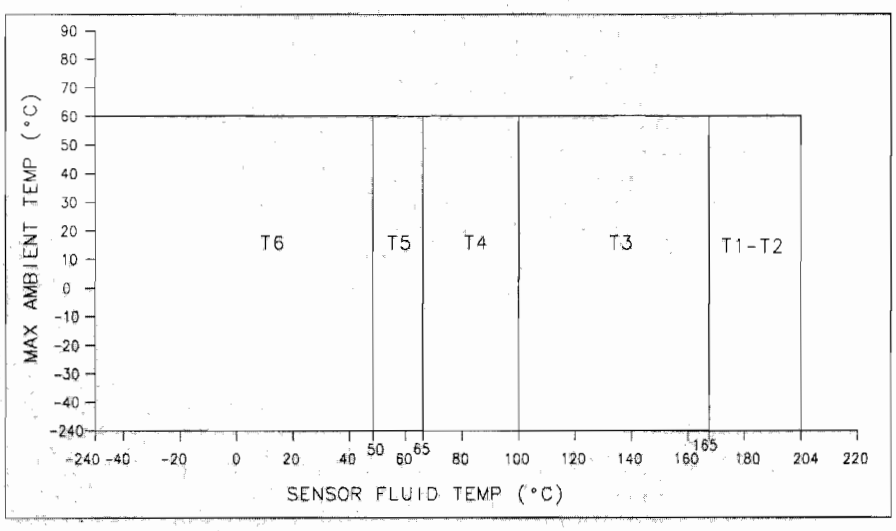
1.4.5 For type CMF400*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C
The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6 For type CMF400*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-240 °C up to +60 °C

The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2 Type CMF***(A, B, C, E)****(R, H, S)*I**** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
Effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	4,0	32,3	19,8	-50
CMF300(A, B, C, E)****(R, H, S)*I****	4,0	32,3	19,8	-50
CMF400(A, B, C, E)****(R, H, S)*I****	7,75	54,3	19,8	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

voltage	Ui	DC	30	V
current	Ii		101	mA
power	Pi		750	mW
effective internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	1,25	15,4	569,2	-50
CMF300(A ,B, C, E)****(R, H, S)*I****	1,25	15,4	569,2	-50
CMF400(A, B, C, E)****(R, H, S)*I****	6,5	41,1	569,2	-50

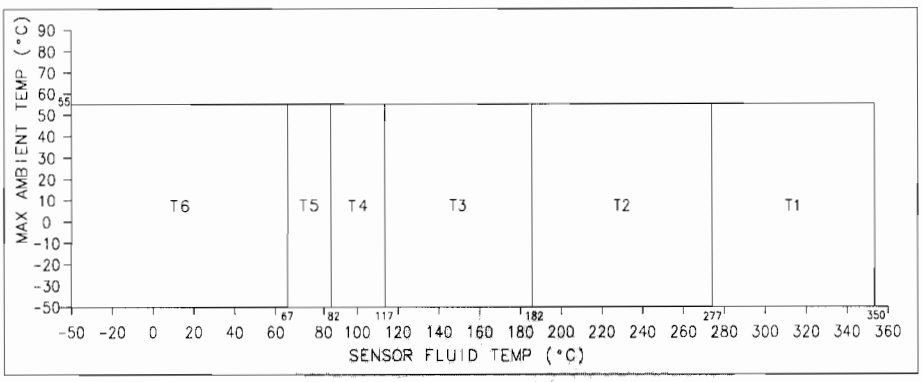
2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

2.4 Thermal data
Regulation of temperature class

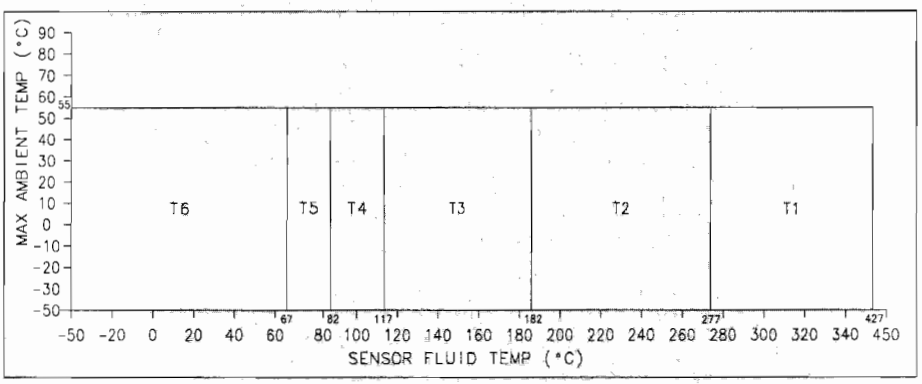
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

2.4.1 For types CMF200(A, B)****(R, H, S)*I**** and CMF300(A, B)****(R, H, S)*I**** with J-box and CMF400(A, B)****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

2.4.2 For types CMF200(C, E)****(R, H, S)*I**** and CMF300(C, E)****(R, H, S)*I**** with J-box and CMF400(C, E)****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

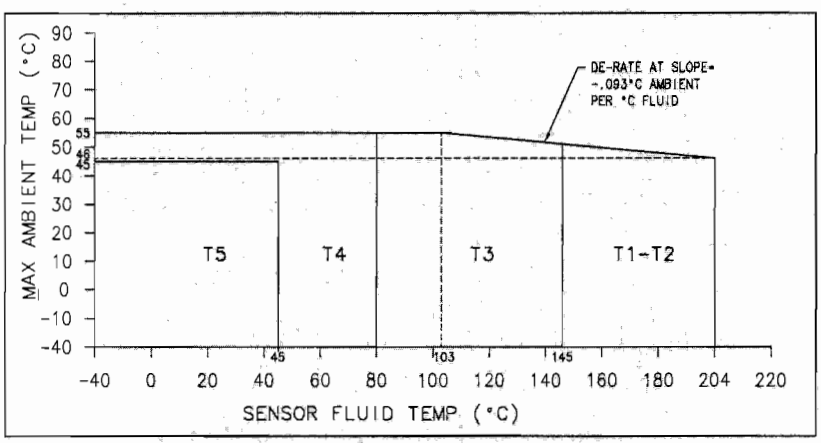
3 For types CMF********(2, 3, 4, 5, A, B, Q, V)*I**** inclusive Construction Identification Code (C.I.C) A4

3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17,3	V
Current	Ii		484	mA
Power	Pi		2,1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

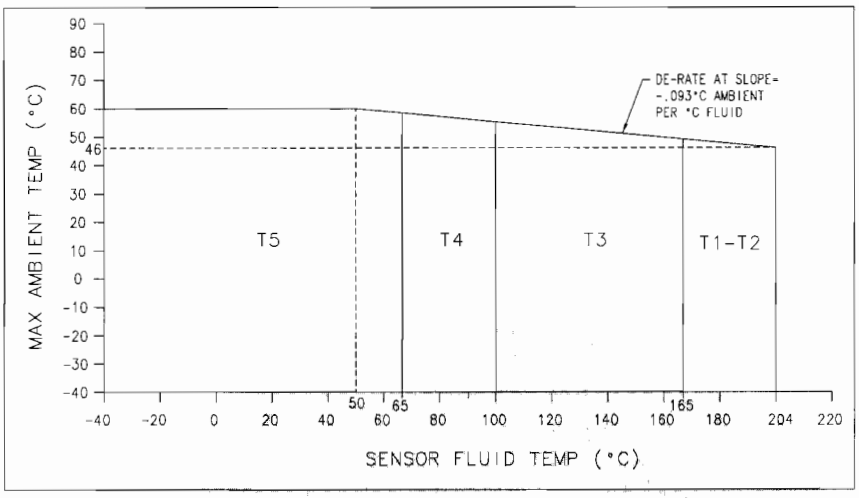
3.2 Temperature class
except types CMF***(A, B, C, E)****(2, 3, 4, 5, A, B, Q, V)*I****
The classification into a temperature class/determination of the maximum surface temperature T depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

3.2.1 For types CMF010*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF025*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF050*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF100*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF200*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF300*****(2, 3, 4, 5, A, B, Q, V)*I**** with Construction Identification Code (C.I.C) A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

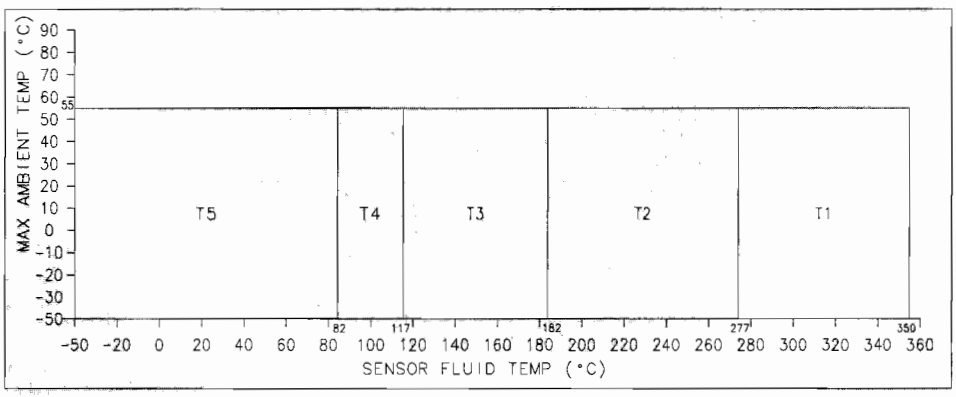
3.2.2 For type CMF400*****(2, 3, 4, 5, A, B, Q, V)*I***** with Construction Identification Code (C.I.C) marking A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

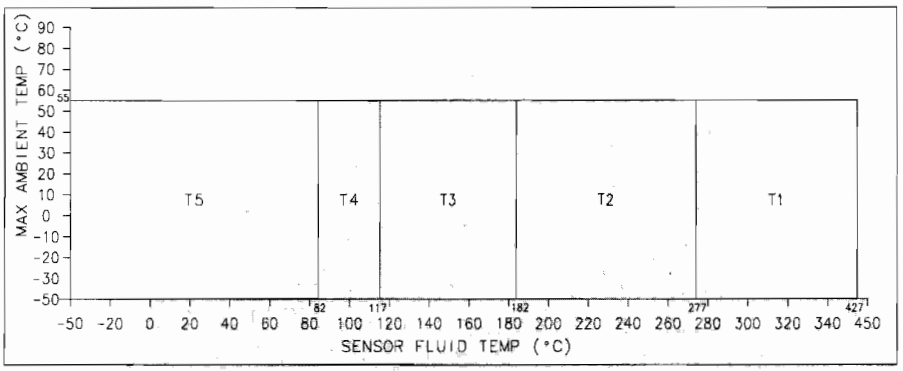
3.2.3 For types CMF200(A,B)****(2, 3, 4, 5 A, B, Q, V)*I****, CMF300(A,B)****(2, 3, 4, 5 A, B, Q, V)*I **** and CMF400(A,B)****(2, 3, 4, 5 A, B, Q, V)*I **** with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.4 For types CMF200(C,E)****(2, 3, 4, 5 A, B, Q, V)*I ****,
CMF300(C,E)****(2, 3, 4, 5 A, B, Q, V)*I **** and CMF400(C,E)****(2, 3, 4, 5 A, B, Q, V)*I ****
with integrally mounted core processor



Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

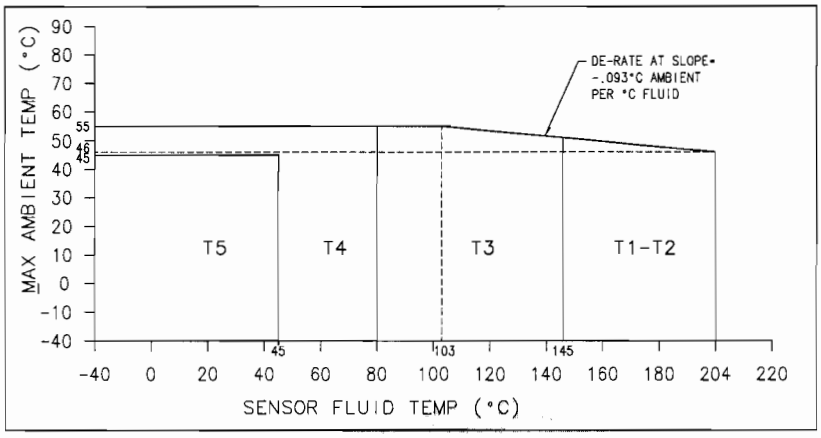
4 Type CMF*******(C,F)*I****

4.1 Electrical parameters see BVS 04.0006X for the transmitter type *700**********

4.2 Temperature class
except types CMF***(A, B, C, E)****(C, F)*I****

The classification into a temperature class/determination of the maximum surface temperature T depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

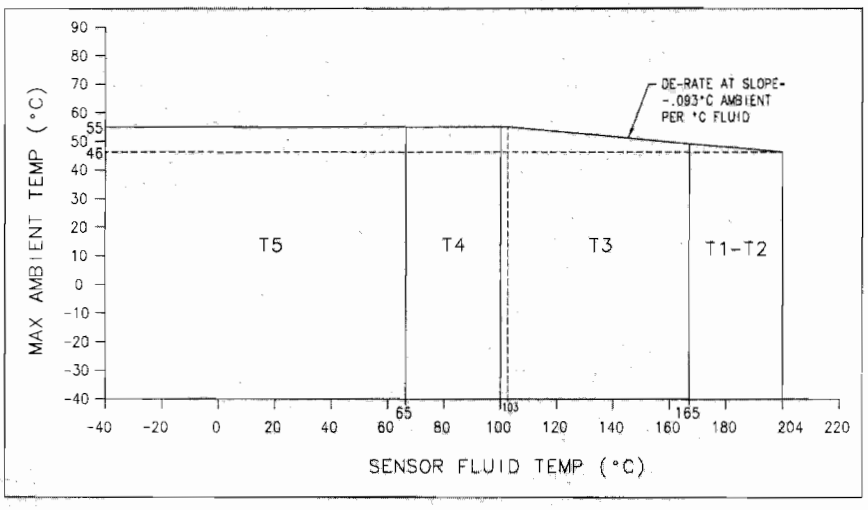
4.2.1 For types CMF010*****(C, F)*I****, CMF025*****(C, F)*I****, CMF050*****(C, F)*I****, CMF100*****(C, F)*I****, CMF200*****(C, F)*I****, CMF300*****(C, F)*I**** and CMF200*****(C, F)*I**** and CMF300*****(C, F)*I**** with Construction Identification Code (C.I.C) A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

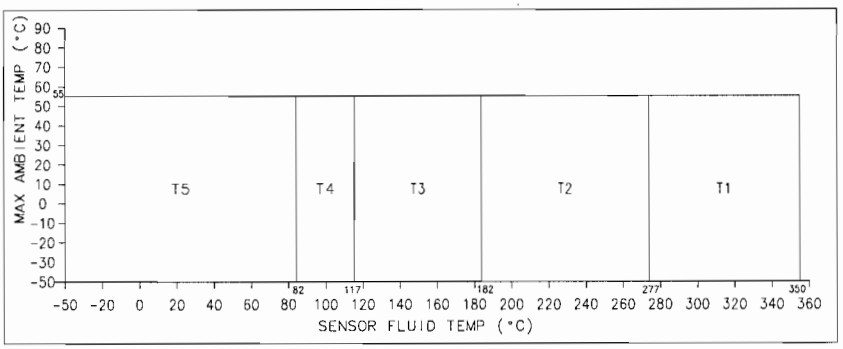
4.2.2 For type CMF400*****(C, F)*I**** inclusive Construction Identification Code (C.I.C) marking A4 mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

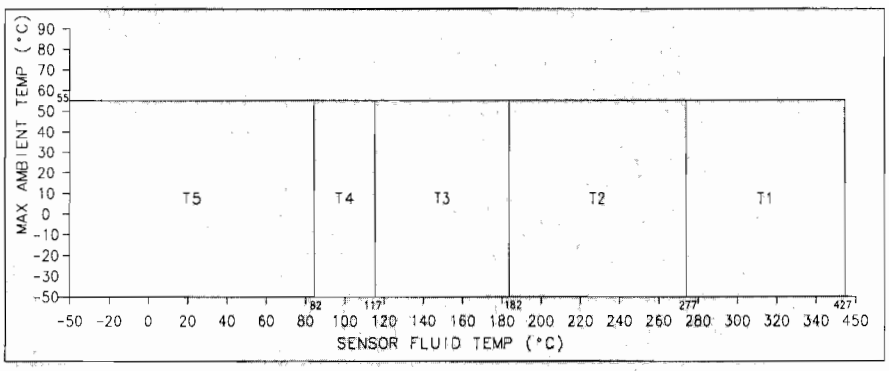
4.2.3 For types CMF200(A, B)****(C, F)*I****, CMF300(A, B)****(C, F)*I**** and CMF400(A, B)****(C, F)*I**** mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.2.4 For types CMF200(C, E)****(C, F)*I****, CMF300(C, E)****(C, F)*I**** and CMF400(C, E)****(C, F)*I**** mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 2**
Annex

Marking
The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient/Fluid temperature range
CMF010 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF025 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF050 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*I****	Ex ib IIC T1-T6	- 60 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I**** incl. CMF200 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF200[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I**** incl. CMF300 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[1]*I**** incl. CMF400 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 68 °C ≤ Ta ≤ +60 °C
CMF400 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +60 °C
CMF400[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF010 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF025 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF050 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF100 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I**** incl. CMF200 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I**** incl. CMF300 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[2]*I**** incl. CMF400 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +60 °C
CMF400 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF400[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C

1) at this place the letter R, H or S may be inserted
2) at this place the letter A, B, Q or V may be inserted
4) at this place the letter A, B, C or E may be inserted

EXAM
BBG Prüf- und Zertifizier GmbH

Zertifizierungsstelle

Carl-Beyling-Haus
Dinnendahlstrasse 9
44809 Bochum

Telefon 0234 – 3696-105
Telefax 0234 – 3696-110

EXAM · Postfach 10 27 48 · 44727 Bochum

Emerson Process Management Flow BV
Wiltonstraat 30
3905 KW Veenendaal
Niederlande

Ihr Zeichen	H. van Holland
Ihre Nachricht	19.06.2006
Unser Zeichen	BVS-Schu/Mi A 20060405
Durchwahl	Tel.: (0234) 3696 105 Fax: (0234) 3696 110
e-mail	Schumann@bg-exam.de
Datum	12.07.2006

Ladies and Gentlemen,

we added the Revision Report as of 12.07.2006 to the IECEx Test Report DE/BVS/04/2024.

We confirm, that the Certificate

IECEx BVS 04.0007X as of 2006-06-02
must not be modified and keeps still valid unchanged.

Kind regards
BBG Prüf- und Zertifizier GmbH

i.V. Migenda (Migenda) i.V. Wittler (Dr. Wittler)

Enclosures: Revision Report
Descriptive Documents

EXAM
BBG Prüf- und Zertifizier GmbH

Geschäftsführung:
Dr.-Ing. Reinhard Bassier
Dr.-Ing. Günter Levin

Sitz: Bochum
Amtsgericht Bochum
HRB 5357

Bankverbindung:
Commerzbank Bochum
BLZ 430 400 36
Konto 20 50 250

e-mail: info@bg-exam.de
http://www.bg-exam.de

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X	issue No.:3	Certificate history: Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)
Status:	**Current**		
Date of Issue:	**2007-08-01**	Page 1 of 5	

Applicant: **Micro Motion, Inc.**
Boulder, Co. 80301
United States of America

Electrical Apparatus: **Sensor type CMF*** *******|****
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ib IIB/IIC T1 - T5/T6**

Approved for issue on behalf of the IECEx Certification Body: Dr. R. Jockers

Position: Head of Certification Body

Signature:
(for printed version)

Date: 01.08.2007

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-08-01** Issue No.: **3**

Manufacturer: **Micro Motion, inc.**
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Co., Ltd
1277 Xin Jin Qiao Rd
Jin Qiao Export Processing Zone
Pudong
Shanghai 201206
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture'rs quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/00 and DE/BVS/ExTR06.0009/01 and DE/BVS/ExTR06.0009/02 and DE/BVS/ExTR06.0009/03

File Reference:
DE/BVS/04/2024 and DE/BVS/04/2024/N1 and DE/BVS/04/2024/N2 and DE/BVS/04/2024/N3

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-08-01** Issue No.: **3**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The flow sensor in combination with a transmitter is used for flow measurement.
The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, resistors, temperature sensors and terminals and connectors.
The sensors type **CMF*** *****(A, B, Q or V)*I**** have an enclosure with an inside mounted processing device type 700 (IECEx BVS 04.0002U).
These variation will have classification code Ex ib IIC T1-T5.
The sensor **type CMF*** *****(R or H)*I**** have an enclosure with inside mounted terminal blocks.
These variation will have classification code Ex ib IIC T1-T6.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination **type CMF*** *****C*I**** and **type CMF*** *****F*I****.

CONDITIONS OF CERTIFICATION: YES as shown below:

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I****	CMF200 *****C*I****
	CMF025 *****C*I****	CMF300 *****C*I****
	CMF050 *****C*I****	CMF200 *****F*I****
	CMF100 *****C*I****	CMF300 *****F*I****
	CMF010 *****F*I****	CMF400 *****F*I****
	CMF025 *****F*I****	CMF400 *****C*I****
	CMF050 *****F*I****	
	CMF100 *****F*I****	
Transmitter type *700*11*******	Ex ib IIB+H2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Description (for Issue 1)

The flow sensor can be modified and additional variations are available.

The flow sensor can be mounted to the transmitter type *700*12******* or the transmitter type *700*15******* alternatively.

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.

Parameters and marking see Annex Product Description Issue 1.

The sensors can also have an alternative 9-wire feed-through.

Description (for Issue 2)

The junction box can be out of stainless steel, these variations gets the denomination type CMF********S*I****.

The coils of types CMF200*****(R, H, S)*I****, CMF300*****(R, H, S)*I**** and CMF400*****(R, H, S)*I**** have been modified and are suitable for use in group IIC; these variations get the Construction Identification Code (CIC) A4.

Instead of the junction box (type CMF********(R, H, S)*I****) an enclosure with an integral mounted signal processing device type 700 can be used; this variation gets the denomination type CMF********(A, B)*I**** for a steel enclosure and CMF********(Q, V)*I**** for an aluminium enclosure.

When used with an integral mounted enhanced signal processing device type 800 (IECEx BVS 05.0010U); the variation gets the denomination type CMF********(3, 5)*I**** for a steel enclosure and CMF********(2, 4)*I**** for an aluminium enclosure.

The high temperature version CMF*** (A, B, C, E)******I**** can be executed with a junction box, or transmitter, or core processor, or enhanced core processor.

Parameters and marking see Annex Product Description Issue 2.

Description (for issue 3)

The manufacturing location Emerson Process Management Co., Ltd, Shanghai, People's Pepublic of China was added.

The manufacturer Micro Motion Inc., Boulder, United States of America changed the EXCB for quality supervision. Responsible is now DNV for all production sites.

The high temperature versions CMF*** (A,B,C,E)******I**** can be manufactured with other coils and get therefore the additional marking with C.I.C. A5.
Also for testing of the sensors the new standard versions of IEC 60079-* have been taken as basis.; a modified marking is the result.

Additional information see Annex.

IECEx Certificate of Conformity

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Date of Issue: **2007-08-01** Issue No.: **3**

Additional information:

Subject and type
Sensor type **CMF***** *********I******
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:

type **CMF**aaa *e*bbbbcd**I**bbbbb

where
a type of sensor
b marking without influence to the type of protection
c electronic interface:
- A = stainless steel enclosure with 4-wire integral signal processor for remotely mounted transmitter
- B = stainless steel enclosure with 4-wire integral signal processor with extended mount for remotely mounted transmitter
- C = with transmitter type *700****
- F = with transmitter type *700**** with extender
- R = 9-wire epoxy painted aluminum junction box
- H = 9-wire epoxy painted aluminum junction box with extended mount
- Q = epoxy painted aluminum enclosure with 4-wire integral signal processor for remotely mounted transmitter
- V = epoxy painted aluminum enclosure with 4-wire integral signal processor with extended mount for remotely mounted transmitter
- *S = 9-wire stainless steel junction box*
- *2 = aluminium enclosure with integral signal processor type 800 (IECEx BVS 05.0010U)*
- *3 = stainless steel enclosure with integral signal processor type 800 (IECEx BVS 05.0010U)*
- *4 = aluminium enclosure with integral signal processor type 800 (IECEx BVS 05.0010U) and with extender*
- *5 = stainless steel enclosure with integral signal processor type 800 (IECEx BVS 05.0010U) and with extender*

d conduit connection
e High temperature versions
- *A = Stainless Steel Tube 350°C*
- *B = HY Tube 350°C*
- *C = Stainless Steel Tube 427°C*
- *E = HY Tube 427°C*

Changes are made in *italic letters*.

Annexe: Annex.pdf, Annex Product description Issue1.pdf, Annex Product description Issue2.pdf, BVS_04_0007X_N3_Micro Motion_Annex.pdf

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Subject and type (continued)

Sensor type CMF*** *******I****

The sensors type CMF*** *****(A, B, Q or V)*I**** have an enclosure with an inside mounted processing device type 700 (IECEx BVS 04.0002U). These variations will have classification code Ex ib IIB/IIC T1-T5. The sensors type CMF*** *****(R or H)*I**** have an enclosure with an inside mounted terminal blocks. These variations will have classification code Ex ib IIB/IIC T1-T6.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination type CMF*** *****C*I**** and type CMF*** *****F*I****

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I**** CMF025 *****C*I**** CMF050 *****C*I**** CMF100 *****C*I**** CMF010 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I****	CMF200 *****C*I**** CMF300 *****C*I**** CMF200 *****F*I**** CMF300 *****F*I**** CMF400 *****C*I**** CMF400 *****F*I****
Transmitter type *700*11*******	Ex ib IIB+H_2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
.Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

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Parameters

1 Type CMF*** *****R*I**** and type CMF*** *****H*I****

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W

Effective internal capacitance negligible

sensor type	inductance [mH]	coil resistance at -20 °C [Ω]	serial resistor at-20 °C [Ω]
CMF010 *****R*I**** CMF010 *****H*I****	2,51	86,8	946,6
CMF025 *****R*I**** CMF025 *****H*I****	2,51	86,8	170,4
CMF050 *****R*I**** CMF050 *****H*I****	2,51	86,8	170,4
CMF100 *****R*I**** CMF100 *****H*I****	6,7	64,5	89
CMF200 *****R*I**** CMF200 *****H*I****	10,4	65,7	24,7
CMF300 *****R*I**** CMF300 *****H*I****	9	74,8	5,9
CMF300A ****R*I**** CMF300A ****H*I****	8,5	63,2	31,3

for type CMF400 *****R*I**** and type CMF400 *****H*I****

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance at -50 °C [Ω]	Serial resistor at-50 °C [Ω]
CMF400 *****R*I**** CMF400 *****H*I****	4,4	15,72	38,56

1.2 Pick-Off circuits (Terminals 5/9 and 6/8 or wire colour green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Effective internal capacitance negligible

sensor type	inductance [mH]	coil resistance at -20 °C [Ω]	serial resistor at -20 °C [Ω]
CMF010 *****R*I**** CMF010 *****H*I****	2,51	86,8	0
CMF025 *****R*I**** CMF025 *****H*I****	2,51	86,8	0
CMF050 *****R*I**** CMF050 *****H*I****	2,51	86,8	0
CMF100 *****R*I**** CMF100 *****H*I****	0,441	12,2	0
CMF200 *****R*I**** CMF200 *****H*I****	0,61	19,6	0
CMF300 *****R*I**** CMF300 *****H*I****	0,61	19,6	0
CMF300A ****R*I**** CMF300A ****H*I****	0,393	35,1	31,3

for type CMF400 *****R*I**** and type CMF400 *****H*I****

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance at -50 °C [Ω]	Serial resistor at -50 °C [Ω]
CMF400 *****R*I**** CMF400 *****H*I****	6,9	99,52	569,2

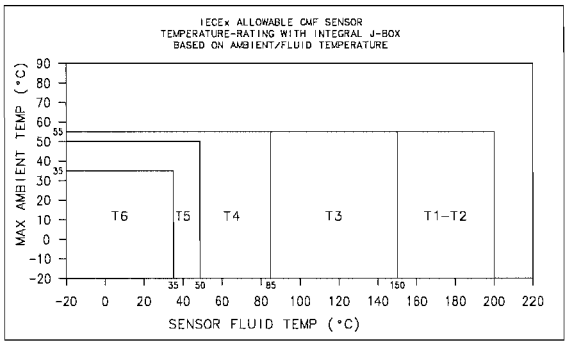
1.3 Temperature circuit (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci	negligible		
Effective internal inductance	Li	negligible		

1.4 Regulation of temperature class

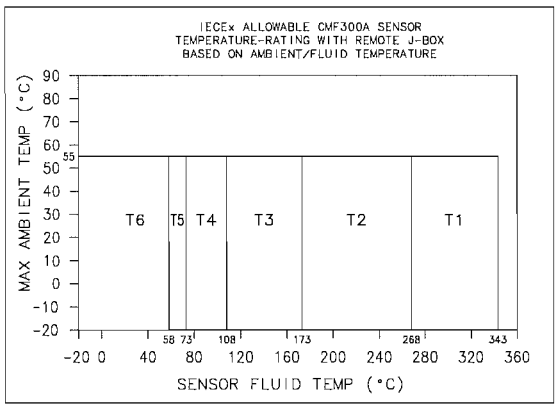
1.4.1 for all types CMF*** *****(R or H)*I**** except CMF300A ****(R or H)*I**** and except CMF400 *****(R or H)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



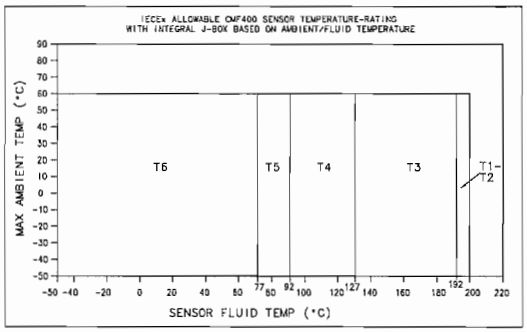
Minimum medium temperature is –20°C.

1.4.2 The classification of the sensors type CMF300A ****R*I**** and type CMF300A ****H*I**** into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –20°C.

1.4.3 The classification of the sensors type CMF400 *****(R or H)*I**** into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –50°C.

1.5 for all types CMF*** *****(R or H)*I**** except CMF400 *****(R or H)*I****

Ambient temperature range	Ta	-20 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.
The ambient temperature of the sensor may be less than –20°C provided the temperature of the medium is not less than 0°C.

for Type CMF400 *****(R or H)*I****

Ambient temperature range	Ta	-50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

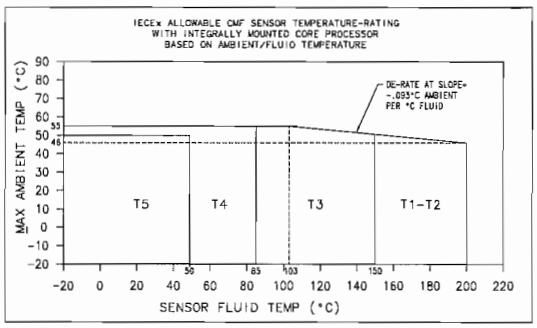
2 for all types CMF*** *****(A, B, Q or V)*I**** except CMF300A *******I****

2.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17,3	V
Current	Ii		484	mA
Power	Pi		2,1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

2.2 Regulation of temperature class

2.2.1 for all types CMF*** *****(A, B, Q or V)*I**** except CMF400 *****(A, B, Q or V)*I****
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



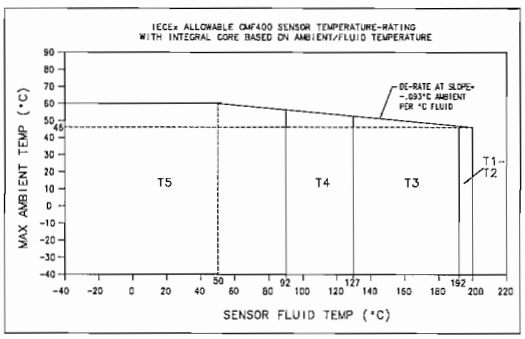
Minimum medium temperature is –20°C.

Ambient temperature range	Ta	-20 °C up to +55 °C

The ambient temperature of the sensor may be–40°C provided the temperature of the medium is not less than 0°C.

2.2.2 Type CMF400 *****(A, B, Q or V)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –40°C.

Ambient temperature range	Ta	-40 °C up to +60 °C

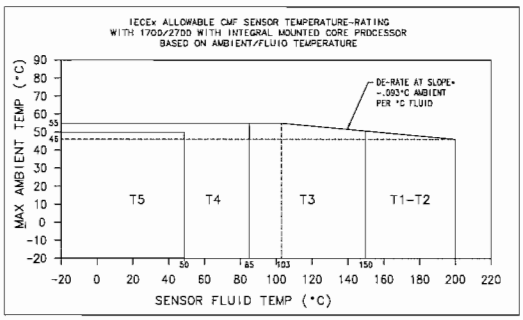
3 for all types CMF*** *****(C or F)*I**** except CMF300A *******I****

3.1 Electrical parameters see IECEx BVS 04.0006X for the transmitter type *700**********

3.2 Regulation of temperature class

3.2.1 for all types CMF*** *****(C or F)*I**** except CMF400 *****(C or F)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

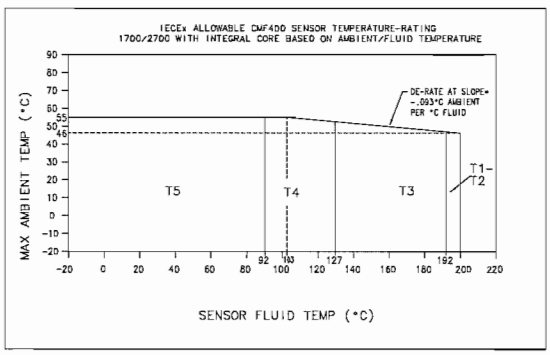


Minimum medium temperature is –20°C.

Ambient temperature range	Ta	-20 °C up to +55 °C

3.2.2 Type CMF400 *****(C or F)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –20°C.

Ambient temperature range	Ta	-20 °C up to +55 °C

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Annex

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient temperature range
CMF010 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300A ****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[1]*I****	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF010 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[2]*I****	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF010 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C

[1] at this place the letter R or H may be inserted

[2] at this place the letter A, B, Q or V may be inserted

[3] at this place the letter C or F may be inserted

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Annex

Details for Certificate Changes (for Issue 1)

Subject and Type
Sensor type CMF*** *******I****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:
type **CMF**aaa bbbbbcd**I**bbbb

where

- a type of sensor
- b marking without influence to the type of protection
- c electronic interface:
  - A = 4-wire stainless steel integral signal processor for remotely mounted transmitter
  - B = 4-wire stainless steel integral signal processor with extended mount for remotely mounted transmitter
  - C = with transmitter type *700****
  - F = with transmitter type *700**** with extender
  - R = 9-wire epoxy painted aluminium junction box
  - H = 9-wire epoxy painted aluminium junction box with extended mount
  - Q = 4-wire epoxy painted aluminium integral signal processor for remotely mounted transmitter
  - V = 4-wire epoxy painted aluminium integral signal processor with extended mount for remotely mounted transmitter
- d conduit connection

Alternatively a transmitter type *700********** (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination type CMF*** *****C*I**** and type CMF*** *****F*I****.
By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I**** CMF025 *****C*I**** CMF050 *****C*I**** CMF100 *****C*I**** CMF010 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I****	CMF200 *****C*I**** CMF300 *****C*I**** CMF200 *****F*I**** CMF300 *****F*I**** CMF400 *****C*I**** CMF400 *****F*I****
Transmitter type *700*1[1)]*******	Ex ib IIB+H_2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*1[2)]*******	Ex ib IIC T1-5	Ex ib IIB T1-5

1) at this place the numeral 1 or **2** can be inserted (new version in bold)
2) at this place the numeral 4 or **5** can be inserted (new version in bold)

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Annex

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.

The sensors can also have an alternative 9-wire feed-through.

Modified parameters

1 Drive coil (Terminals 1/2 or wires red/brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
effective internal capacitance			negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]
CMF200 *****[1]*I**** CIC A3 CMF200 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	9,5	102,6 at -20 °C	0
CMF300 *****[1]*I**** CIC A3 CMF300 *****[2]*I**** CIC A3 CMF300 *****[3]*I**** CIC A3	9,5	102,6 at -20 °C [Ω]	0
CMF400 *****[1]*I**** CIC A3 CMF400 *****[2]*I**** CIC A3 CMF400 *****[3]*I**** CIC A3	11,75	79,2 at -50 °C [Ω]	19,8 at -50 °C [Ω]

[1] At this place the letter R or H will be inserted.

[2] At this place the letter A, B, D, E, Q, V, W or Y will be inserted.

[3] At this place the letter C or F will be inserted.

2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]
CMF200 *****[1]*I**** CIC A3 CMF200 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	2,0	46,3 at -20 °C	0 - 567,9 at -20 °C
CMF300 *****[1]*I**** CIC A3 CMF300 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	2,0	46,3 at -20 °C	0 - 567,9 at -20 °C
CMF400 *****[1]*I**** CIC A3 CMF400 *****[2]*I**** CIC A3 CMF400 *****[3]*I**** CIC A3	12,4	121,8 at -50 °C	0 - 566,4 at -50 °C

[1] At this place the letter R or H will be inserted.

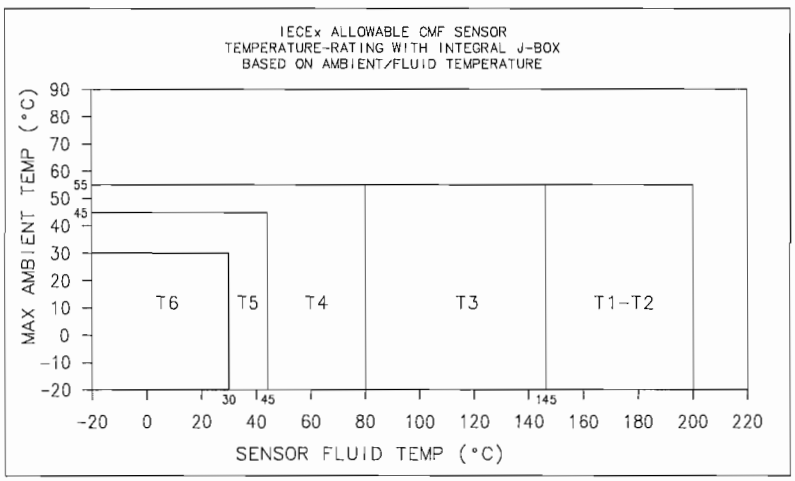
[2] At this place the letter A, B, D, E, Q, V, W or Y will be inserted.

[3] At this place the letter C or F will be inserted.

3 Thermal data
Regulation of temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

3.1 Type CMF*** *****R*I**** or CMF*** *****H*I**** with Construction Identification Code (CIC) A3, except for CMF300A *****R*I****, CMF300A *****H*I**** and CMF400 *****R*I****, CMF400 *****H*I****



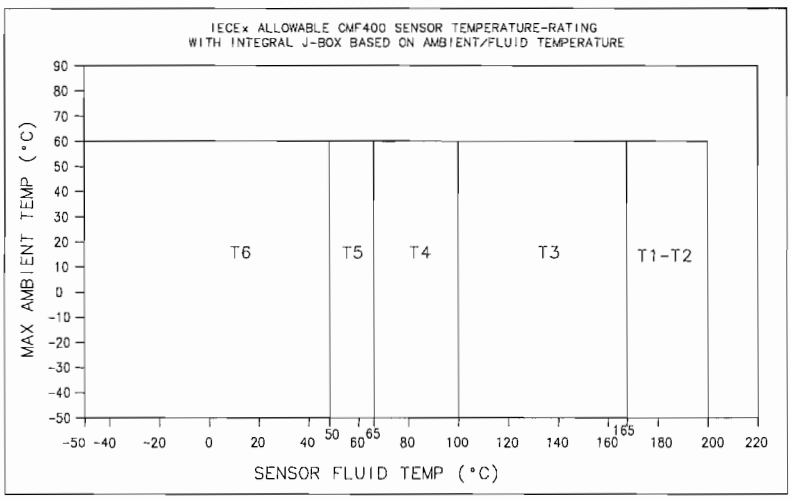
Minimum medium temperature is -20°C.

Ambient temperature range Ta -20 °C up to +55 °C

The use of the sensor at higher ambient temperature is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

The ambient temperature of the sensor may be less than –20°C provided the temperature of the medium is not less than 0°C.

3.2 Type CMF400 *****R*I**** or CMF400 *****H*I**** Construction Identification Code (CIC) A3:



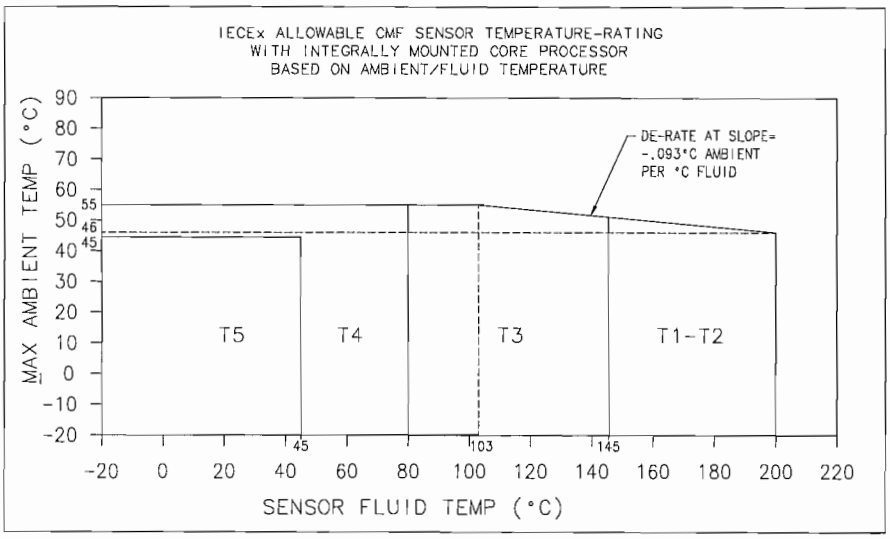
Minimum medium temperature is -50°C.

Ambient temperature range	Ta	-50 °C up to +60 °C

The ambient temperature of the sensor may be less than –50°C provided the temperature of the medium is not less than 0°C.

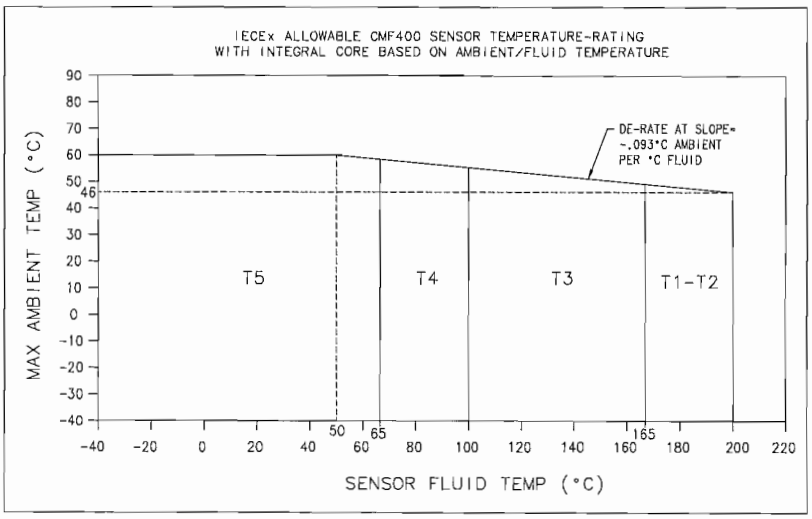
The use of the sensor at higher ambient temperature is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.3 Type CMF*** *****(A, B, D, E, Q, V, W or Y)*I**** with Construction Identification Code (CIC) A3, except for CMF300A *****(A, B, D, E, Q, V, W or Y)*I**** and CMF400 *****(A, B, D, E, Q, V, W or Y)*I****:



Minimum medium temperature is -20°C.
Ambient temperature range Ta -20 °C up to +55 °C
The ambient temperature of the sensor may be –40°C provided the temperature of the medium is not less than 0°C

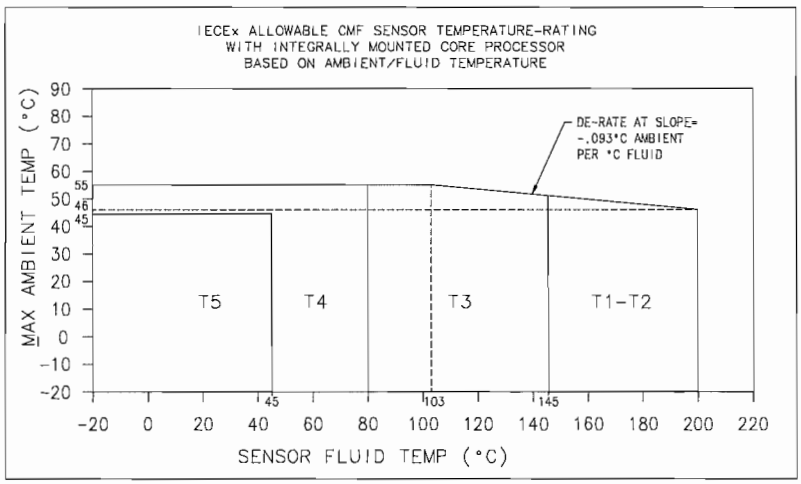
3.4 Type CMF400 *****(A, B, D, E, Q, V, W or Y)*I**** Construction Identification Code (CIC) A3



Minimum medium temperature is -40°C.

Ambient temperature range Ta -40 °C up to +60 °C

3.5 Type CMF*** *****C*I**** or CMF*** *****F*I**** Construction Identification Code (CIC) A3, except for CMF300A *****C*I****, CMF300A *****F*I**** and CMF400 *****C*I****, CMF400 *****F*I****

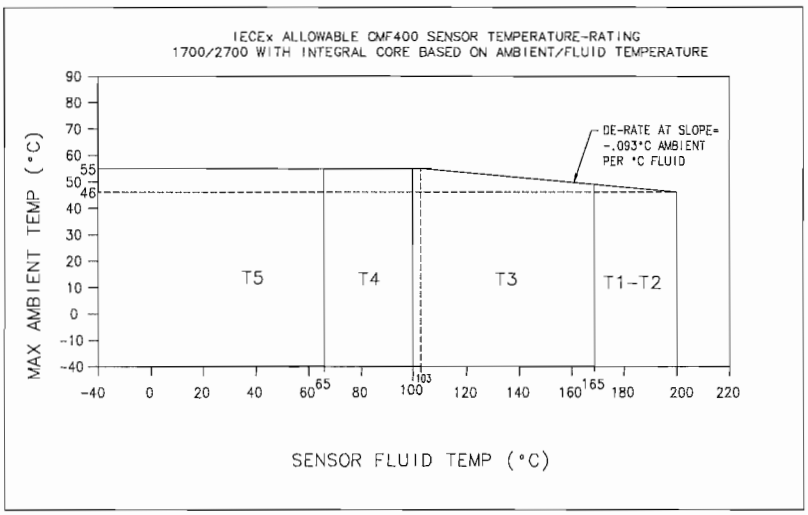


Minimum medium temperature is -20°C.

Ambient temperature range Ta –20 °C up to +55 °C

The ambient temperature of the sensor may be –40°C provided the temperature of the medium is not less than 0°C

3.6 Type CMF400 *****C*I**** or CMF400 *****F*I**** Construction Identification Code (CIC) A3



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Annex

Minimum medium temperature is -40°C.

Ambient temperature range Ta –40 °C up to +55 °C

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient temperature range
CMF010 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF100*****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[1]*|**** incl. CMF200 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[1]*|**** incl. CMF300 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300A ****[1]*|****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[1]*|**** incl. CMF400 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF010 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[2]*|**** incl. CMF200 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[2]*|**** incvl. CMF300 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[2]*|**** incl. CMF400 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF010 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[3]*|**** incl. CMF200 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[3]*|**** incl. CMF300 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[3]*|**** incl. CMF400 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C

[1] at this place the letter R or H may be inserted
[2] at this place the letter A, B, Q or V may be inserted
[3] at this place the letter C or F may be inserted

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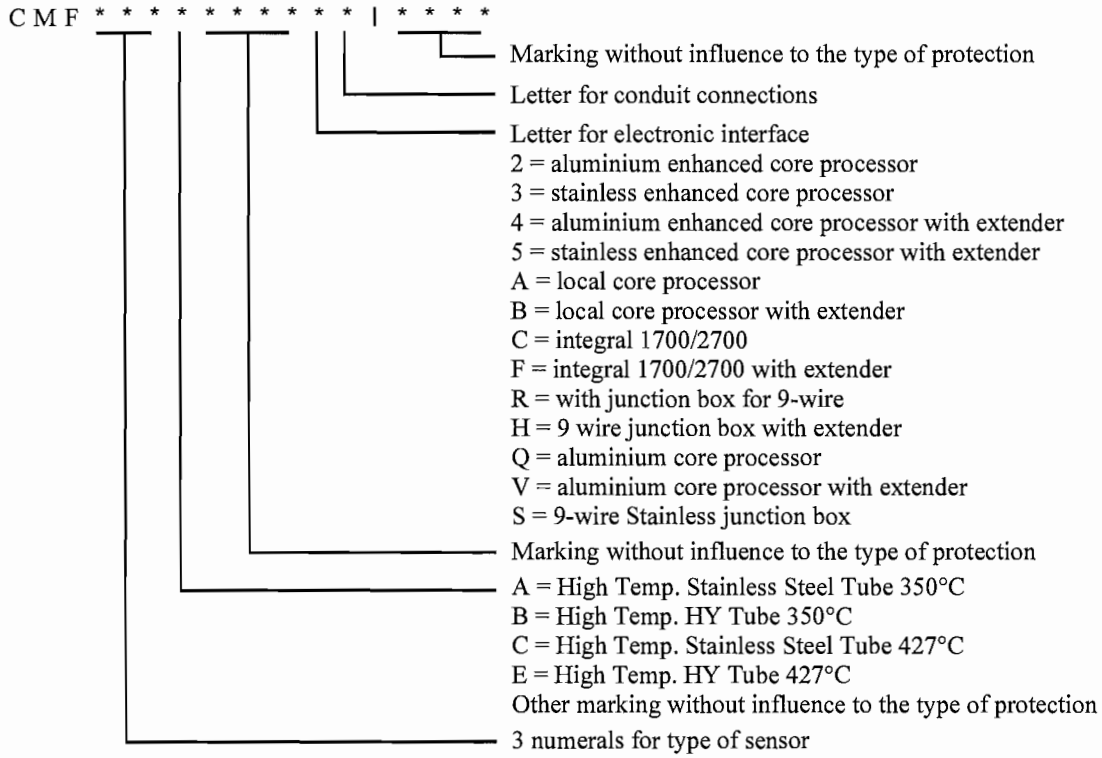
Annex

Details for Certificate Changes (for Issue 2)

Subject and Type
Sensor type CMF*** *******I****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:



Alternatively a transmitter type *700********** can be mounted directly to the sensor CMF********(C, F)*I****; the use of the unit will be modified according to the following table:

Transmitter type	CMF010*****(C, F)*I**** CMF025*****(C, F)*I**** CMF050*****(C, F)*I**** CMF100*****(C, F)*I**** CMF100*****(C, F)*I**** C.I.C. A4 CMF200*****(C, F)*I**** C.I.C A4 CMF300*****(C, F)*I**** C.I.C A4 CMF400*****(C, F)*I**** C.I.C A4	CMF200*****(C, F)*I**** CMF300*****(C, F)*I**** CMF400*****(C, F)*I**** CMF200(A, B, C, E)*****(C or F)*I**** CMF300(A, B, C, E)*****(C or F)*I**** CMF400(A, B, C, E)*****(C or F)*I****
*700*1[1)] *******	EEx ib IIB+H_2 T1-T5	EEx ib IIB T1-T5
*700*1[2)] *******	EEx ib IIC T1-T5	EEx ib IIB T1-T5

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3, 4 or 5 will be inserted.

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The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and get the Construction Identification Code (CIC) A4 and canbe used in IIC areas.

Modified parameters

1 Type CMF********(R, H, S)*I**** inclusive Construction Identification Code (C.I.C) A4 except type CMF(A,B,C,E)****(R,H,S)*I****

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
Effective internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum ambient/Fluid Temperature [°C]
CMF010*****(R, H, S)*I****	2,51	78,7 0	948,9 945,1	-40 -240
CMF025*****(R, H, S)*I****	2,51	78,7 0	170,8 170,1	-40 -240
CMF050*****(R, H, S)*I****	2,51	78,7 0	170,8 170,1	-40 -240
CMF100*****(R, H, S)*I****	6,7	58,4 52,4	89	-40 -60
CMF100*****(R, H, S)*I**** CIC A4	6,7	0	177,0	-240
CMF200*****(R, H, S)*I**** CIC A3	9,5	92,9 85,8	0	-40 -55
CMF200*****(R, H, S)*I**** CIC A4	9,5	0	177,0	-240
CMF300*****(R, H, S)*I**** CIC A3	9,5	92,9 85,8	0	-40 -55
CMF300*****(R, H, S)*I**** CIC A4	9,5	0	177,0	-240
CMF400 *****(R, H, S)*I**** CIC A3	11,75	83,5 71,4	19,8	-40 -68
CMF400 *****(R, H, S)*I**** CIC A4	11,75	0	187,1	-240

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF010*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF025*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF050*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF100*****(R, H, S)*I****	0,441	11,1 9,9	0	-40 -60
CMF100*****(R, H, S)*I**** CIC A4	0,441	0	0 to 567,9	-240
CMF200*****(R ,H, S)*I**** CIC A3	2,0	41,9 38,7	0 to 567,9	-40 -55
CMF200*****(R, H, S)*I**** CIC A4	2,0	0	0 to 567,9	-240
CMF300*****(R, H, S)*I**** CIC A3	2,0	41,9 38,7	0 to 567,9	-40 -55
CMF300*****(R, H, S)*I**** CIC A4	2,0	0	0 to 567,9	-240
CMF400*****(R, H, S)*I**** CIC A3	12,4	128,3 109,8	0 to 566,4	-40 -68
CMF400*****(R, H, S)*I**** CIC A4	12,4	0	0 to 566,4	-240

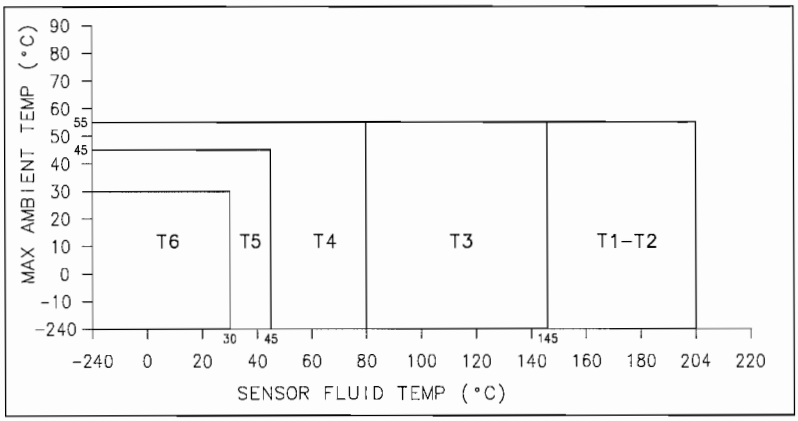
1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

1.4 Thermal data
Regulation of temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

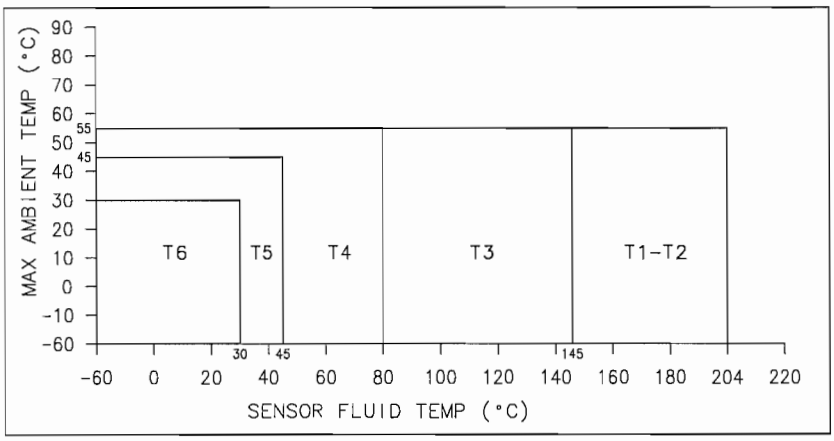
1.4.1 For types CMF010*****(R, H, S)*I****, CMF025*****(R, H, S)*I**** and CMF050*****(R, H, S)*I**** with J-box



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

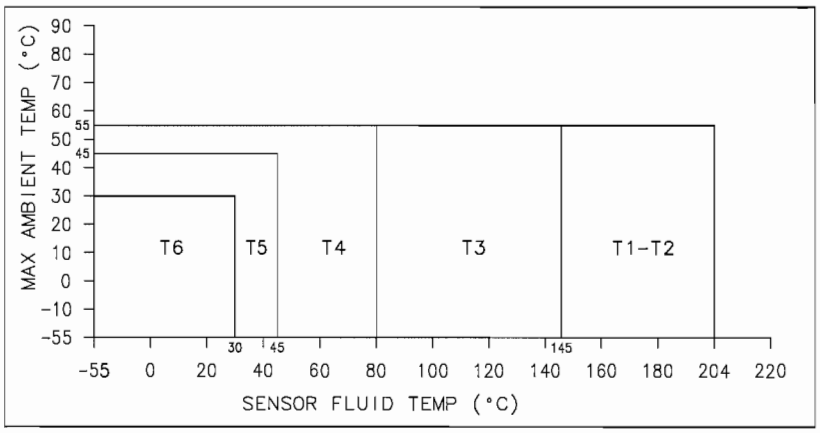
1.4.2 For type CMF100*****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

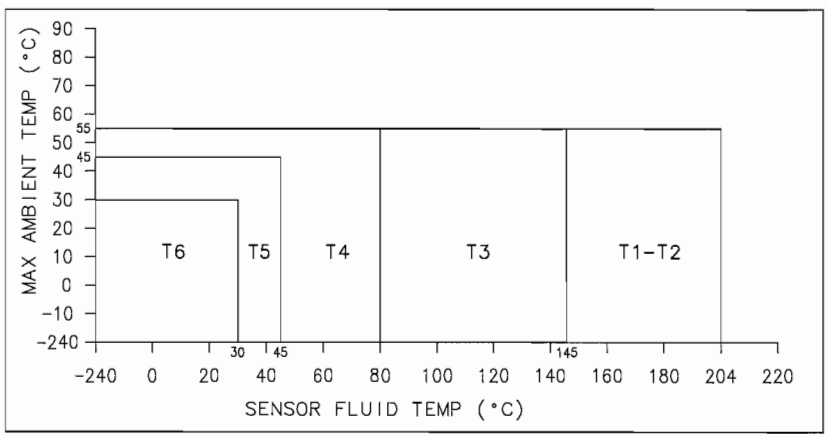
1.4.3 For types CMF200*****(R, H, S)*I**** and CMF300*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

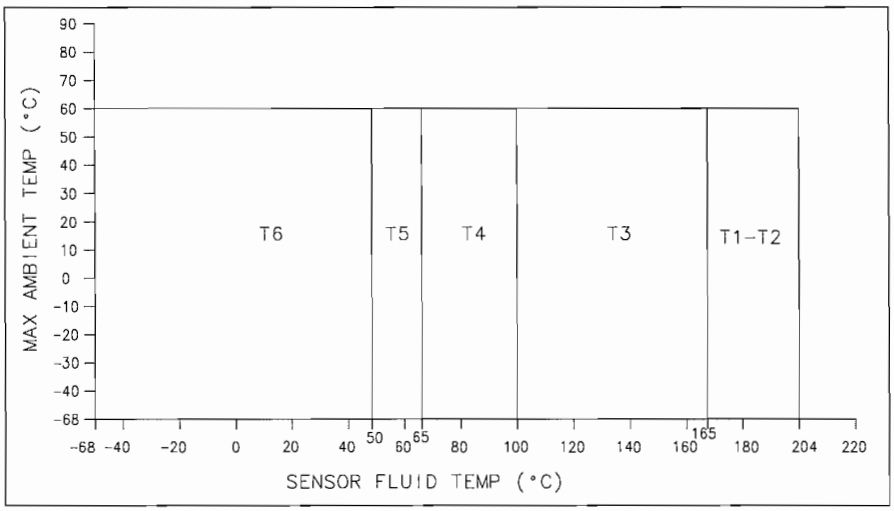
1.4.4 For types CMF200*****(R,H,S)*I**** and CMF300*****(R,H,S)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

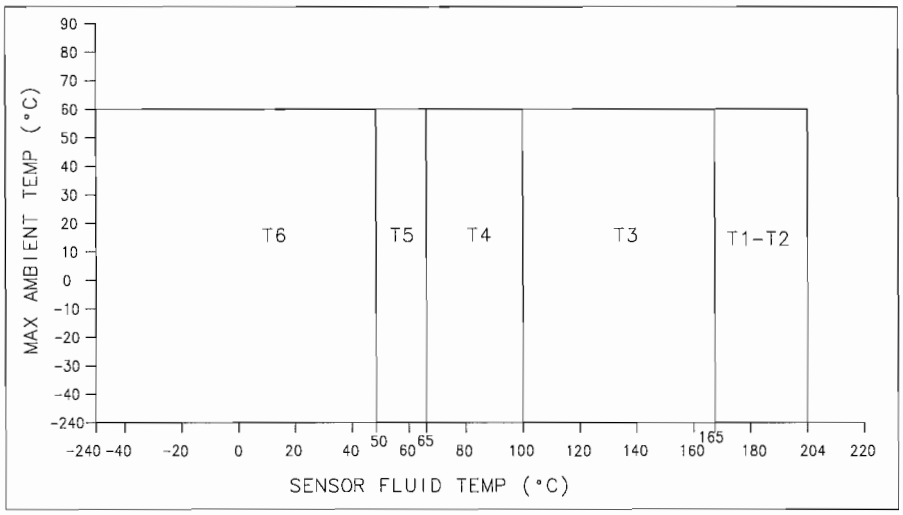
1.4.5 For type CMF400*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C
The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6 For type CMF400*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta		-240 °C up to +60 °C

The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2 Type CMF***(A, B, C, E)****(R, H, S)*I**** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
Effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	4,0	32,3	19,8	-50
CMF300(A, B, C, E)****(R, H, S)*I****	4,0	32,3	19,8	-50
CMF400(A, B, C, E)****(R, H, S)*I****	7,75	54,3	19,8	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

voltage	Ui	DC	30	V
current	Ii		101	mA
power	Pi		750	mW
effective internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	1,25	15,4	569,2	-50
CMF300(A ,B, C, E)****(R, H, S)*I****	1,25	15,4	569,2	-50
CMF400(A, B, C, E)****(R, H, S)*I****	6,5	41,1	569,2	-50

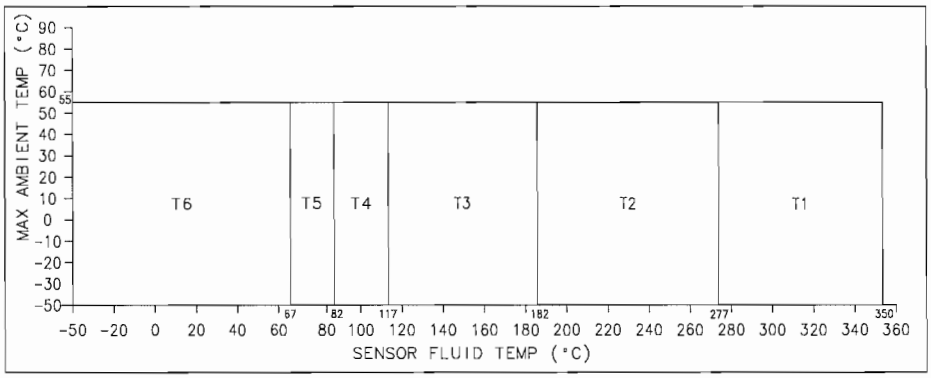
2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

2.4 Thermal data
Regulation of temperature class

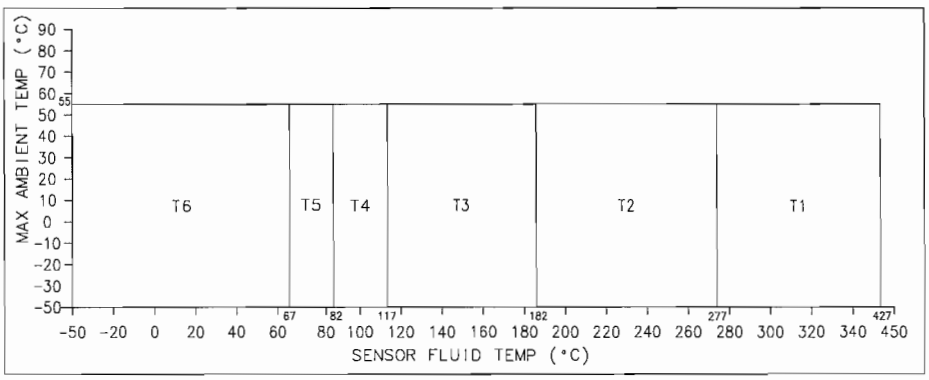
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

2.4.1 For types CMF200(A, B)****(R, H, S)*I**** and CMF300(A, B)****(R, H, S)*I**** with J-box and CMF400(A, B)****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

2.4.2 For types CMF200(C, E)****(R, H, S)*I**** and CMF300(C, E)****(R, H, S)*I**** with J-box and CMF400(C, E)****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

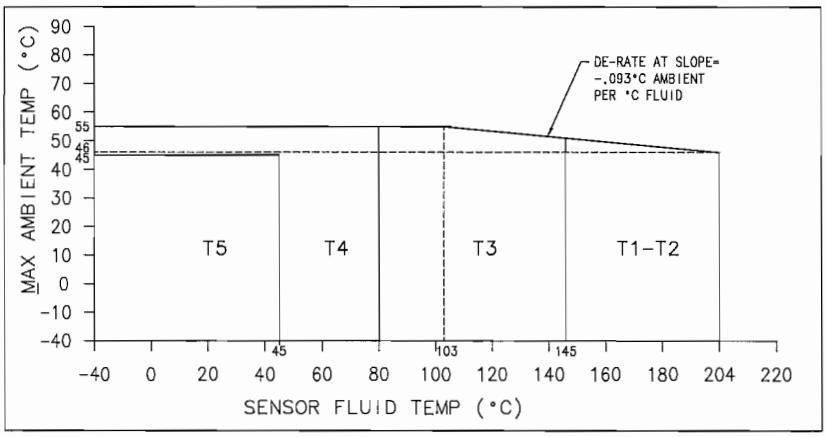
3 For types CMF********(2, 3, 4, 5, A, B, Q, V)*I**** inclusive Construction Identification Code (C.I.C) A4

3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17,3	V
Current	Ii		484	mA
Power	Pi		2,1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

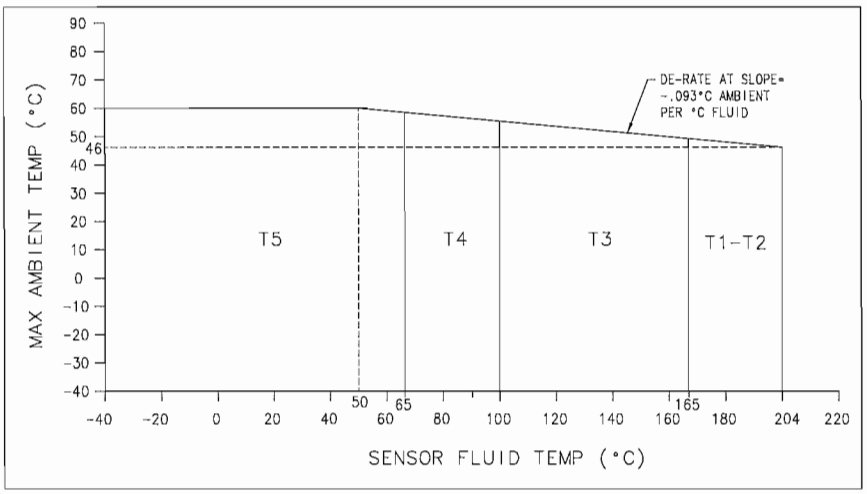
3.2 Temperature class
except types CMF***(A, B, C, E)****(2, 3, 4, 5, A, B, Q, V)*I****
The classification into a temperature class/determination of the maximum surface temperature T depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

3.2.1 For types CMF010*****(2, 3, 4, 5, A, B, Q, V)*I****,
CMF025*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF050*****(2, 3, 4, 5, A, B, Q, V)*I****,
CMF100*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF200*****(2, 3, 4, 5, A, B, Q, V)*I****,
CMF300*****(2, 3, 4, 5, A, B, Q, V)*I**** with Construction Identification Code (C.I.C) A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

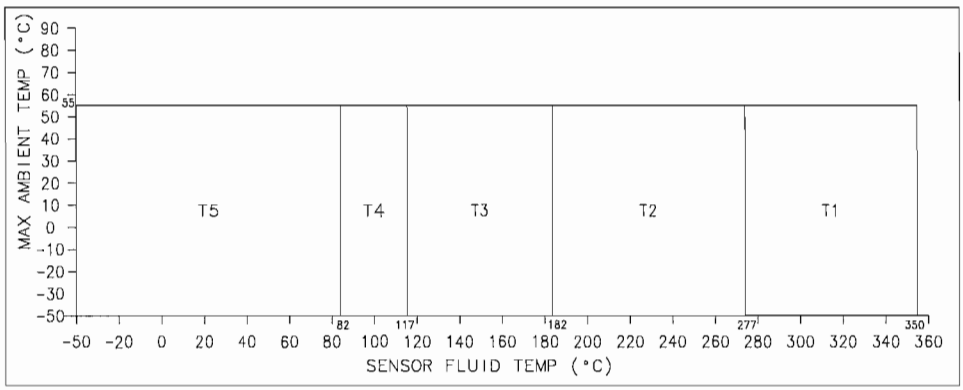
3.2.2 For type CMF400*****(2, 3, 4, 5, A, B, Q, V)*I***** with Construction Identification Code (C.I.C) marking A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

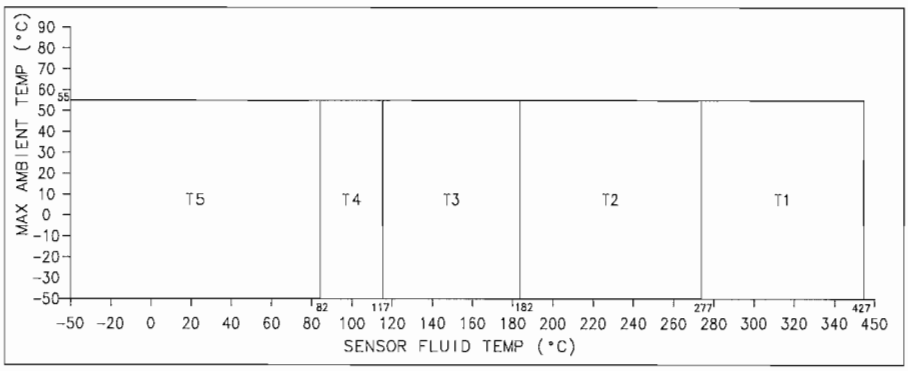
3.2.3 For types CMF200(A,B)****(2, 3, 4, 5 A, B, Q, V)*I****,
CMF300(A,B)****(2, 3, 4, 5 A, B, Q, V)*I **** and CMF400(A,B)****(2, 3, 4, 5 A, B, Q, V)*I ****
with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.4 For types CMF200(C,E)****(2, 3, 4, 5 A, B, Q, V)*I ****,
CMF300(C,E)****(2, 3, 4, 5 A, B, Q, V)*I **** and CMF400(C,E)****(2, 3, 4, 5 A, B, Q, V)*I ****
with integrally mounted core processor



Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

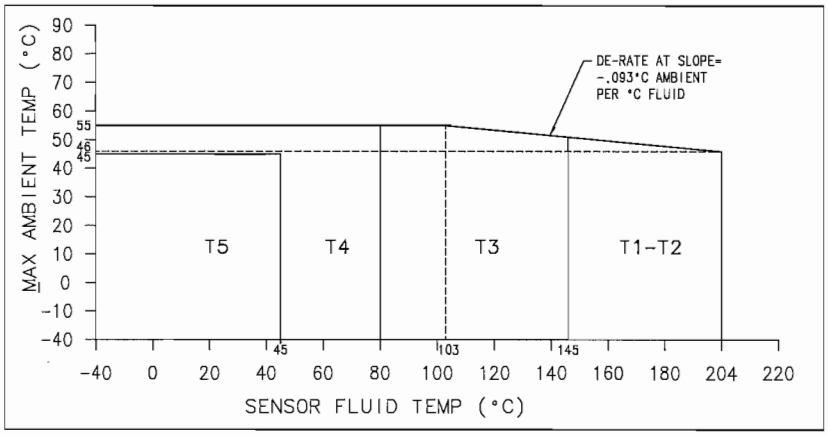
4 Type CMF*******(C,F)*I****

4.1 Electrical parameters see BVS 04.0006X for the transmitter type *700**********

4.2 Temperature class
except types CMF***(A, B, C, E)****(C, F)*I****

The classification into a temperature class/determination of the maximum surface temperature T depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

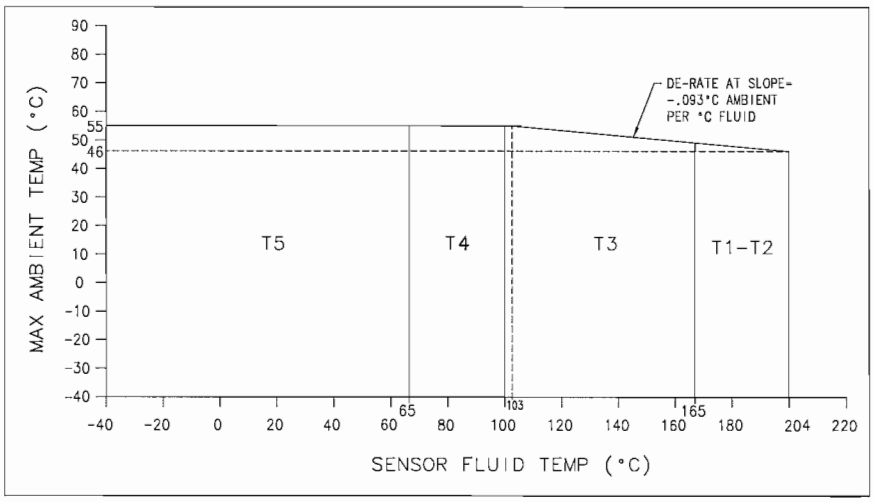
4.2.1 For types CMF010*****(C, F)*I****, CMF025*****(C, F)*I****, CMF050*****(C, F)*I****,
CMF100*****(C, F)*I****, CMF200*****(C, F)*I****, CMF300*****(C, F)*I**** and
CMF200*****(C, F)*I**** and CMF300*****(C, F)*I**** with Construction Identification Code (C.I.C) A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

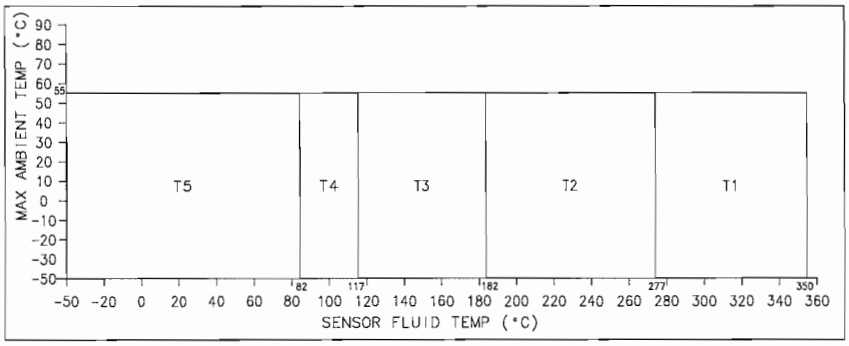
4.2.2 For type CMF400*****(C, F)*I**** inclusive Construction Identification Code (C.I.C) marking A4 mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

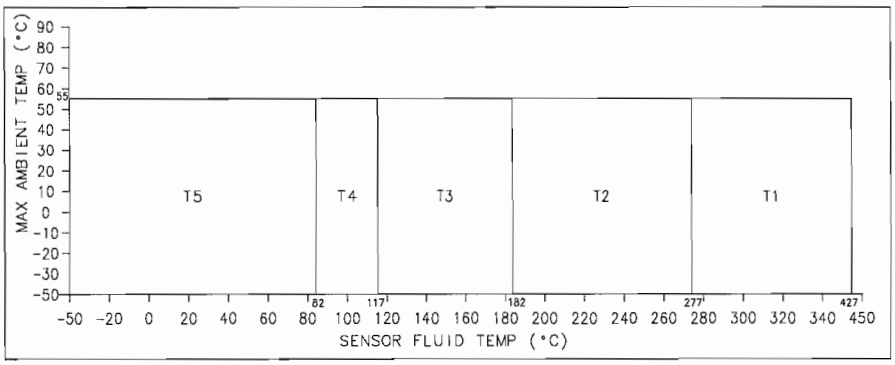
4.2.3 For types CMF200(A, B)****(C, F)*I****, CMF300(A, B)****(C, F)*I**** and CMF400(A, B)****(C, F)*I**** mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.2.4 For types CMF200(C, E)****(C, F)*I****, CMF300(C, E)****(C, F)*I**** and CMF400(C, E)****(C, F)*I**** mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 2**
Annex

Marking
The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient/Fluid temperature range
CMF010 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF025 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF050 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*I****	Ex ib IIC T1-T6	- 60 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I**** incl. CMF200 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF200[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I**** incl. CMF300 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[1]*I**** incl. CMF400 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 68 °C ≤ Ta ≤ +60 °C
CMF400 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +60 °C
CMF400[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF010 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF025 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF050 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF100 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I**** incl. CMF200 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I**** incl. CMF300 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[2]*I**** incl. CMF400 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +60 °C
CMF400 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF400[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C

1) at this place the letter R, H or S may be inserted
2) at this place the letter A, B, Q or V may be inserted
4) at this place the letter A, B, C or E may be inserted

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X Issue 3**
Annex

General product information:

Modified Parameters

1 Type CMF***(A, B, C, E)****(R, H, S)*Z**** with J-box

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	4.01	32.3	19.8	-50
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	
CMF300(A, B, C, E)****(R, H, S)*I****	4.01	32.3	19.8	-50
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	
CMF400(A, B, C, E)****(R, H, S)*I****	7.75	54.3	19.8	-50
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	3.4	35.2	12.8	

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Effective internal capacitance negligible

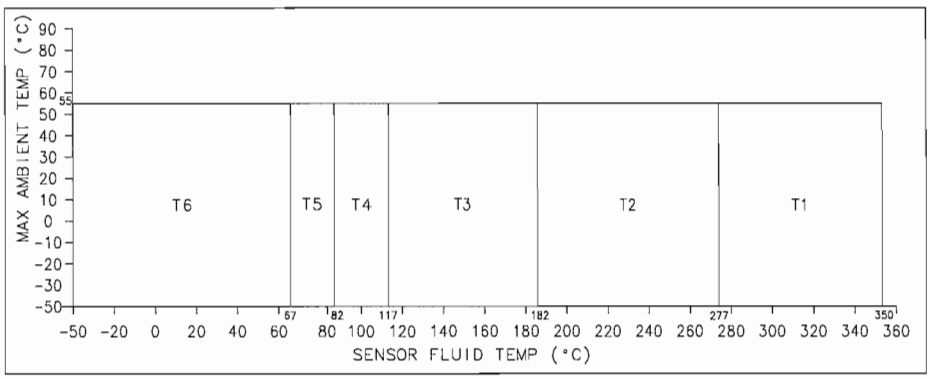
Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	1.25	15.4	569.2	-50
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0		
CMF300(A ,B, C, E)****(R, H, S)*I****	1.25	15.4	569.2	-50
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0		
CMF400(A, B, C, E)****(R, H, S)*I***	6.5	41.1	569.2	-50
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4		

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

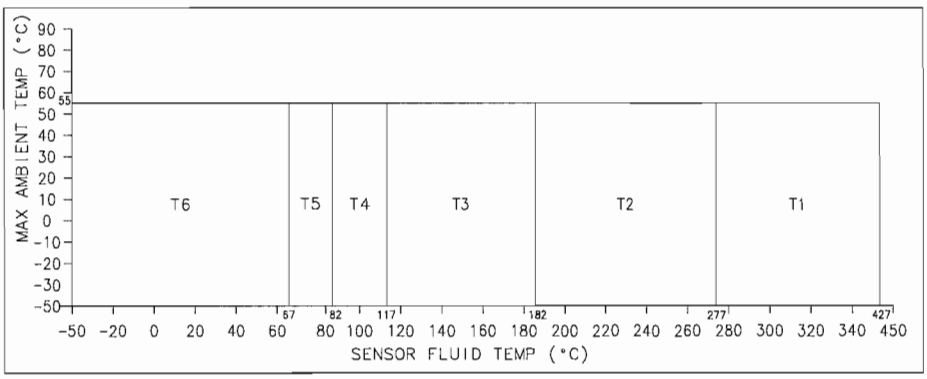
1.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1 For types CMF200(A, B)****(R, H, S)*I**** C.I.C. A5 or no marking, CMF300(A, B)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box and CMF400(A, B)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box connected to MVD transmitters only



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

1.4.2 For types CMF200(C, E)****(R, H, S)*I**** C.I.C. A5 or no marking, CMF300(C, E)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box and CMF400(C, E)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box connected to MVD transmitters only



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

1.5 Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

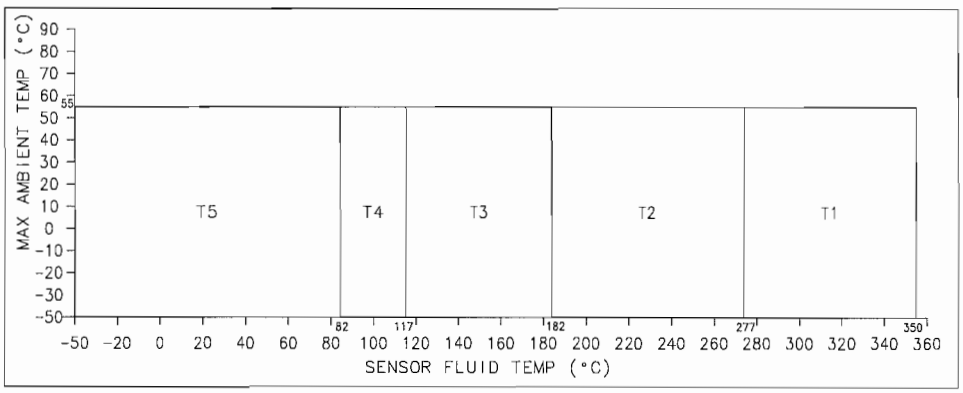
2 For types CMF***(A,B,C,E)****(2, 3, 4, 5, 6, 7, 8, 9, A, B, D, E, Q, V, W, Y)*I**** inclusive Construction Identification Code (C.I.C) A5 or no marking

2.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

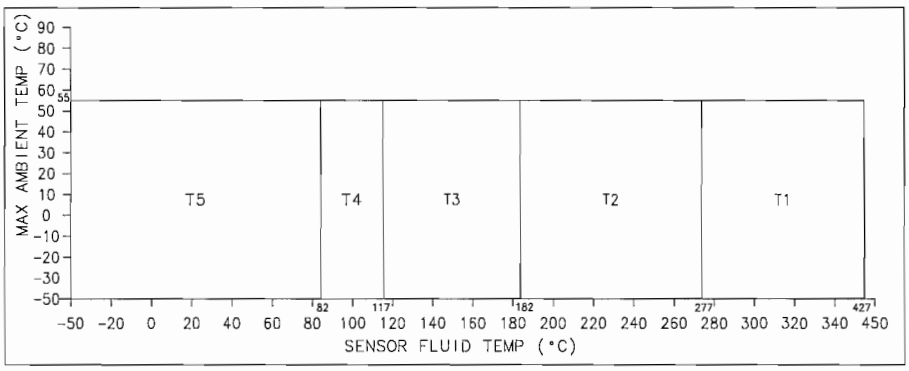
2.2 Temperature class
for types CMF***(A,B,C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.2.1 For types CMF200(A,B)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking,
CMF300(A,B)****(2, 3, 4, 5, A, B, Q, V)*Z**** C.I.C. A5 or no marking and
CMF400(A,B)****(2, 3, 4, 5, A, B, Q, V)*Z**** C.I.C. A5 or no marking
with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

2.2.2 For types CMF200(C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking, CMF300(C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking and CMF400(C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

2.3 Ambient temperature range Ta -50 °C bis +55 °C

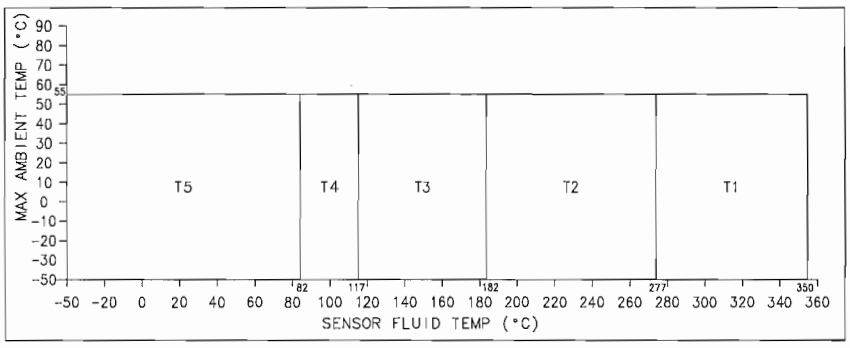
The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3 Type CMF***(A,B,C,E)****(C,F)*I****

3.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

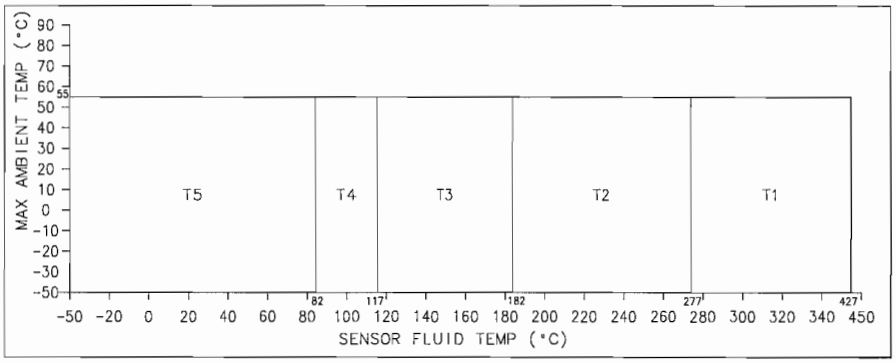
3.2 Temperature class
for types CMF***(A,B,C,E)****(C, F)*I**** C.I.C. A5 or no marking
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

3.2.1 For types CMF200(A, B)****(C, F)*Z**** C.I.C. A5 or no marking, CMF300(A, B)****(C, F)*Z**** C.I.C. A5 or no marking and CMF400(A, B)****(C, F)*Z**** C.I.C. A5 or no marking mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

3.2.2 For types CMF200(C, E)****(C, F)*I**** C.I.C. A5 or no marking, CMF300(C, E)****(C, F)*I**** C.I.C. A5 or no marking and CMF400(C, E)****(C, F)*I**** C.I.C. A5 or no marking mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

3.3 Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X Issue 3**
Annex

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient/Fluid temperature range
CMF010 *****[1]*|****	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF025 *****[1]*|****	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF050 *****[1]*|****	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*|****	Ex ib IIC T1-T6	-60 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*|**** incl. CMF200 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	-55 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200[4)]****[1]*|**** incl. CMF200[4)]*****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*|**** incl. CMF300 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	-55 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF300[4)] ****[1]*|**** incl. CMF300[4)] ****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF400 *****[1]*|**** incl. CMF400 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	-68 °C ≤ Ta ≤ +60 °C
CMF400 *****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +60 °C
CMF400[4)] ****[1]*|**** incl. CMF400[4)] ****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF010 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF025 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF050 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF100 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2)]*|**** incl. CMF200 *****[2)]*|**** CIC A3	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2)]*|**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200[4)] ****[2)]*|**** incl. CMF200[4)] ****[2)]*|**** CIC A5	Ex ib IIB T1-T5	-50 °C ≤ Ta ≤ +55 °C
CMF300 *****[2)]*|**** incl. CMF300 *****[2)]*|**** CIC A3	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF300 *****[2)]*|**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF300[4)] ****[2)]*|**** incl. CMF300[4)] ****[2)]*|**** CIC A5	Ex ib IIB T1-T5	-50 °C ≤ Ta ≤ +55 °C
CMF400 *****[2)]*|**** incl. CMF400 *****[2)]*|**** CIC A3	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +60 °C
CMF400 *****[2)]*|**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF400[4)] ****[2)]*|**** incl. CMF400[4)] ****[2)]*|**** CIC A5	Ex ib IIB T1-T5	-50 °C ≤ Ta ≤ +55 °C

1) at this place the letter R, H or S may be inserted
2) at this place the number 2, 3 ,4 or 5 or the letter A, B, Q or V may be inserted
4) at this place the letter A, B, C or E may be inserted

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X	issue No.:3	Certificate history: Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)
Status:	**Current**		
Date of Issue:	**2007-08-01**	Page 1 of 5	

Applicant: **Micro Motion, Inc.**
Boulder, Co. 80301
United States of America

Electrical Apparatus: **Sensor type CMF*** *******|****
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ib IIB/IIC T1 - T5/T6**

Approved for issue on behalf of the IECEx Certification Body: Dr. R. Jockers

Position: Head of Certification Body

Signature:
(for printed version)

Date: 01.08.2007

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-08-01** Issue No.: **3**

Manufacturer: **Micro Motion, inc.**
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Co., Ltd
1277 Xin Jin Qiao Rd
Jin Qiao Export Processing Zone
Pudong
Shanghai 201206
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture'rs quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/00 and DE/BVS/ExTR06.0009/01 and DE/BVS/ExTR06.0009/02 and DE/BVS/ExTR06.0009/03

File Reference:
DE/BVS/04/2024 and DE/BVS/04/2024/N1 and DE/BVS/04/2024/N2 and DE/BVS/04/2024/N3

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-08-01** Issue No.: **3**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The flow sensor in combination with a transmitter is used for flow measurement.
The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, resistors, temperature sensors and terminals and connectors.
The sensors type **CMF*** *****(A, B, Q or V)*I**** have an enclosure with an inside mounted processing device type 700 (IECEx BVS 04.0002U).
These variation will have classification code Ex ib IIC T1-T5.
The sensor **type CMF*** *****(R or H)*I**** have an enclosure with inside mounted terminal blocks.
These variation will have classification code Ex ib IIC T1-T6.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination **type CMF*** *****C*I**** and **type CMF*** *****F*I****.

CONDITIONS OF CERTIFICATION: YES as shown below:

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I****	CMF200 *****C*I****
	CMF025 *****C*I****	CMF300 *****C*I****
	CMF050 *****C*I****	CMF200 *****F*I****
	CMF100 *****C*I****	CMF300 *****F*I****
	CMF010 *****F*I****	CMF400 *****F*I****
	CMF025 *****F*I****	CMF400 *****C*I****
	CMF050 *****F*I****	
	CMF100 *****F*I****	
Transmitter type *700*11*******	Ex ib IIB+H2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-08-01** Issue No.: **3**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Description (for Issue 1)

The flow sensor can be modified and additional variations are available.

The flow sensor can be mounted to the transmitter type *700*12******* or the transmitter type *700*15******* alternatively.

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.

Parameters and marking see Annex Product Description Issue 1.

The sensors can also have an alternative 9-wire feed-through.

Description (for Issue 2)

The junction box can be out of stainless steel, these variations gets the denomination type CMF********S*I****.

The coils of types CMF200*****(R, H, S)*I****, CMF300*****(R, H, S)*I**** and CMF400*****(R, H, S)*I**** have been modified and are suitable for use in group IIC; these variations get the Construction Identification Code (CIC) A4.

Instead of the junction box (type CMF********(R, H, S)*I****) an enclosure with an integral mounted signal processing device type 700 can be used; this variation gets the denomination type CMF********(A, B)*I**** for a steel enclosure and CMF********(Q, V)*I**** for an aluminium enclosure.

When used with an integral mounted enhanced signal processing device type 800 (IECEx BVS 05.0010U); the variation gets the denomination type CMF********(3, 5)*I**** for a steel enclosure and CMF********(2, 4)*I**** for an aluminium enclosure.

The high temperature version CMF*** (A, B, C, E)******I**** can be executed with a junction box, or transmitter, or core processor, or enhanced core processor.

Parameters and marking see Annex Product Description Issue 2.

Description (for issue 3)

The manufacturing location Emerson Process Management Co., Ltd, Shanghai, People's Pepublic of China was added.

The manufacturer Micro Motion Inc., Boulder, United States of America changed the EXCB for quality supervision. Responsible is now DNV for all production sites.

The high temperature versions CMF*** (A,B,C,E)******I**** can be manufactured with other coils and get therefore the additional marking with C.I.C. A5.
Also for testing of the sensors the new standard versions of IEC 60079-* have been taken as basis.; a modified marking is the result.

Additional information see Annex.

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Date of Issue: **2007-08-01** Issue No.: **3**

Additional information:

Subject and type
Sensor type **CMF***** *********I******
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:

type **CMF**aaa *e*bbbbcd**I**bbbbb

where
a type of sensor
b marking without influence to the type of protection
c electronic interface:
- A = stainless steel enclosure with 4-wire integral signal processor for remotely mounted transmitter
- B = stainless steel enclosure with 4-wire integral signal processor with extended mount for remotely mounted transmitter
- C = with transmitter type *700****
- F = with transmitter type *700**** with extender
- R = 9-wire epoxy painted aluminum junction box
- H = 9-wire epoxy painted aluminum junction box with extended mount
- Q = epoxy painted aluminum enclosure with 4-wire integral signal processor for remotely mounted transmitter
- V = epoxy painted aluminum enclosure with 4-wire integral signal processor with extended mount for remotely mounted transmitter
- *S = 9-wire stainless steel junction box*
- *2 = aluminium enclosure with integral signal processor type 800 (IECEx BVS 05.0010U)*
- *3 = stainless steel enclosure with integral signal processor type 800 (IECEx BVS 05.0010U)*
- *4 = aluminium enclosure with integral signal processor type 800 (IECEx BVS 05.0010U) and with extender*
- *5 = stainless steel enclosure with integral signal processor type 800 (IECEx BVS 05.0010U) and with extender*

d conduit connection
e High temperature versions
- *A = Stainless Steel Tube 350°C*
- *B = HY Tube 350°C*
- *C = Stainless Steel Tube 427°C*
- *E = HY Tube 427°C*

Changes are made in *italic letters*.

Annexe: Annex.pdf, Annex Product description Issue1.pdf, Annex Product description Issue2.pdf, BVS_04_0007X_N3_Micro Motion_Annex.pdf

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Annex

Subject and type (continued)

Sensor type CMF*** *******I****

The sensors type CMF*** *****(A, B, Q or V)*I**** have an enclosure with an inside mounted processing device type 700 (IECEx BVS 04.0002U). These variations will have classification code Ex ib IIB/IIC T1-T5. The sensors type CMF*** *****(R or H)*I**** have an enclosure with an inside mounted terminal blocks. These variations will have classification code Ex ib IIB/IIC T1-T6.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination type CMF*** *****C*I**** and type CMF*** *****F*I****

By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I**** CMF025 *****C*I**** CMF050 *****C*I**** CMF100 *****C*I**** CMF010 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I****	CMF200 *****C*I**** CMF300 *****C*I**** CMF200 *****F*I**** CMF300 *****F*I**** CMF400 *****C*I**** CMF400 *****F*I****
Transmitter type *700*11*******	Ex ib IIB+H_2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
.Transmitter type *700*14*******	Ex ib IIC T1-5	Ex ib IIB T1-5

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Parameters

1 Type CMF*** *****R*I**** and type CMF*** *****H*I****

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W

Effective internal capacitance negligible

sensor type	inductance [mH]	coil resistance at -20 °C [Ω]	serial resistor at-20 °C [Ω]
CMF010 *****R*I**** CMF010 *****H*I****	2,51	86,8	946,6
CMF025 *****R*I**** CMF025 *****H*I****	2,51	86,8	170,4
CMF050 *****R*I**** CMF050 *****H*I****	2,51	86,8	170,4
CMF100 *****R*I**** CMF100 *****H*I****	6,7	64,5	89
CMF200 *****R*I**** CMF200 *****H*I****	10,4	65,7	24,7
CMF300 *****R*I**** CMF300 *****H*I****	9	74,8	5,9
CMF300A ****R*I**** CMF300A ****H*I****	8,5	63,2	31,3

for type CMF400 *****R*I**** and type CMF400 *****H*I****

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance at -50 °C [Ω]	Serial resistor at-50 °C [Ω]
CMF400 *****R*I**** CMF400 *****H*I****	4,4	15,72	38,56

1.2 Pick-Off circuits (Terminals 5/9 and 6/8 or wire colour green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Effective internal capacitance negligible

sensor type	inductance [mH]	coil resistance at -20 °C [Ω]	serial resistor at -20 °C [Ω]
CMF010 *****R*I**** CMF010 *****H*I****	2,51	86,8	0
CMF025 *****R*I**** CMF025 *****H*I****	2,51	86,8	0
CMF050 *****R*I**** CMF050 *****H*I****	2,51	86,8	0
CMF100 *****R*I**** CMF100 *****H*I****	0,441	12,2	0
CMF200 *****R*I**** CMF200 *****H*I****	0,61	19,6	0
CMF300 *****R*I**** CMF300 *****H*I****	0,61	19,6	0
CMF300A ****R*I**** CMF300A ****H*I****	0,393	35,1	31,3

for type CMF400 *****R*I**** and type CMF400 *****H*I****

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance at -50 °C [Ω]	Serial resistor at -50 °C [Ω]
CMF400 *****R*I**** CMF400 *****H*I****	6,9	99,52	569,2

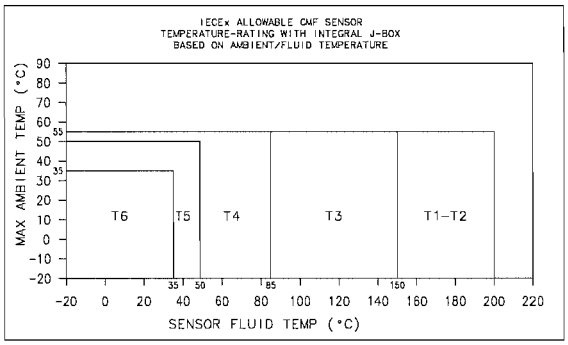
1.3 Temperature circuit (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci	negligible		
Effective internal inductance	Li	negligible		

1.4 Regulation of temperature class

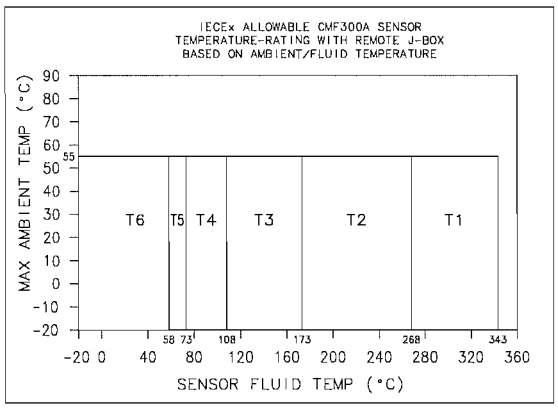
1.4.1 for all types CMF*** *****(R or H)*I**** except CMF300A ****(R or H)*I**** and except CMF400 *****(R or H)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



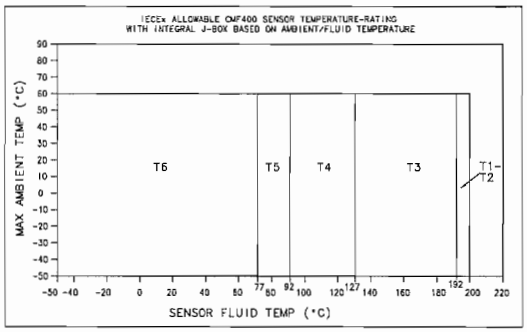
Minimum medium temperature is –20°C.

1.4.2 The classification of the sensors type CMF300A ****R*I**** and type CMF300A ****H*I**** into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –20°C.

1.4.3 The classification of the sensors type CMF400 *****(R or H)*I**** into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –50°C.

1.5 for all types CMF*** *****(R or H)*I**** except CMF400 *****(R or H)*I****

Ambient temperature range	Ta	-20 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.
The ambient temperature of the sensor may be less than –20°C provided the temperature of the medium is not less than 0°C.

for Type CMF400 *****(R or H)*I****

Ambient temperature range	Ta	-50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

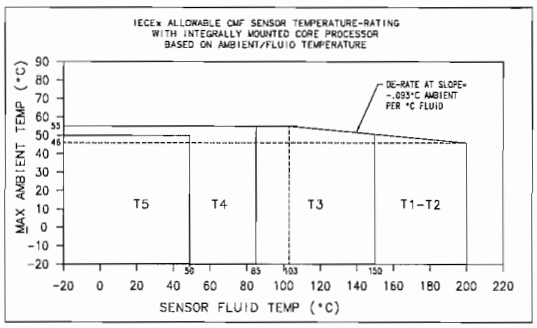
2 for all types CMF*** *****(A, B, Q or V)*I**** except CMF300A *******I****

2.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17,3	V
Current	Ii		484	mA
Power	Pi		2,1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

2.2 Regulation of temperature class

2.2.1 for all types CMF*** *****(A, B, Q or V)*I**** except CMF400 *****(A, B, Q or V)*I****
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



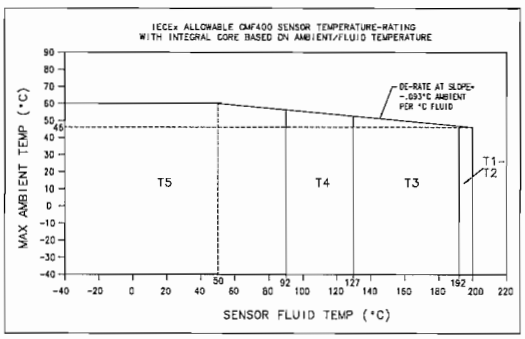
Minimum medium temperature is –20°C.

Ambient temperature range	Ta	-20 °C up to +55 °C

The ambient temperature of the sensor may be–40°C provided the temperature of the medium is not less than 0°C.

2.2.2 Type CMF400 *****(A, B, Q or V)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –40°C.

Ambient temperature range	Ta	-40 °C up to +60 °C

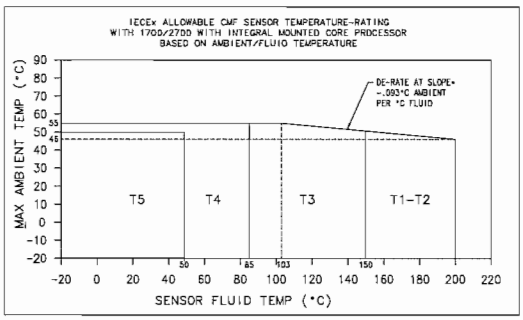
3 for all types CMF*** *****(C or F)*I**** except CMF300A *******I****

3.1 Electrical parameters see IECEx BVS 04.0006X for the transmitter type *700**********

3.2 Regulation of temperature class

3.2.1 for all types CMF*** *****(C or F)*I**** except CMF400 *****(C or F)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

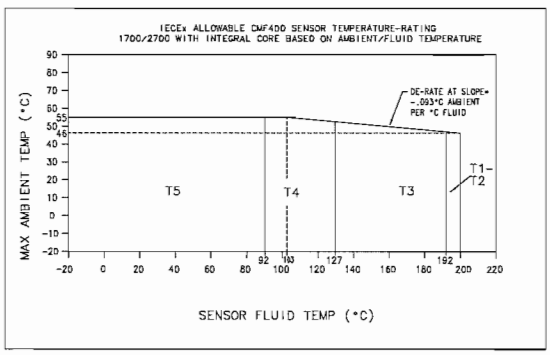


Minimum medium temperature is –20°C.

Ambient temperature range	Ta	-20 °C up to +55 °C

3.2.2 Type CMF400 *****(C or F)*I****

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:



Minimum medium temperature is –20°C.

Ambient temperature range	Ta	-20 °C up to +55 °C

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Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient temperature range
CMF010 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[1]*I****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300A ****[1]*I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[1]*I****	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF010 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[2]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[2]*I****	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF010 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[3]*I****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[3]*I****	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C

[1] at this place the letter R or H may be inserted

[2] at this place the letter A, B, Q or V may be inserted

[3] at this place the letter C or F may be inserted

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Details for Certificate Changes (for Issue 1)

Subject and Type
Sensor type CMF*** *******I****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:
type **CMF**aaa bbbbbcd**I**bbbb

where

- a type of sensor
- b marking without influence to the type of protection
- c electronic interface:
  - A = 4-wire stainless steel integral signal processor for remotely mounted transmitter
  - B = 4-wire stainless steel integral signal processor with extended mount for remotely mounted transmitter
  - C = with transmitter type *700****
  - F = with transmitter type *700**** with extender
  - R = 9-wire epoxy painted aluminium junction box
  - H = 9-wire epoxy painted aluminium junction box with extended mount
  - Q = 4-wire epoxy painted aluminium integral signal processor for remotely mounted transmitter
  - V = 4-wire epoxy painted aluminium integral signal processor with extended mount for remotely mounted transmitter
- d conduit connection

Alternatively a transmitter type *700********** (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination type CMF*** *****C*I**** and type CMF*** *****F*I****.
By mounting the sensor directly to the transmitter the use of the unit will be modified according to the following table:

	CMF010 *****C*I**** CMF025 *****C*I**** CMF050 *****C*I**** CMF100 *****C*I**** CMF010 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I****	CMF200 *****C*I**** CMF300 *****C*I**** CMF200 *****F*I**** CMF300 *****F*I**** CMF400 *****C*I**** CMF400 *****F*I****
Transmitter type *700*1[1)]*******	Ex ib IIB+H_2 T1-5	Ex ib IIB T1-5
Transmitter type *700*13*******	Ex ib IIC T1-5	Ex ib IIB T1-5
Transmitter type *700*1[2)]*******	Ex ib IIC T1-5	Ex ib IIB T1-5

1) at this place the numeral 1 or **2** can be inserted (new version in bold)
2) at this place the numeral 4 or **5** can be inserted (new version in bold)

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Annex

The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.

The sensors can also have an alternative 9-wire feed-through.

Modified parameters

1 Drive coil (Terminals 1/2 or wires red/brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
effective internal capacitance			negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]
CMF200 *****[1]*I**** CIC A3 CMF200 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	9,5	102,6 at -20 °C	0
CMF300 *****[1]*I**** CIC A3 CMF300 *****[2]*I**** CIC A3 CMF300 *****[3]*I**** CIC A3	9,5	102,6 at -20 °C [Ω]	0
CMF400 *****[1]*I**** CIC A3 CMF400 *****[2]*I**** CIC A3 CMF400 *****[3]*I**** CIC A3	11,75	79,2 at -50 °C [Ω]	19,8 at -50 °C [Ω]

[1] At this place the letter R or H will be inserted.

[2] At this place the letter A, B, D, E, Q, V, W or Y will be inserted.

[3] At this place the letter C or F will be inserted.

2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]
CMF200 *****[1]*I**** CIC A3 CMF200 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	2,0	46,3 at -20 °C	0 - 567,9 at -20 °C
CMF300 *****[1]*I**** CIC A3 CMF300 *****[2]*I**** CIC A3 CMF200 *****[3]*I**** CIC A3	2,0	46,3 at -20 °C	0 - 567,9 at -20 °C
CMF400 *****[1]*I**** CIC A3 CMF400 *****[2]*I**** CIC A3 CMF400 *****[3]*I**** CIC A3	12,4	121,8 at -50 °C	0 - 566,4 at -50 °C

[1] At this place the letter R or H will be inserted.

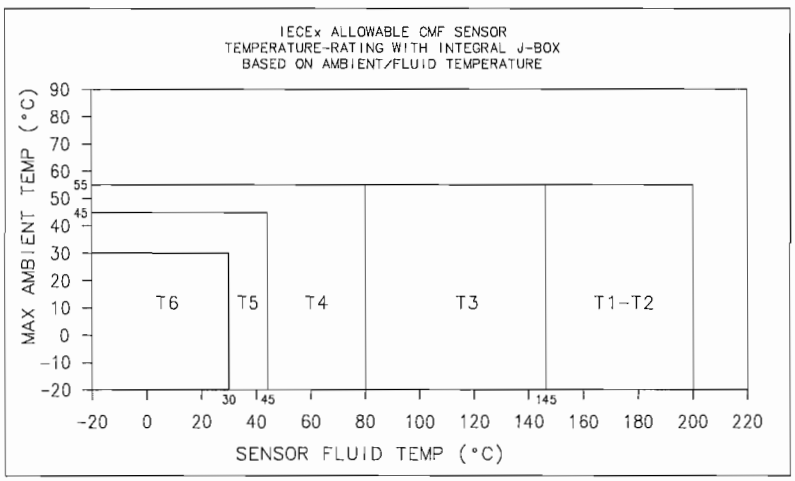
[2] At this place the letter A, B, D, E, Q, V, W or Y will be inserted.

[3] At this place the letter C or F will be inserted.

3 Thermal data
Regulation of temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

3.1 Type CMF*** *****R*I**** or CMF*** *****H*I**** with Construction Identification Code (CIC) A3, except for CMF300A *****R*I****, CMF300A *****H*I**** and CMF400 *****R*I****, CMF400 *****H*I****



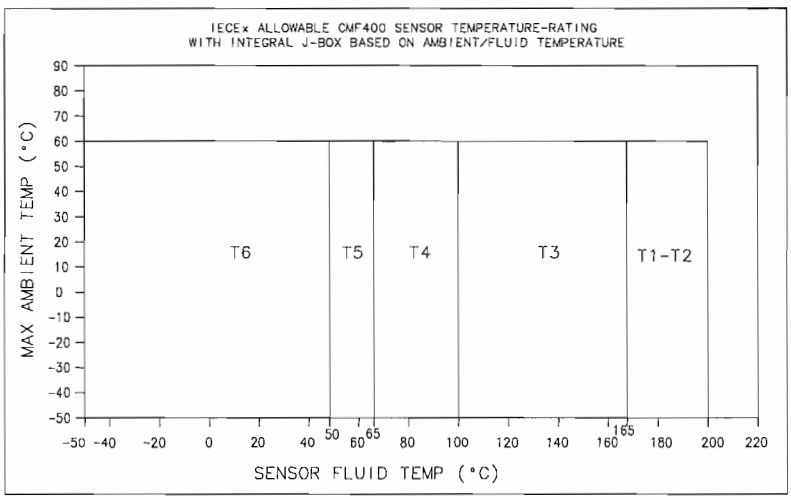
Minimum medium temperature is -20°C.

Ambient temperature range Ta -20 °C up to +55 °C

The use of the sensor at higher ambient temperature is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

The ambient temperature of the sensor may be less than –20°C provided the temperature of the medium is not less than 0°C.

3.2 Type CMF400 *****R*I**** or CMF400 *****H*I**** Construction Identification Code (CIC) A3:



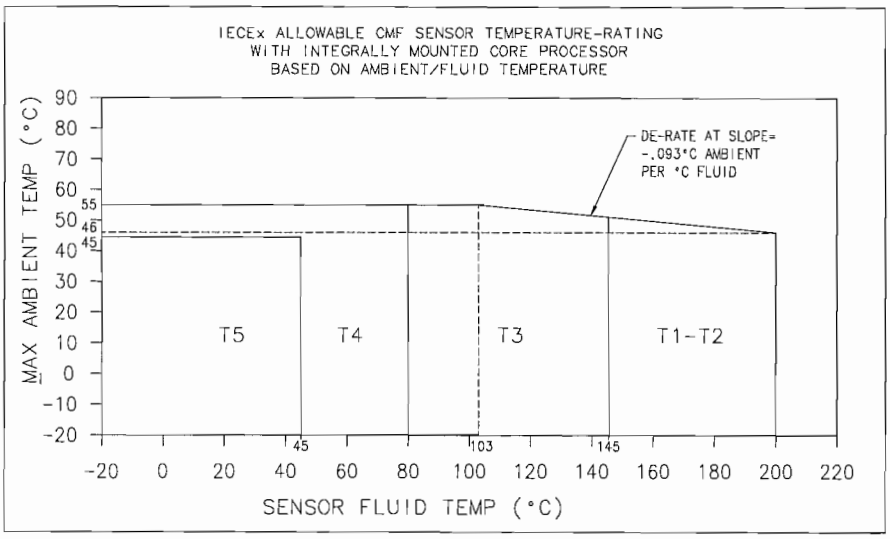
Minimum medium temperature is -50°C.

Ambient temperature range	Ta	-50 °C up to +60 °C

The ambient temperature of the sensor may be less than –50°C provided the temperature of the medium is not less than 0°C.

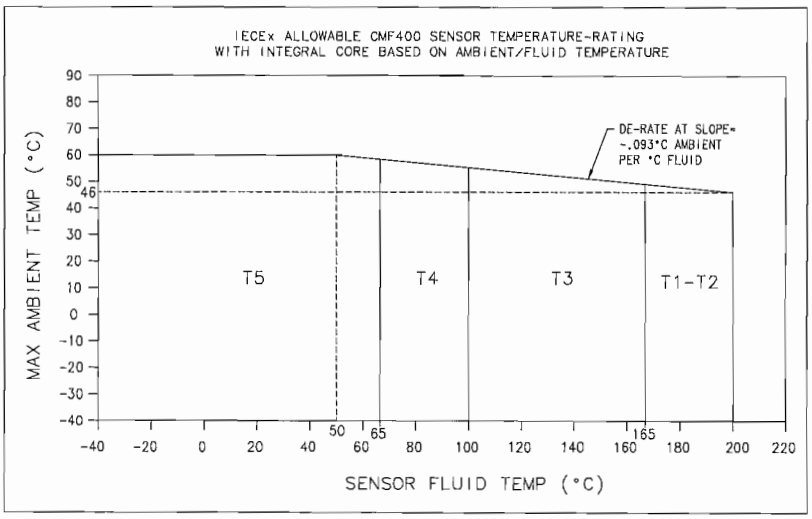
The use of the sensor at higher ambient temperature is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.3 Type CMF*** *****(A, B, D, E, Q, V, W or Y)*I**** with Construction Identification Code (CIC) A3, except for CMF300A *****(A, B, D, E, Q, V, W or Y)*I**** and CMF400 *****(A, B, D, E, Q, V, W or Y)*I****:



Minimum medium temperature is -20°C.
Ambient temperature range Ta -20 °C up to +55 °C
The ambient temperature of the sensor may be –40°C provided the temperature of the medium is not less than 0°C

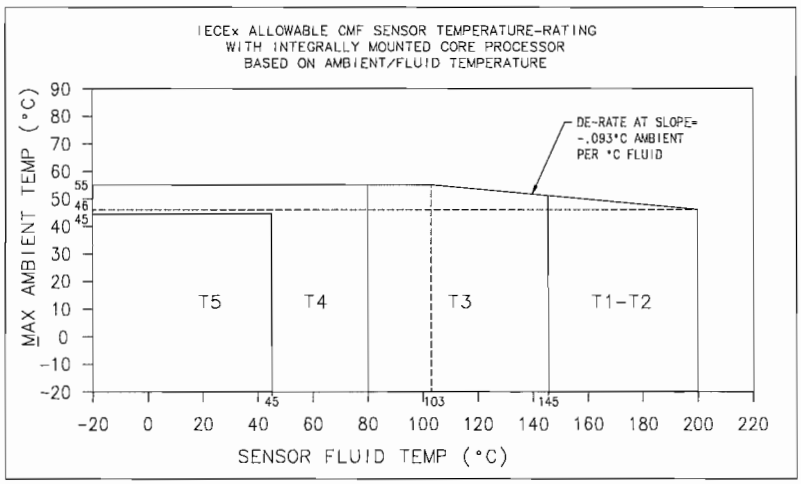
3.4 Type CMF400 *****(A, B, D, E, Q, V, W or Y)*I**** Construction Identification Code (CIC) A3



Minimum medium temperature is -40°C.

Ambient temperature range Ta -40 °C up to +60 °C

3.5 Type CMF*** *****C*I**** or CMF*** *****F*I**** Construction Identification Code (CIC) A3, except for CMF300A *****C*I****, CMF300A *****F*I**** and CMF400 *****C*I****, CMF400 *****F*I****

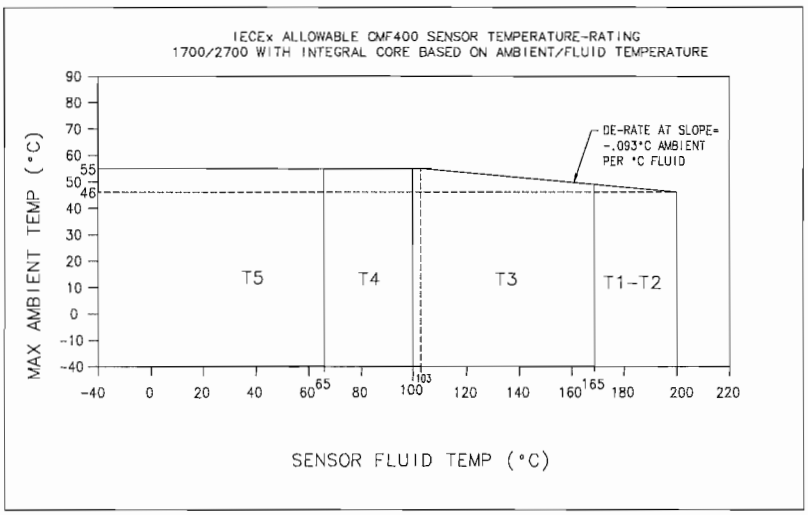


Minimum medium temperature is -20°C.

Ambient temperature range Ta –20 °C up to +55 °C

The ambient temperature of the sensor may be –40°C provided the temperature of the medium is not less than 0°C

3.6 Type CMF400 *****C*I**** or CMF400 *****F*I**** Construction Identification Code (CIC) A3



IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 1**

Annex

Minimum medium temperature is -40°C.

Ambient temperature range Ta –40 °C up to +55 °C

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient temperature range
CMF010 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF100*****[1]*|****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[1]*|**** incl. CMF200 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[1]*|**** incl. CMF300 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300A ****[1]*|****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[1]*|**** incl. CMF400 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF010 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[2]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[2]*|**** incl. CMF200 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[2]*|**** incvl. CMF300 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[2]*|**** incl. CMF400 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF010 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF100 *****[3]*|****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 *****[3]*|**** incl. CMF200 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****[3]*|**** incl. CMF300 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 *****[3]*|**** incl. CMF400 *****[3]*|**** CIC A3	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C

[1] at this place the letter R or H may be inserted
[2] at this place the letter A, B, Q or V may be inserted
[3] at this place the letter C or F may be inserted

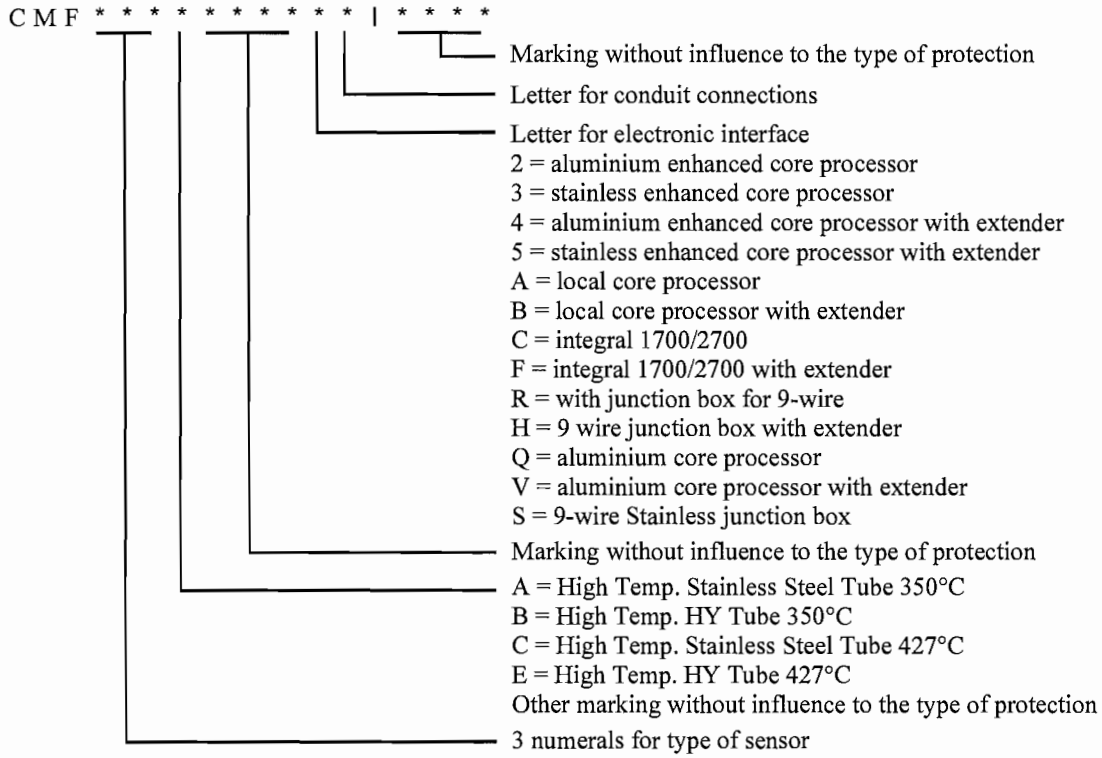
IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 2**
Annex

Details for Certificate Changes (for Issue 2)

Subject and Type
Sensor type CMF*** *******I****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:



Alternatively a transmitter type *700********** can be mounted directly to the sensor CMF********(C, F)*I****; the use of the unit will be modified according to the following table:

Transmitter type	CMF010*****(C, F)*I**** CMF025*****(C, F)*I**** CMF050*****(C, F)*I**** CMF100*****(C, F)*I**** CMF100*****(C, F)*I**** C.I.C. A4 CMF200*****(C, F)*I**** C.I.C A4 CMF300*****(C, F)*I**** C.I.C A4 CMF400*****(C, F)*I**** C.I.C A4	CMF200*****(C, F)*I**** CMF300*****(C, F)*I**** CMF400*****(C, F)*I**** CMF200(A, B, C, E)*****(C or F)*I**** CMF300(A, B, C, E)*****(C or F)*I**** CMF400(A, B, C, E)*****(C or F)*I****
*700*1[1)] *******	EEx ib IIB+H_2 T1-T5	EEx ib IIB T1-T5
*700*1[2)] *******	EEx ib IIC T1-T5	EEx ib IIB T1-T5

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3, 4 or 5 will be inserted.

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The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and get the Construction Identification Code (CIC) A4 and canbe used in IIC areas.

Modified parameters

1 Type CMF********(R, H, S)*I**** inclusive Construction Identification Code (C.I.C) A4 except type CMF(A,B,C,E)****(R,H,S)*I****

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
Effective internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum ambient/Fluid Temperature [°C]
CMF010*****(R, H, S)*I****	2,51	78,7 0	948,9 945,1	-40 -240
CMF025*****(R, H, S)*I****	2,51	78,7 0	170,8 170,1	-40 -240
CMF050*****(R, H, S)*I****	2,51	78,7 0	170,8 170,1	-40 -240
CMF100*****(R, H, S)*I****	6,7	58,4 52,4	89	-40 -60
CMF100*****(R, H, S)*I**** CIC A4	6,7	0	177,0	-240
CMF200*****(R, H, S)*I**** CIC A3	9,5	92,9 85,8	0	-40 -55
CMF200*****(R, H, S)*I**** CIC A4	9,5	0	177,0	-240
CMF300*****(R, H, S)*I**** CIC A3	9,5	92,9 85,8	0	-40 -55
CMF300*****(R, H, S)*I**** CIC A4	9,5	0	177,0	-240
CMF400 *****(R, H, S)*I**** CIC A3	11,75	83,5 71,4	19,8	-40 -68
CMF400 *****(R, H, S)*I**** CIC A4	11,75	0	187,1	-240

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF010*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF025*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF050*****(R, H, S)*I****	2,51	78,7 0	0	-40 -240
CMF100*****(R, H, S)*I****	0,441	11,1 9,9	0	-40 -60
CMF100*****(R, H, S)*I**** CIC A4	0,441	0	0 to 567,9	-240
CMF200*****(R ,H, S)*I**** CIC A3	2,0	41,9 38,7	0 to 567,9	-40 -55
CMF200*****(R, H, S)*I**** CIC A4	2,0	0	0 to 567,9	-240
CMF300*****(R, H, S)*I**** CIC A3	2,0	41,9 38,7	0 to 567,9	-40 -55
CMF300*****(R, H, S)*I**** CIC A4	2,0	0	0 to 567,9	-240
CMF400*****(R, H, S)*I**** CIC A3	12,4	128,3 109,8	0 to 566,4	-40 -68
CMF400*****(R, H, S)*I**** CIC A4	12,4	0	0 to 566,4	-240

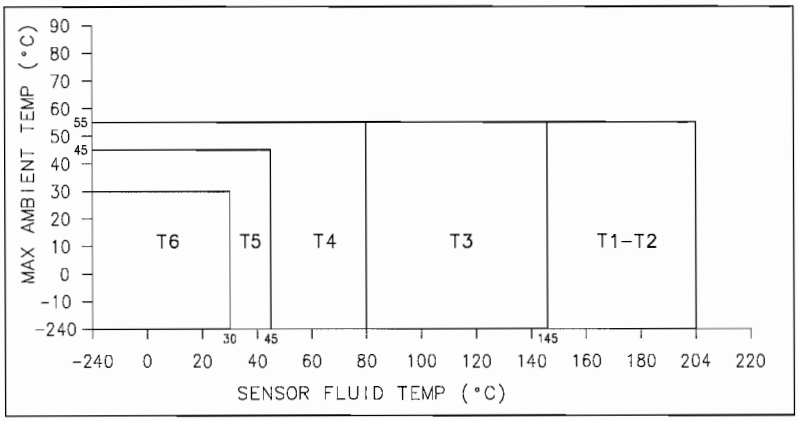
1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

1.4 Thermal data
Regulation of temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

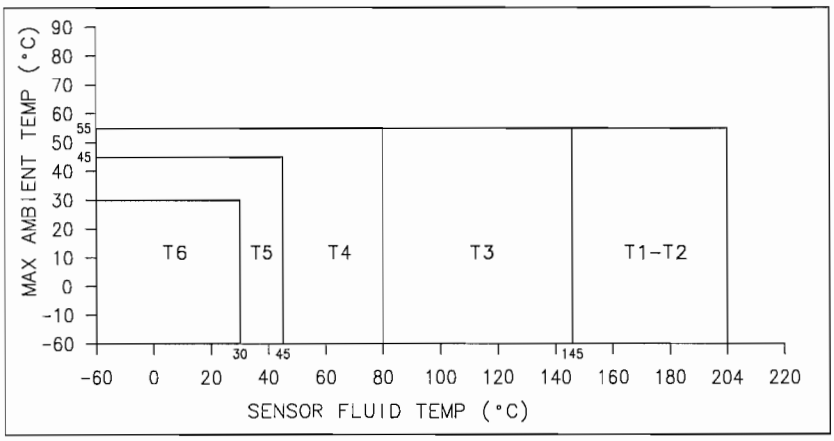
1.4.1 For types CMF010*****(R, H, S)*I****, CMF025*****(R, H, S)*I**** and CMF050*****(R, H, S)*I**** with J-box



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

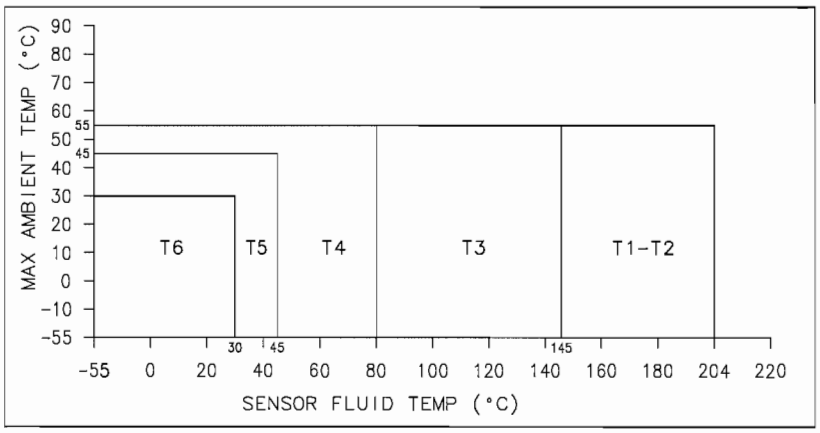
1.4.2 For type CMF100*****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

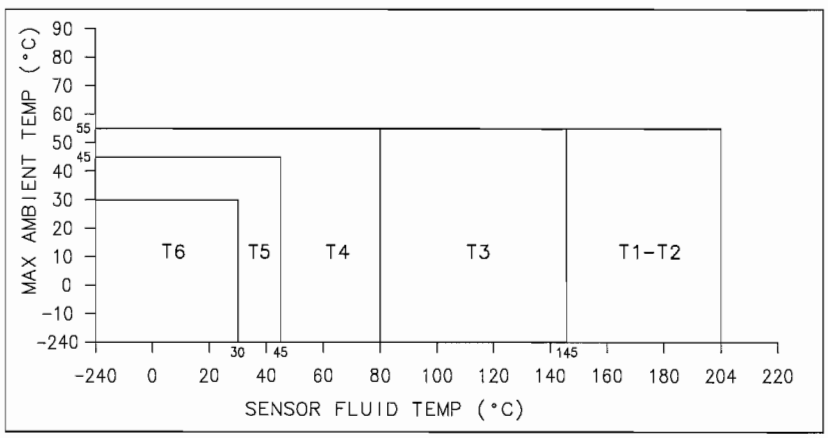
1.4.3 For types CMF200*****(R, H, S)*I**** and CMF300*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

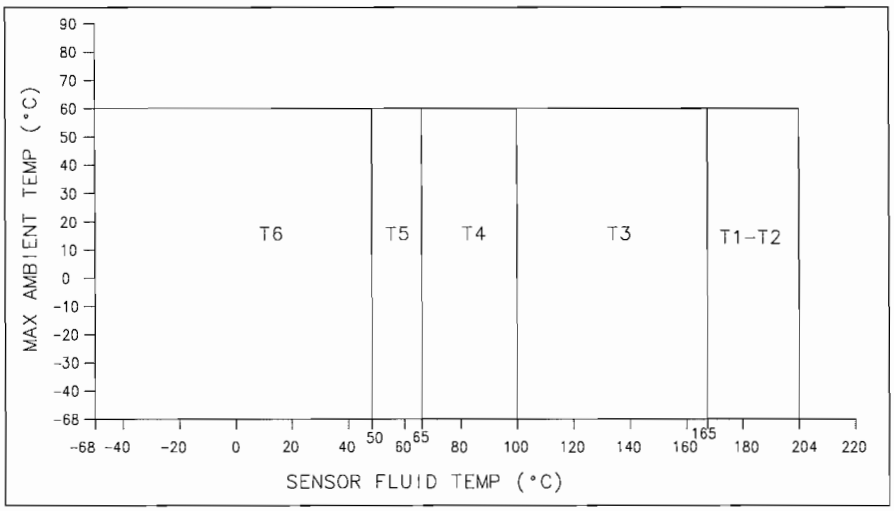
1.4.4 For types CMF200*****(R,H,S)*I**** and CMF300*****(R,H,S)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

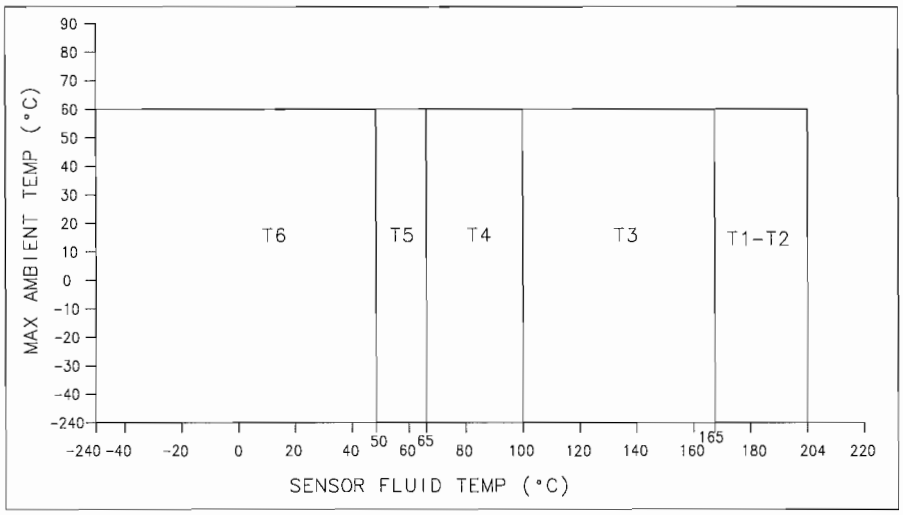
1.4.5 For type CMF400*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C
The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6 For type CMF400*****(R, H, S)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta		-240 °C up to +60 °C

The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2 Type CMF***(A, B, C, E)****(R, H, S)*I**** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W
Effective internal capacitance	Ci		negligible	

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	4,0	32,3	19,8	-50
CMF300(A, B, C, E)****(R, H, S)*I****	4,0	32,3	19,8	-50
CMF400(A, B, C, E)****(R, H, S)*I****	7,75	54,3	19,8	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

voltage	Ui	DC	30	V
current	Ii		101	mA
power	Pi		750	mW
effective internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	1,25	15,4	569,2	-50
CMF300(A ,B, C, E)****(R, H, S)*I****	1,25	15,4	569,2	-50
CMF400(A, B, C, E)****(R, H, S)*I****	6,5	41,1	569,2	-50

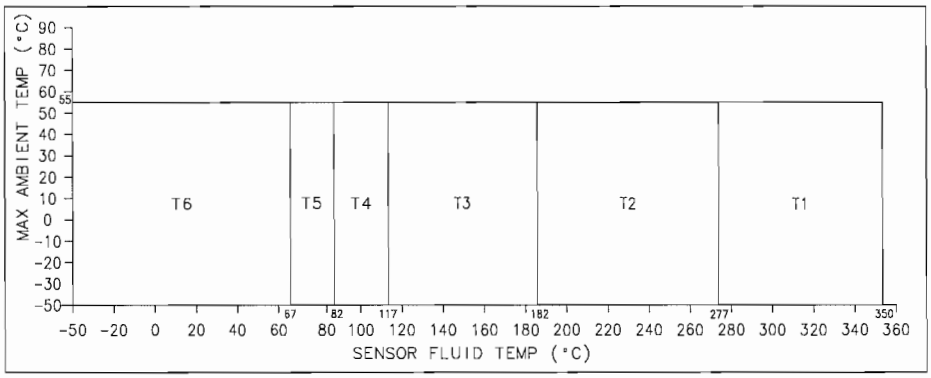
2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

2.4 Thermal data
Regulation of temperature class

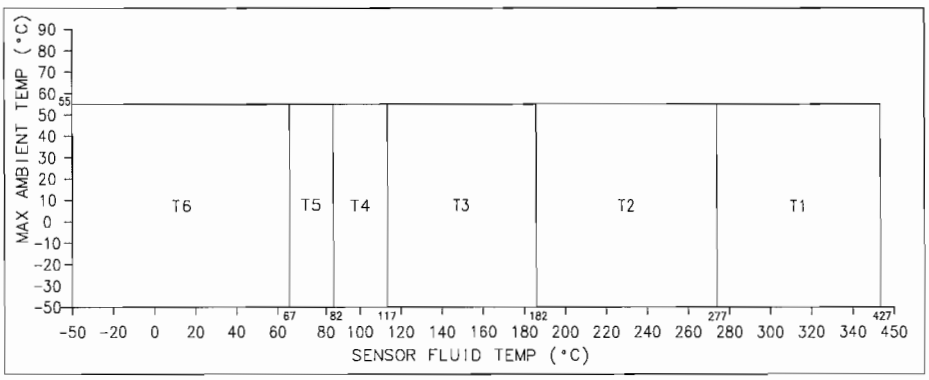
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

2.4.1 For types CMF200(A, B)****(R, H, S)*I**** and CMF300(A, B)****(R, H, S)*I**** with J-box and CMF400(A, B)****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

2.4.2 For types CMF200(C, E)****(R, H, S)*I**** and CMF300(C, E)****(R, H, S)*I**** with J-box and CMF400(C, E)****(R, H, S)*I**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

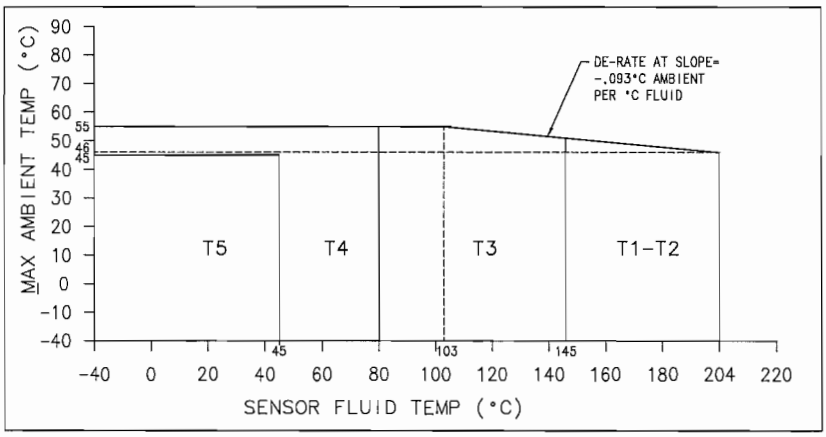
3 For types CMF********(2, 3, 4, 5, A, B, Q, V)*I**** inclusive Construction Identification Code (C.I.C) A4

3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17,3	V
Current	Ii		484	mA
Power	Pi		2,1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

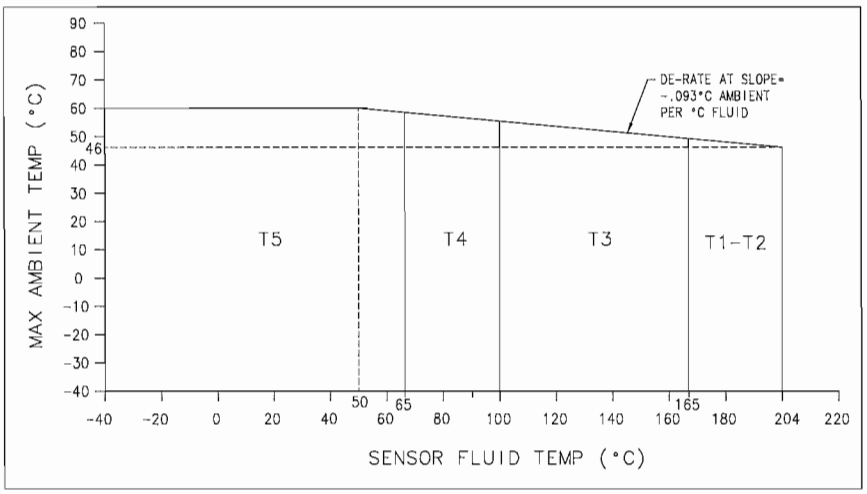
3.2 Temperature class
except types CMF***(A, B, C, E)****(2, 3, 4, 5, A, B, Q, V)*I****
The classification into a temperature class/determination of the maximum surface temperature T depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

3.2.1 For types CMF010*****(2, 3, 4, 5, A, B, Q, V)*I****,
CMF025*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF050*****(2, 3, 4, 5, A, B, Q, V)*I****,
CMF100*****(2, 3, 4, 5, A, B, Q, V)*I****, CMF200*****(2, 3, 4, 5, A, B, Q, V)*I****,
CMF300*****(2, 3, 4, 5, A, B, Q, V)*I**** with Construction Identification Code (C.I.C) A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

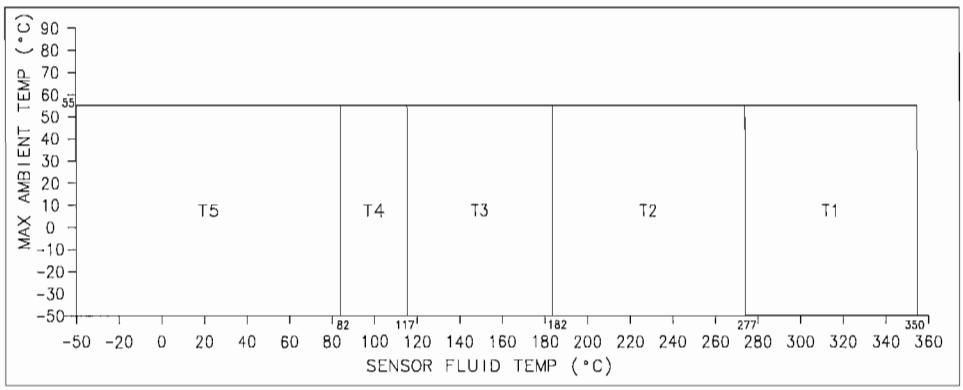
3.2.2 For type CMF400*****(2, 3, 4, 5, A, B, Q, V)*I***** with Construction Identification Code (C.I.C) marking A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

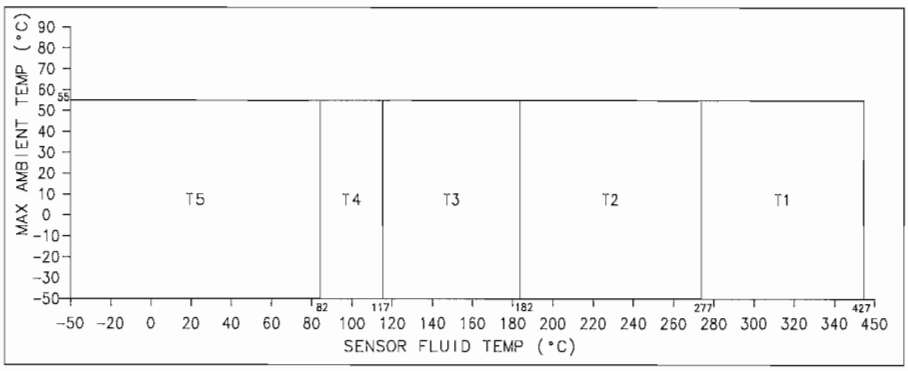
3.2.3 For types CMF200(A,B)****(2, 3, 4, 5 A, B, Q, V)*I****,
CMF300(A,B)****(2, 3, 4, 5 A, B, Q, V)*I **** and CMF400(A,B)****(2, 3, 4, 5 A, B, Q, V)*I ****
with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.4 For types CMF200(C,E)****(2, 3, 4, 5 A, B, Q, V)*I ****,
CMF300(C,E)****(2, 3, 4, 5 A, B, Q, V)*I **** and CMF400(C,E)****(2, 3, 4, 5 A, B, Q, V)*I ****
with integrally mounted core processor



Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

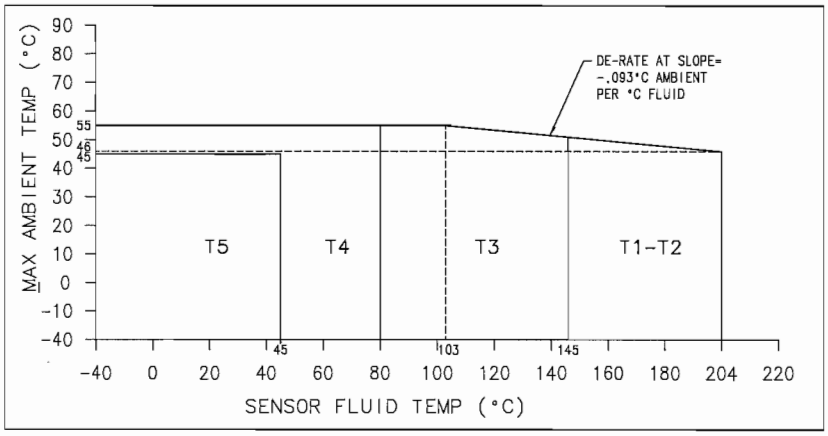
4 Type CMF*******(C,F)*I****

4.1 Electrical parameters see BVS 04.0006X for the transmitter type *700**********

4.2 Temperature class
except types CMF***(A, B, C, E)****(C, F)*I****

The classification into a temperature class/determination of the maximum surface temperature T depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

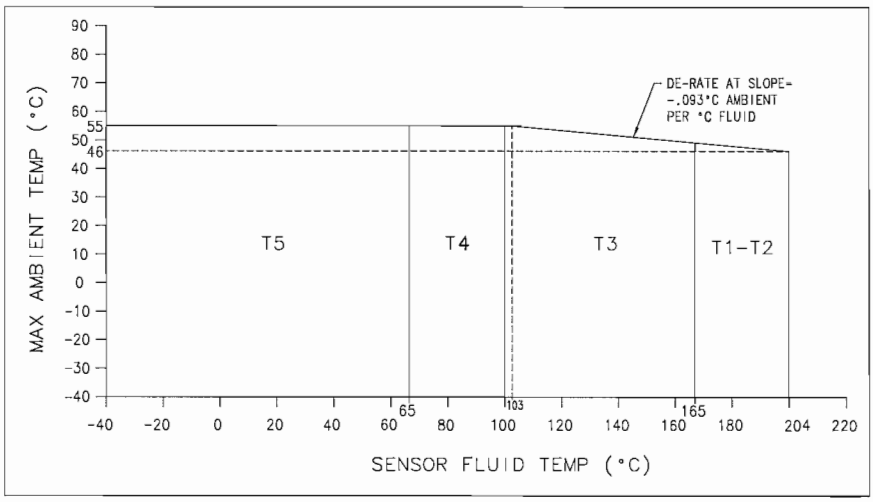
4.2.1 For types CMF010*****(C, F)*I****, CMF025*****(C, F)*I****, CMF050*****(C, F)*I****,
CMF100*****(C, F)*I****, CMF200*****(C, F)*I****, CMF300*****(C, F)*I**** and
CMF200*****(C, F)*I**** and CMF300*****(C, F)*I**** with Construction Identification Code (C.I.C) A3 and A4 and with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

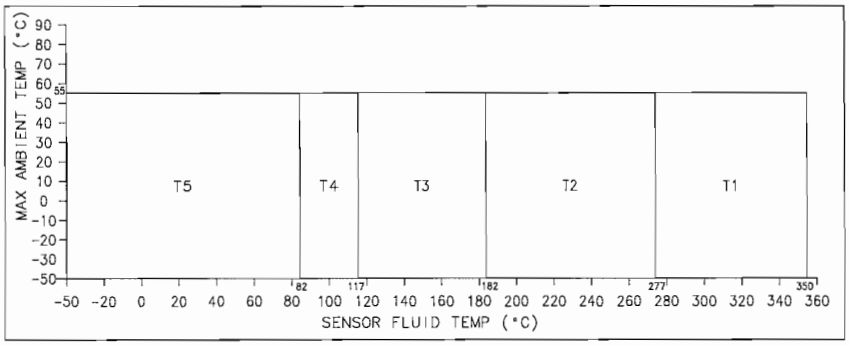
4.2.2 For type CMF400*****(C, F)*I**** inclusive Construction Identification Code (C.I.C) marking A4 mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

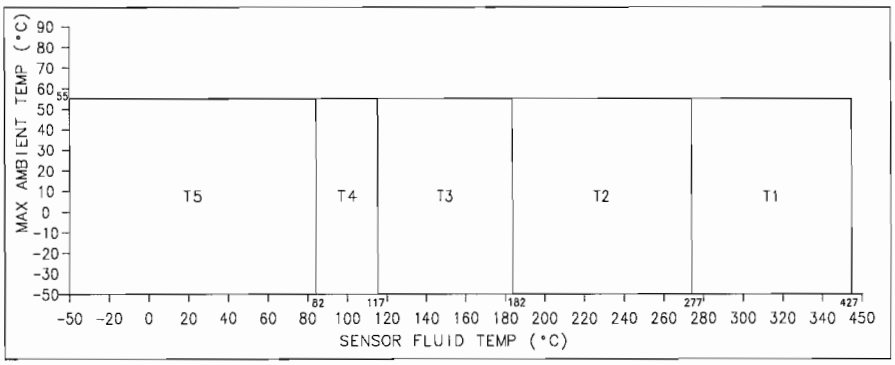
4.2.3 For types CMF200(A, B)****(C, F)*I****, CMF300(A, B)****(C, F)*I**** and CMF400(A, B)****(C, F)*I**** mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.2.4 For types CMF200(C, E)****(C, F)*I****, CMF300(C, E)****(C, F)*I**** and CMF400(C, E)****(C, F)*I**** mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures than +55 °C is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

IECEx Certificate of Conformity

EXAM BBG Prüf- und Zertifizier GmbH

Certificate No.: **IECEx BVS 04.0007X Issue 2**
Annex

Marking
The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient/Fluid temperature range
CMF010 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF025 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF050 *****[1]*I****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*I****	Ex ib IIC T1-T6	- 60 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I**** incl. CMF200 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF200[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I**** incl. CMF300 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[1]*I**** incl. CMF400 *****[1]*I**** CIC A3	Ex ib IIB T1-T6	- 68 °C ≤ Ta ≤ +60 °C
CMF400 *****[1]*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +60 °C
CMF400[4] ****[1]*I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF010 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF025 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF050 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF100 *****[2]*I****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I**** incl. CMF200 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I**** incl. CMF300 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[2]*I**** incl. CMF400 *****[2]*I**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +60 °C
CMF400 *****[2]*I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF400[4] ****[2]*I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C

1) at this place the letter R, H or S may be inserted
2) at this place the letter A, B, Q or V may be inserted
4) at this place the letter A, B, C or E may be inserted

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X Issue 3**
Annex

General product information:

Modified Parameters

1 Type CMF***(A, B, C, E)****(R, H, S)*Z**** with J-box

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	4.01	32.3	19.8	-50
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	
CMF300(A, B, C, E)****(R, H, S)*I****	4.01	32.3	19.8	-50
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	
CMF400(A, B, C, E)****(R, H, S)*I****	7.75	54.3	19.8	-50
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	3.4	35.2	12.8	

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Effective internal capacitance negligible

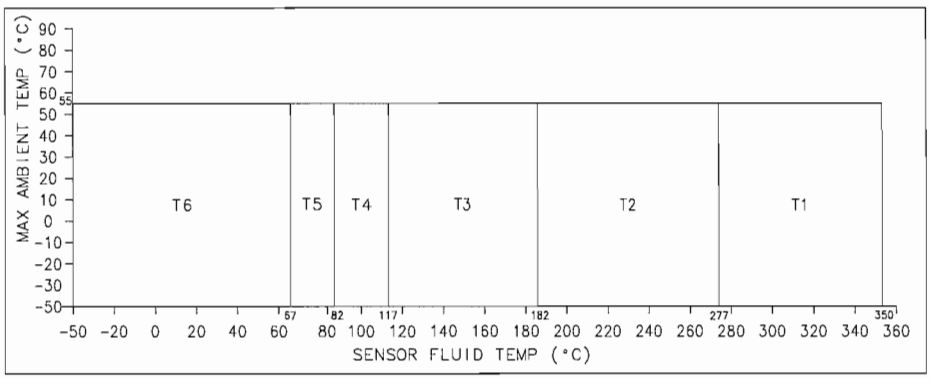
Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A, B, C, E)****(R, H, S)*I****	1.25	15.4	569.2	-50
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0		
CMF300(A ,B, C, E)****(R, H, S)*I****	1.25	15.4	569.2	-50
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0		
CMF400(A, B, C, E)****(R, H, S)*I***	6.5	41.1	569.2	-50
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4		

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci		negligible	
Effective internal inductance	Li		negligible	

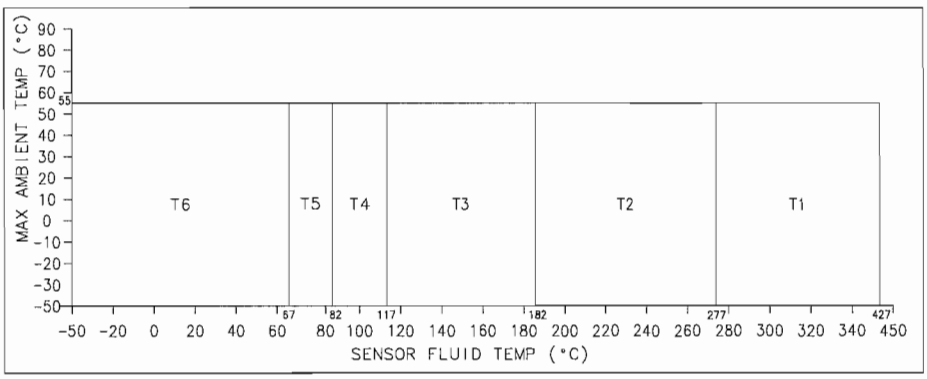
1.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1 For types CMF200(A, B)****(R, H, S)*I**** C.I.C. A5 or no marking, CMF300(A, B)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box and CMF400(A, B)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box connected to MVD transmitters only



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

1.4.2 For types CMF200(C, E)****(R, H, S)*I**** C.I.C. A5 or no marking, CMF300(C, E)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box and CMF400(C, E)****(R, H, S)*I**** C.I.C. A5 or no marking with J-box connected to MVD transmitters only



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

1.5 Ambient temperature range Ta -50 °C up to +55 °C
The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

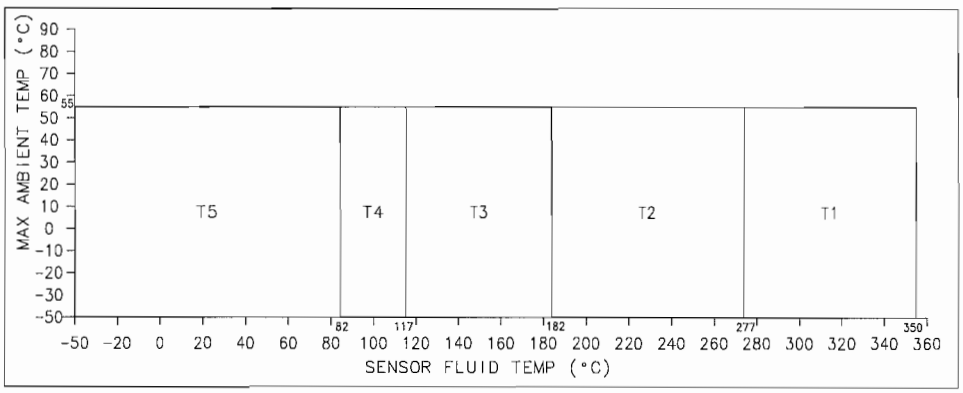
2 For types CMF***(A,B,C,E)****(2, 3, 4, 5, 6, 7, 8, 9, A, B, D, E, Q, V, W, Y)*I**** inclusive Construction Identification Code (C.I.C) A5 or no marking

2.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

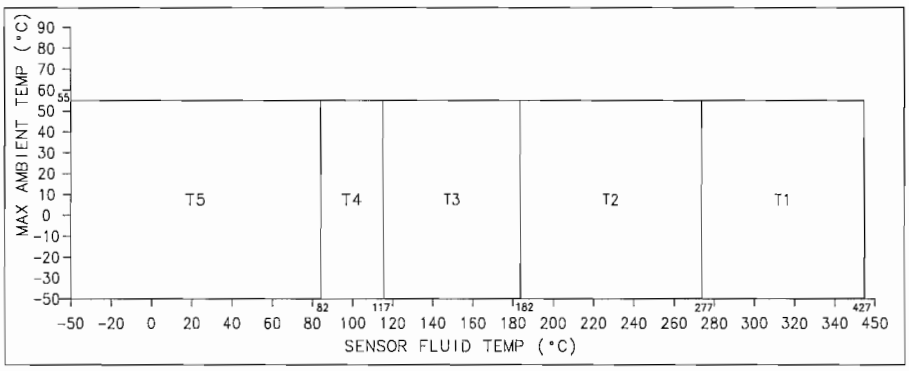
2.2 Temperature class
for types CMF***(A,B,C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.2.1 For types CMF200(A,B)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking,
CMF300(A,B)****(2, 3, 4, 5, A, B, Q, V)*Z**** C.I.C. A5 or no marking and
CMF400(A,B)****(2, 3, 4, 5, A, B, Q, V)*Z**** C.I.C. A5 or no marking
with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

2.2.2 For types CMF200(C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking, CMF300(C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking and CMF400(C,E)****(2, 3, 4, 5, A, B, Q, V)*I**** C.I.C. A5 or no marking with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

2.3 Ambient temperature range Ta -50 °C bis +55 °C

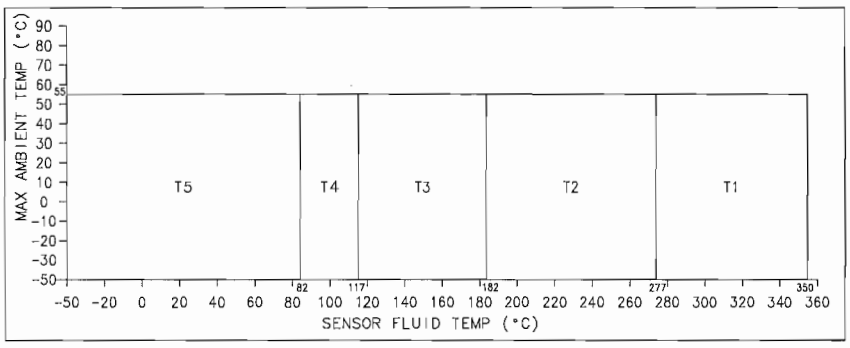
The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3 Type CMF***(A,B,C,E)****(C,F)*I****

3.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

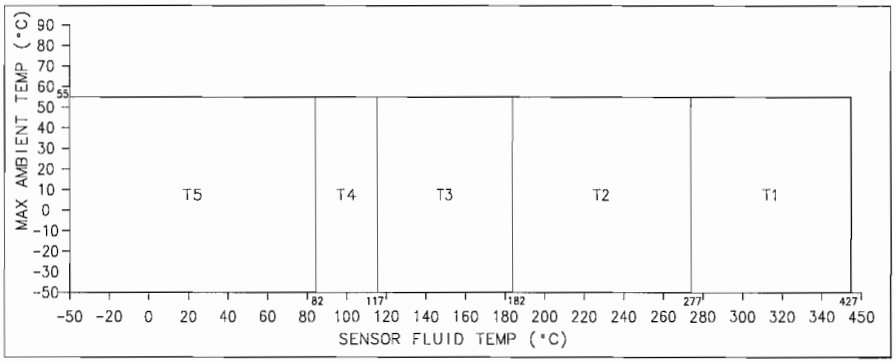
3.2 Temperature class
for types CMF***(A,B,C,E)****(C, F)*I**** C.I.C. A5 or no marking
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

3.2.1 For types CMF200(A, B)****(C, F)*Z**** C.I.C. A5 or no marking, CMF300(A, B)****(C, F)*Z**** C.I.C. A5 or no marking and CMF400(A, B)****(C, F)*Z**** C.I.C. A5 or no marking mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

3.2.2 For types CMF200(C, E)****(C, F)*I**** C.I.C. A5 or no marking, CMF300(C, E)****(C, F)*I**** C.I.C. A5 or no marking and CMF400(C, E)****(C, F)*I**** C.I.C. A5 or no marking mounted to a transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

3.3 Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X Issue 3**
Annex

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient/Fluid temperature range
CMF010 *****[1]*|****	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF025 *****[1]*|****	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF050 *****[1]*|****	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*|****	Ex ib IIC T1-T6	-60 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*|**** incl. CMF200 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	-55 °C ≤ Ta ≤ +55 °C
CMF200 *****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200[4)]****[1]*|**** incl. CMF200[4)]*****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*|**** incl. CMF300 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	-55 °C ≤ Ta ≤ +55 °C
CMF300 *****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF300[4)] ****[1]*|**** incl. CMF300[4)] ****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF400 *****[1]*|**** incl. CMF400 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	-68 °C ≤ Ta ≤ +60 °C
CMF400 *****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +60 °C
CMF400[4)] ****[1]*|**** incl. CMF400[4)] ****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF010 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF025 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF050 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF100 *****[2)]*|****	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2)]*|**** incl. CMF200 *****[2)]*|**** CIC A3	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2)]*|**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200[4)] ****[2)]*|**** incl. CMF200[4)] ****[2)]*|**** CIC A5	Ex ib IIB T1-T5	-50 °C ≤ Ta ≤ +55 °C
CMF300 *****[2)]*|**** incl. CMF300 *****[2)]*|**** CIC A3	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF300 *****[2)]*|**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF300[4)] ****[2)]*|**** incl. CMF300[4)] ****[2)]*|**** CIC A5	Ex ib IIB T1-T5	-50 °C ≤ Ta ≤ +55 °C
CMF400 *****[2)]*|**** incl. CMF400 *****[2)]*|**** CIC A3	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +60 °C
CMF400 *****[2)]*|**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF400[4)] ****[2)]*|**** incl. CMF400[4)] ****[2)]*|**** CIC A5	Ex ib IIB T1-T5	-50 °C ≤ Ta ≤ +55 °C

1) at this place the letter R, H or S may be inserted
2) at this place the number 2, 3 ,4 or 5 or the letter A, B, Q or V may be inserted
4) at this place the letter A, B, C or E may be inserted

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X	issue No.:4	Certificate history: Issue No. 4 (2007-10-31) Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)
Status:	**Current**		
Date of Issue:	**2007-10-31**	Page 1 of 4	

Applicant: **Micro Motion, Inc.**
Boulder, Co. 80301
United States of America

Electrical Apparatus: **Sensor type CMF*** *******I****
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ib IIB/IIC T1 - T5/T6**

Approved for issue on behalf of the IECEx Certification Body: Dr. R. Jockers

Position: Head of Certification Body

Signature:
(for printed version)

Date: 31.10.2007

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-10-31** Issue No.: **4**

Manufacturer: **Micro Motion, Inc.**
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Co., Ltd
1277 Xin Jin Qiao Rd
Jin Qiao Export Processing Zone
Pudong
Shanghai 201206
China

Emerson Process Management Flow B.V.
Neonstraat 1
6718 WX Ede
The Netherlands

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture'rs quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/00 and DE/BVS/ExTR06.0009/01 and DE/BVS/ExTR06.0009/02 and DE/BVS/ExTR06.0009/03 and DE/BVS/ExTR06.0009/04

File Reference:
DE/BVS/04/2024 and DE/BVS/04/2024/N1 and DE/BVS/04/2024/N2 and DE/BVS/04/2024/N3 and DE/BVS/04/2024/N4

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-10-31** Issue No.: **4**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The flow sensor in combination with a transmitter is used for flow measurement.
The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, resistors, temperature sensors and terminals and connectors.

Alternatively a transmitter type *700********* (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination **type CMF*** *****C*I**** and **type CMF*** *****F*I****.

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use
By mounting the sensor type CMF********(C,F)*I**** directly to the transmitter *700********* the use of the unit will be modified according to the following:

Transmitter type	Sensor type	
	CMF010*****(C,F)*I**** CMF025*****(C,F)*I**** CMF050*****(C F)*I**** CMF100*****(C,F)*I**** CMF100*****(C,F)*I**** CIC A4 CMF200*****(C,F)*I**** CIC A4 CMF300*****(C,F)*I**** CIC A4 CMF400*****(C,F)*I**** CIC A4 CMF800*****(C,F)*I**** CIC A4 CMFHC3*****(C,F)*I**** CIC A4	CMF200*****(C,F)*I**** CIC A3 CMF300*****(C,F)*I**** CIC A3 CMF400*****(C,F)*I****CIC A3 CMF200(A,B,C,E)*****(C,F)*I**** CMF200(A,B,C,E)****(C,F)*I**** CIC A5 CMF300(A,B,C,E)*****(C,F)*I**** CMF300(A,B,C,E)****(C,F)*I**** CIC A5 CMF400(A,B,C,E)*****(C,F)*I**** CMF400(A,B,C,E)****(C,F)*I**** CIC A5 CMF800(A,B,C,E)*****(C,F)*I**** CMFHC3(A,B,C,E)*****(C,F)*I****
*700*1[1)] *******	Ex ib IIB+H2 T1-T5	Ex ib IIB T1-T5
*700*1[2)] *******	Ex ib IIC T1-T5	Ex ib IIB T1-T5

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3, 4 or 5 will be inserted.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2007-10-31** Issue No.: **4**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Description of the modifications for Issue 1
The flow sensor can be modified and additional variations are available.
The flow sensor can be mounted to the transmitter type *700*12******* or the transmitter type *700*15*******
alternatively. The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and gets the Construction Identification Code (CIC) A3.
The sensors can also have an alternative 9-wire feed-through.

Description of the modifications for Issue 2
The sensors type CMF200 *******I****, CMF300 *******I**** and CMF400 *******I**** may be produced with other coil parameters and get the Construction Identification Code (CIC) A4 and canbe used in IIC areas.

Description of the modifications for Issue 3
The high temperature versions CMF*** (A,B,C,E)******I**** can be manufactured with other coils and get therefore the additional marking with C.I.C. A5.
Also for testing of the sensors the new standard versions of IEC 60079-* have been taken as basis.; a modified marking is the result.
The manufacturing location Emerson Process Management Co., Ltd, Shanghai, People's Pepublic of China was added.
The manufacturer Micro Motion Inc., Boulder, United States of America changed the EXCB for quality supervision.
Responsible is now DNV for all production sites.

Description of the modifications for Issue 4
The sensor can be modified:
New versions type CMF********T*I**** (Electronics Interface for Extended Stainless Steel Junction Box), type CMF800*******I**** and type CMFCH3*******I**** are possible.
A new manufacturing location has been added: Emerson Process Management Flow B.V., 6718 WX Ede, The Netherlands

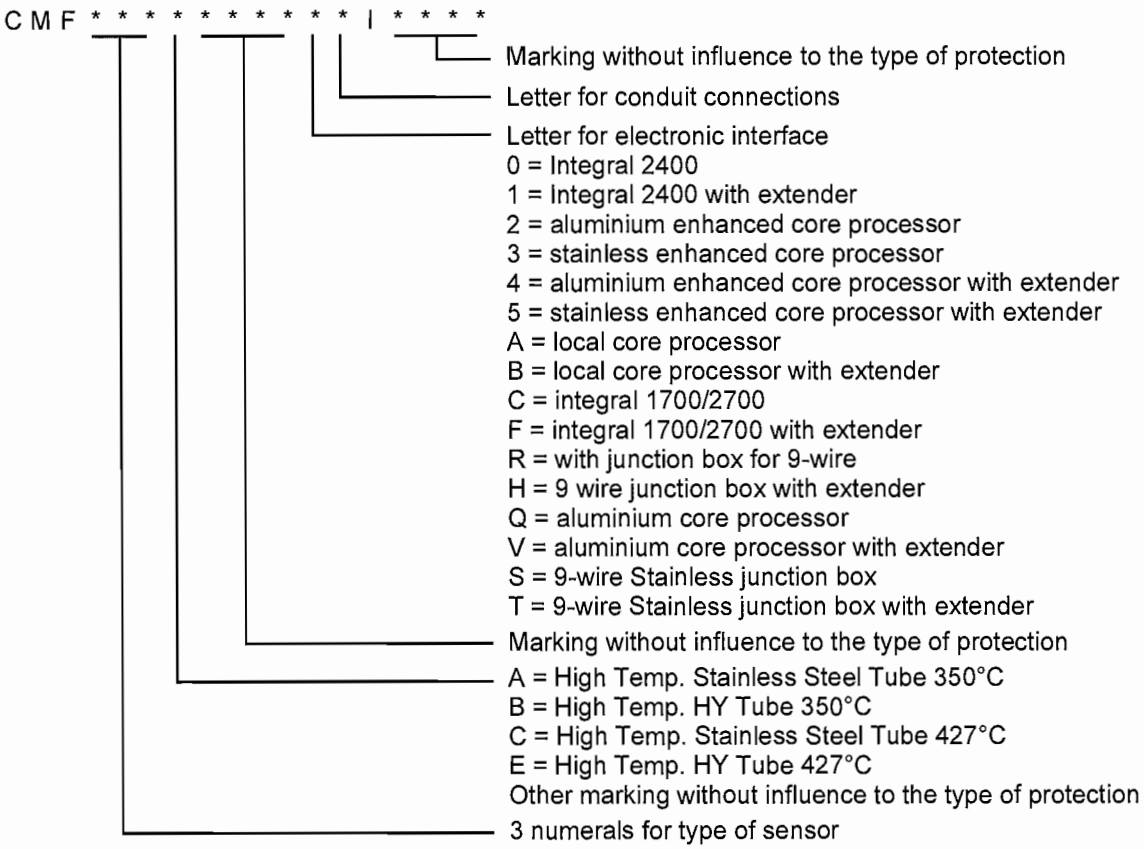
For "Subject and type", "Parameters" and "Marking" see: BVS_04_0007X_issue4_Annex.pdf

Annexe: BVS_04_0007X_issue4_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X Issue 4**
Annex

Subject and Type
Sensor type CMF*** *******|****
Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:



IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X Issue 4**
Annex

Parameters

1 Type CMF********(R,H,S,T)*I**** with J-box, inclusive Construction Identification Code (CIC) A3 and A4 except type CMF***(A,B,C,E)****(R,H,S,T)*I****

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF010*****(R,H,S,T)*I****	2.51	78.7	948.9	-40
CMF010*****(R,H,S,T)*I****	2.51	0	945.1	-240
CMF025*****(R,H,S,T)*I****	2.51	78.7	170.8	-40
CMF025*****(R,H,S,T)*I****	2.51	0	170.1	-240
CMF050*****(R,H,S,T)*I****	2.51	78.7	170.8	-40
CMF050*****(R,H,S,T)*I****	2.51	0	170.1	-240
CMF100*****(R,H,S,T)*I****	6.7	58.4	89.0	-40
CMF100*****(R,H,S,T)*I****	6.7	52.4	89.0	-60
CMF100*****(R,H,S,T)*I**** CIC A4	6.7	0	177.0	-240
CMF200*****(R,H,S,T)*I**** CIC A3	9.5	92.9	0	-40
CMF200*****(R,H,S,T)*I**** CIC A3	9.5	85.8	0	-55
CMF200*****(R,H,S,T)*I**** CIC A4	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*I**** CIC A3	9.5	92.9	0	-40
CMF300*****(R,H,S,T)*I**** CIC A3	9.5	85.8	0	-55
CMF300*****(R,H,S,T)*I**** CIC A4	9.5	0	177.0	-240
CMF400*****(R,H,S,T)*I**** CIC A3	11.75	83.5	19.8	-40
CMF400*****(R,H,S,T)*I**** CIC A3	11.75	71.4	19.8	-68
CMF400 *****(R,H,S,T)*I**** CIC A4	11.75	0	187.1	-240
CMF800*****(R,H,S,T)*I****	5.0	19.5	38.5	-50
CMF800*****(R,H,S,T)*I**** CIC A4	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*I****	5.0	19.5	38.5	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4	5.0	0	126.0	-240

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF010*****(R,H,S,T)*I****	2.51	78.7	0	-40
CMF010*****(R,H,S,T)*I****	2.51	0	0	-240
CMF025*****(R,H,S,T)*I****	2.51	78.7	0	-40
CMF025*****(R,H,S,T)*I****	2.51	0	0	-240
CMF050*****(R,H,S,T)*I****	2.51	78.7	0	-40
CMF050*****(R,H,S,T)*I****	2.51	0	0	-240
CMF100*****(R,H,S,T)*I****	0.441	11.1	0	-40
CMF100*****(R,H,S,T)*I****	0.441	9.9	0	-60
CMF100*****(R,H,S,T)*I**** CIC A4	0.441	0	0	-240
CMF200*****(R,H,S,T)*I**** CIC A3	2.0	41.9	0 to 567.9	-40
CMF200*****(R,H,S,T)*I**** CIC A3	2.0	38.7	0 to 567.9	-55
CMF200*****(R,H,S,T)*I**** CIC A4	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*I**** CIC A3	2.0	41.9	0 to 567.9	-40
CMF300*****(R,H,S,T)*I**** CIC A3	2.0	38.7	0 to 567.9	-55
CMF300*****(R,H,S,T)*I**** CIC A4	2.0	0	0 to 567.9	-240
CMF400*****(R,H,S,T)*I**** CIC A3	12.4	128.3	0 to 566.4	-40
CMF400*****(R,H,S,T)*I**** CIC A3	12.4	109.8	0 to 566.4	-68
CMF400*****(R,H,S,T)*I**** CIC A4	12.4	0	0 to 566.4	-240
CMF800*****(R,H,S,T)*I****	2.8	49.2	42.6 to 566.4	-50
CMF800*****(R,H,S,T)*I**** CIC A4	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*I****	2.8	49.2	42.6 to 566.4	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4	2.8	0	198.4 to 566.4	-240

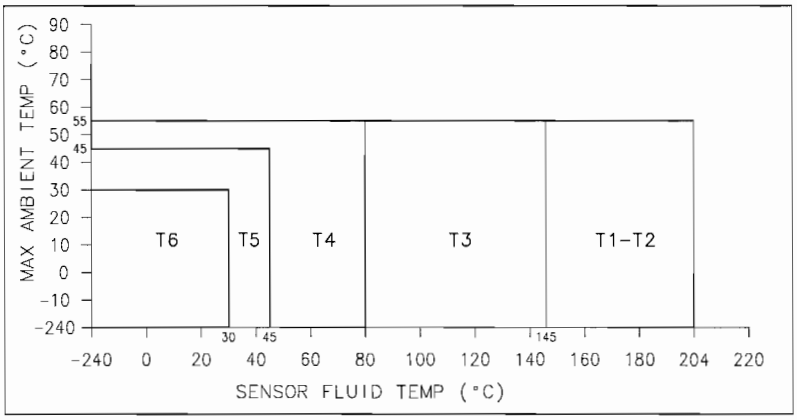
1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance	Ci	negligible		
Effective internal inductance	Li	negligible		

1.4 Temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1 For types CMF010*****(R,H,S,T)*I**** , CMF025*****(R,H,S,T)*I**** and CMF050*****(R,H,S,T)*I**** with J-box

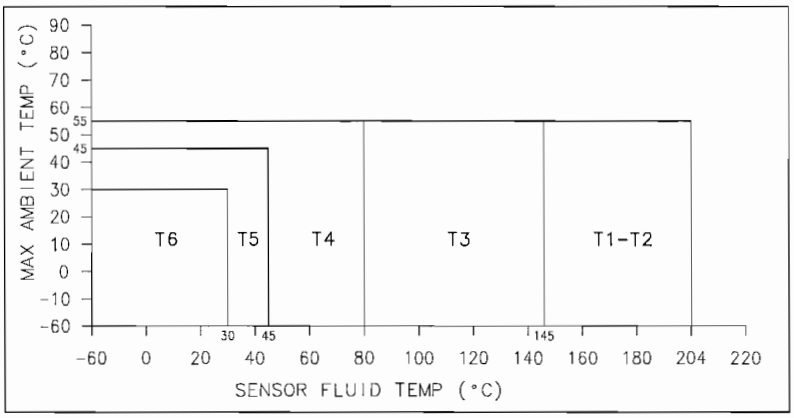


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.2 For types CMF100*****(R,H,S,T)*I**** with J-box connected to MVD transmitters

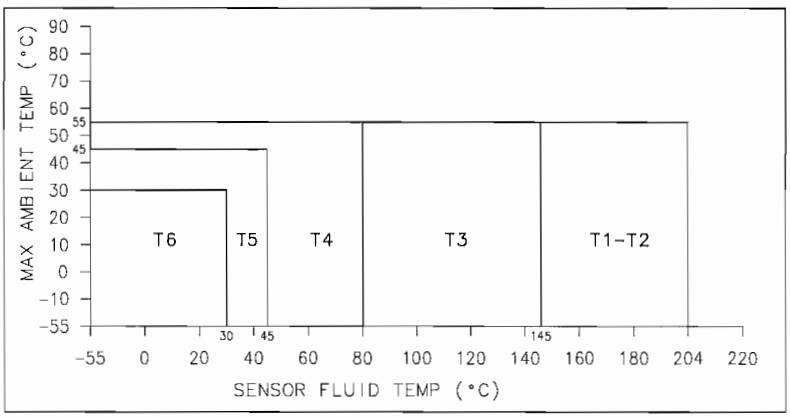


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.4 For types CMF200*****(R,H,S,T)*I**** and CMF300*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A3 with J-box

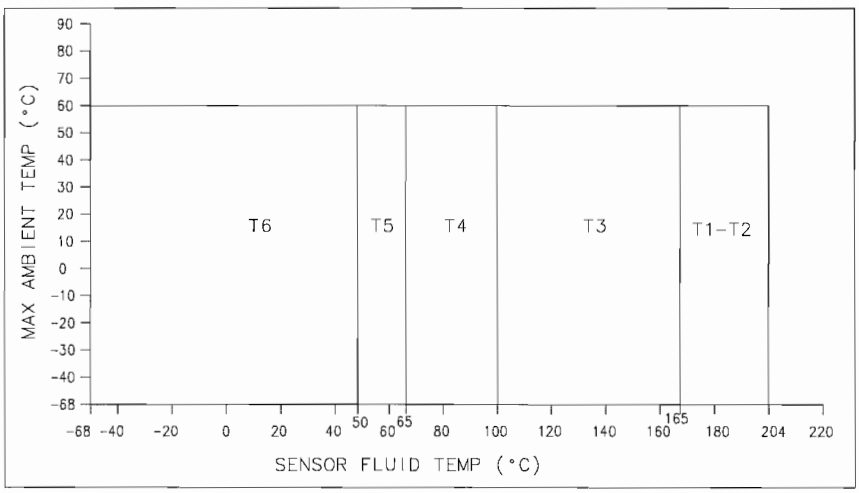


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.5 For types CMF400*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters

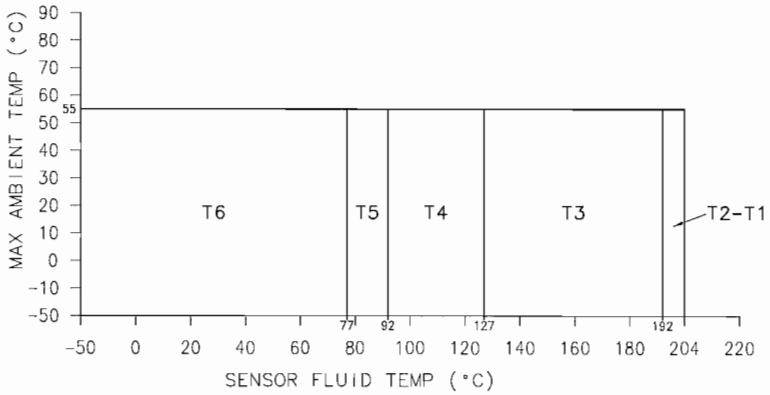


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6 For types CMF800*****(R,H,S,T)*I**** and CMFHC3*****(R,H,S,T)*I**** with J-box connected to MVD transmitters

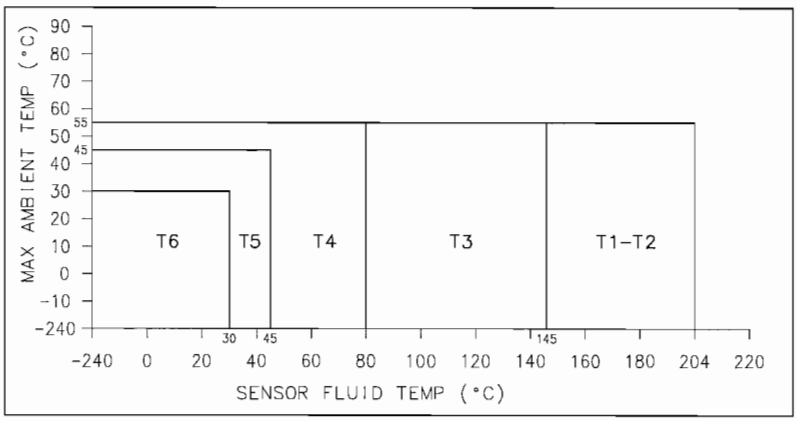


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.7 For types CMF100*****(R,H,S,T)*I****, CMF100*****(R,H,S,T)*I****, and CMF300*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A4 with J-box

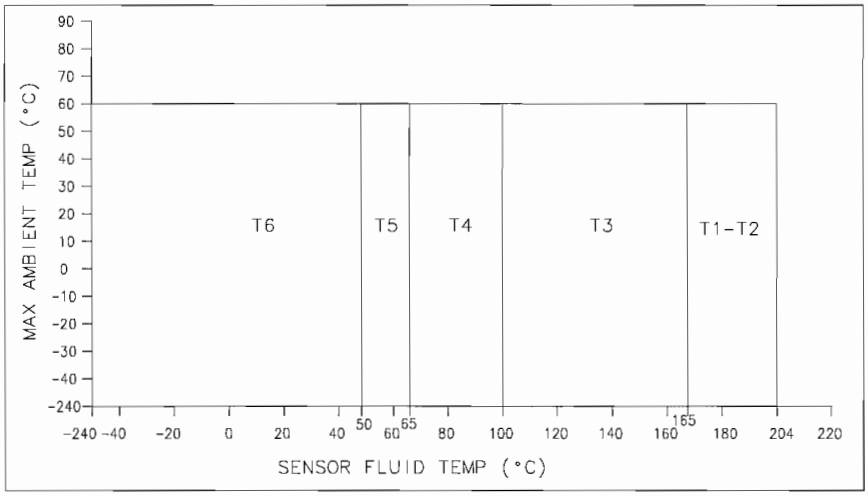


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.7 For types CMF400*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters

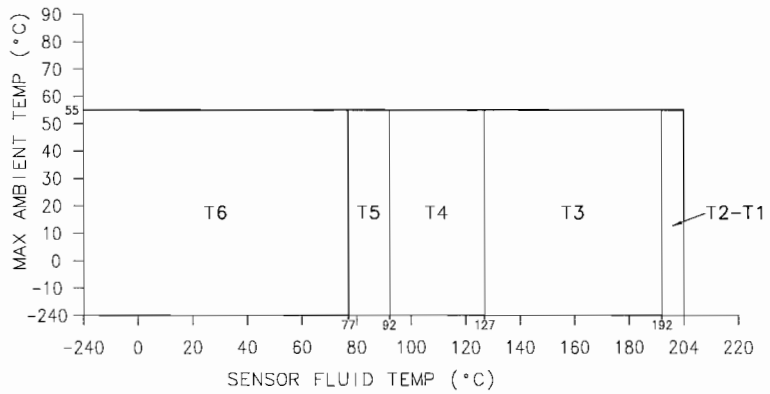


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.8 For types CMF800*****(R,H,S,T)*I**** and CMFHC3*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2 Type CMF***(A,B,C,E)****(R,H,S,T)*I**** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W

Effective internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A,B,C,E)****(R,H,S,T)*I****	4.01	32.2	19.8	-50
CMF200(A,B,C,E)****(R,H,S,T)*I**** CIC A5	1.1	15.4	9.6	-50
CMF300(A,B,C,E)****(R,H,S,T)*I****	4.01	32.3	19.8	-50
CMF300(A,B,C,E)****(R,H,S,T)*I**** CIC A5	1.1	15.4	9.6	-50
CMF400(A,B,C,E)****(R,H,S,T)*I****	7.75	54.3	19.8	-50
CMF400(A,B,C,E)****(R,H,S,T)*I**** CIC A5	3.4	35.2	12.8	-50
CMF800(A,B,C,E)****(R,H,S,T)*I****	5.95	51.3	12.8	-50
CMF800(A,B,C,E)****(R,H,S,T)*I**** CIC A4	5.95	51.3	88.9	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I****	5.95	51.3	12.8	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I**** CIC A4	5.95	51.3	88.9	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Effective internal capacitance negligible

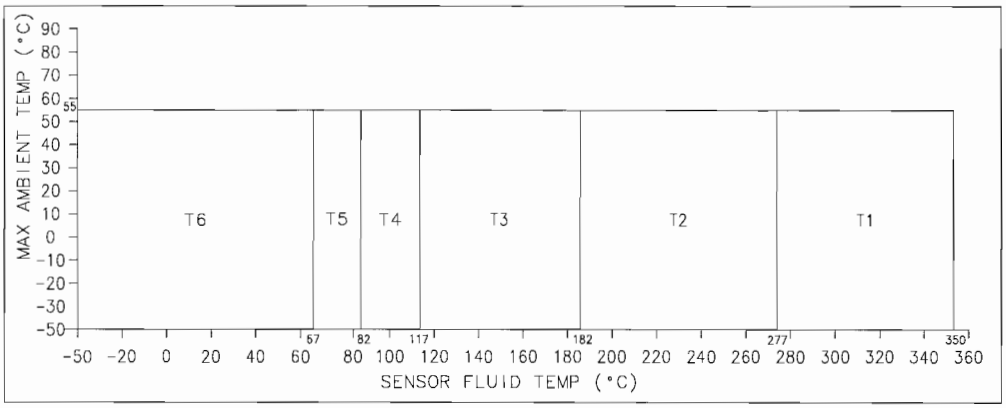
Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A,B,C,E)****(R,H,S,T)*I****	1.25	15.4	569.2	-50
CMF200(A,B,C,E)****(R,H,S,T)*I**** CIC A5	0.50	8.0	569.2	-50
CMF300(A,B,C,E)****(R,H,S,T)*I****	1.25	15.4	569.2	-50
CMF300(A,B,C,E)****(R,H,S,T)*I**** CIC A5	0.50	8.0	569.2	-50
CMF400(A,B,C,E)****(R,H,S,T)*I****	6.50	41.1	569.2	-50
CMF400(A,B,C,E)****(R,H,S,T)*I**** CIC A5	1.10	15.4	569.2	-50
CMF800(A,B,C,E)****(R,H,S,T)*I****	0.85	9.1	42.6	-50
CMF800(A,B,C,E)****(R,H,S,T)*I**** CIC A4	0.85	9.1	42.6	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I****	0.85	9.1	42.6	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I**** CIC A4	0.85	9.1	42.6	-50

2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Effective internal capacitance		Ci	negligible	
Effective internal inductance		Li	negligible	

2.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.4.1 For types CMF200(A,B)****(R,H,S,T)*I**** CIC A5 or no marking and CMF300(A,B)****(R,H,S,T)*I**** CIC A5 or no marking with J-box and CMF400(A,B)****(R,H,S,T)*I**** CIC A5 or no marking, CMF800(A,B)****(R,H,S,T)*I**** A4 or no marking and CMFHC3(A,B)****(R,H,S,T)*I**** A4 or no marking with J-box connected to MVD transmitter only

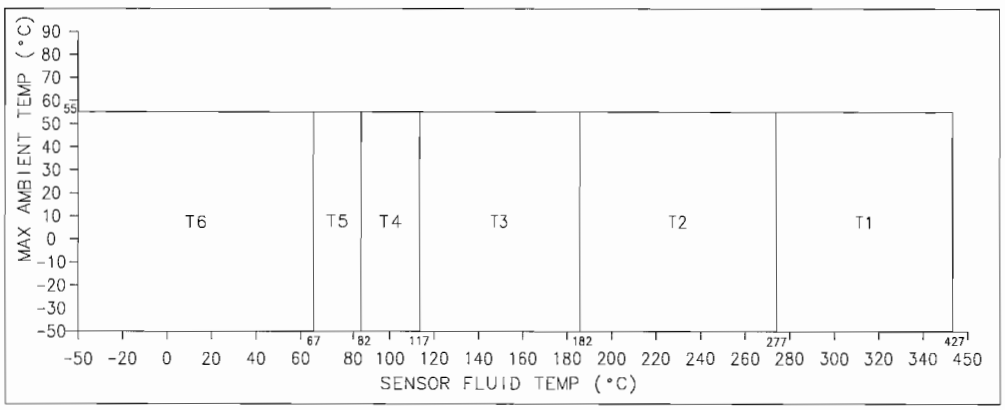


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.4.2 For types CMF200(C,E)****(R,H,S,T)*I**** CIC A5 or no marking and CMF300(C,E)****(R,H,S,T)*I**** CIC A5 or no marking wih J-box and CMF400(C,E)****(R,H,S,T)*I**** CIC A5 or no marking, CMF800(C,E)****(R,H,S,T)*I**** A4 or no marking and CMFHC3(C,E)****(R,H,S,T)*I**** A4 or no marking with J-box connected to MVD transmitter only



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C	

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

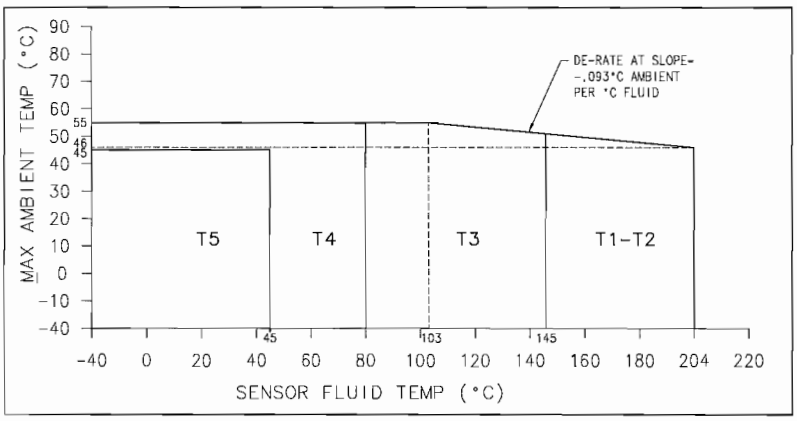
3 Type CMF********(2,3,4,5,A,B,Q,V)*I**** with integral Core Processor inclusive Construction Identification Code (CIC) A3 and A4 except type CMF***(A,B,C,E)****(2,3,4,5,A,B,Q,V)*I****

3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

3.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

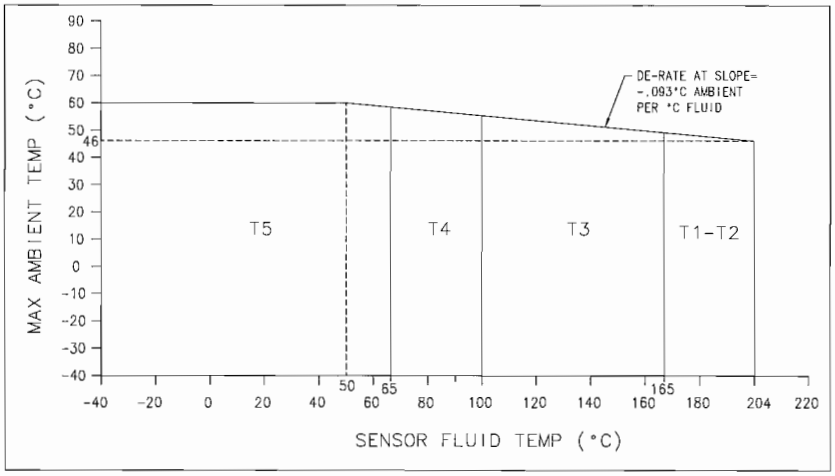
3.2.1 For types CMF010*****(2,3,4,5,A,B,Q,V)*I****, CMF025*****(2,3,4,5,A,B,Q,V)*I****, CMF050*****(2,3,4,5,A,B,Q,V)*I****, CMF100*****(2,3,4,5,A,B,Q,V)*I****, CMF200*****(2,3,4,5,A,B,Q,V)*I****, CMF300*****(2,3,4,5,A,B,Q,V)*I**** and CMF100*****(2,3,4,5,A,B,Q,V)*I****, CMF200*****(2,3,4,5,A,B,Q,V)*I**** and CMF300*****(2,3,4,5,A,B,Q,V)*I**** CIC A3 and A4 with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

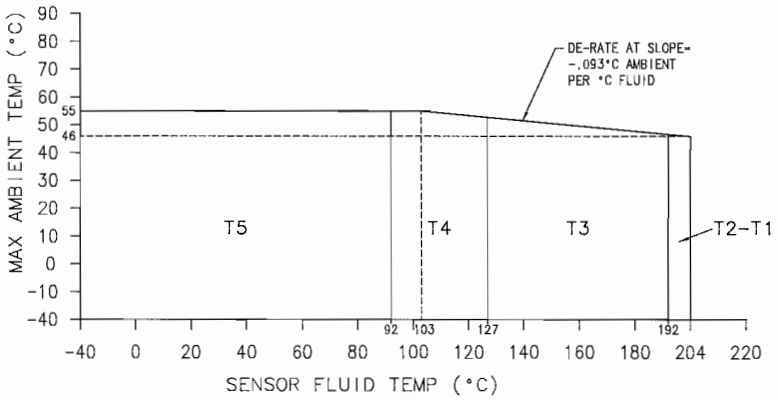
3.2.2 For type CMF400*****(2,3,4,5,A,B,Q,V)*I**** with CIC A3 and A4 with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.3 For type CMF800*****(2,3,4,5A,B,Q,V)*I**** and CMFHC3*****(2,3,4,5A,B,Q,V)*I**** with CIC A4 or no marking with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +55 °C

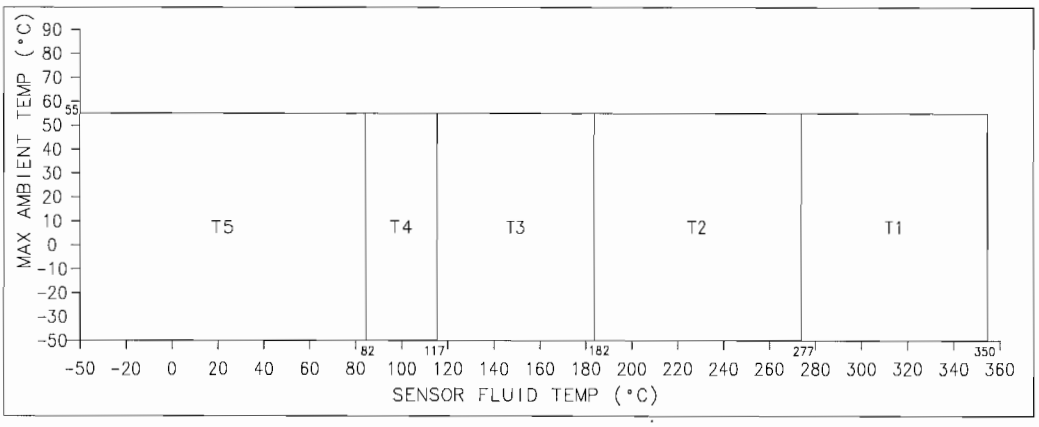
4 Type CMF*** (A,B,C,E) ****(2,3,4,5,A,B,Q,V)*I**** with integral Core Processor, inclusive Construction Identification Code (CIC) A5 or no marking

4.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

4.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

4.2.1 For types CMF200(A,B)****(2,3,4,5A,B,Q,V)*I**** CIC A5 or no marking,
CMF300(A,B)****(2,3,4,5,A,B,Q,V)*I**** CIC A5 or no marking,
CMF400(A,B)****(2,3,4,5,A,B,Q,V)*I**** CIC A5 or no marking,
CMF800(A,B)****(2,3,4,5,A,B,Q,V)*I**** and
CMFHC3(A,B)****(2,3,4,5,A,B,Q,V)*I**** with remote core processor

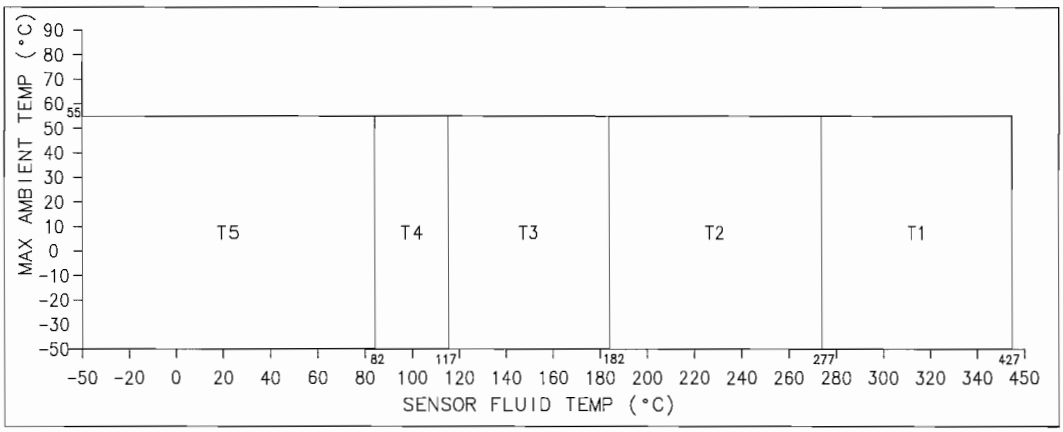


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.2.2 For types CMF200(C,E)****(2,3,4,5,A,B,Q,V)*I**** CIC A5 or no marking,
CMF300(C,E)****(2,3,4,5,A,B,Q,V)*I**** CIC A5 or no marking,
CMF400(C,E)****(2,3,4,5,A,B,Q,V)*I**** CIC A5 or no marking,
CMF800(C,E)****(2,3,4,5,A,B,Q,V)*I**** and CMFHC3(C,E)****(2,3,4,5,A,B,Q,V)*I**** with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

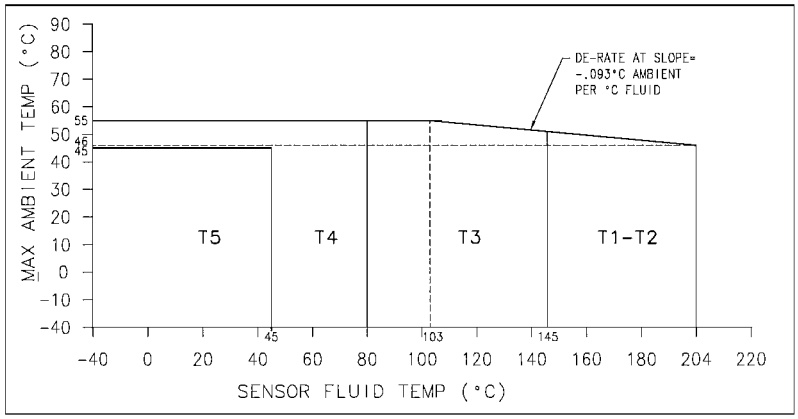
The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5 Type CMF********(C,F)*I**** inclusive Construction Identification Code (CIC) A3 and A4 or no marking, except CMF***(A,B,C,E)****(C,F)*I****

5.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

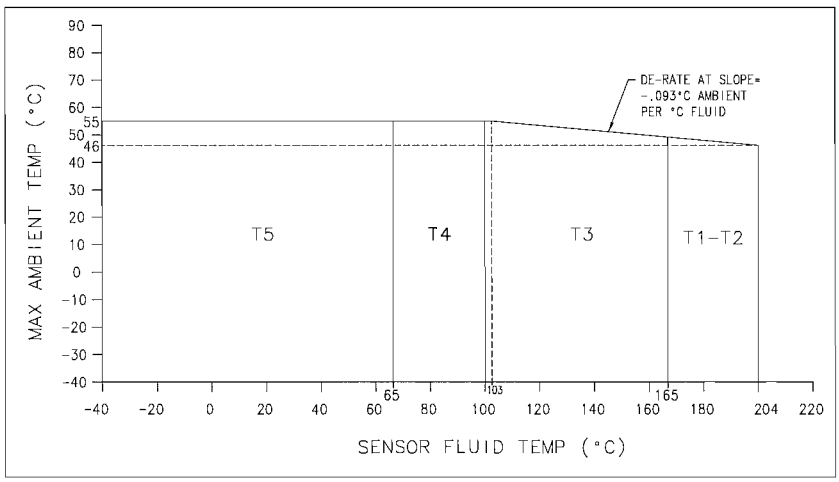
5.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

5.2.1 For types CMF010*****(C,F)*I****, CMF025*****(C,F)*I ****, CMF050*****(C,F)*I****, CMF100*****(C,F)*I****,CMF200*****(C,F)*I****,CMF300*****(C,F)*I**** and CMF100*****(C,F)*I****, CMF200*****(C,F)*I**** and CMF300*****(C,F)*I**** C.I.C. A3 and A4 with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

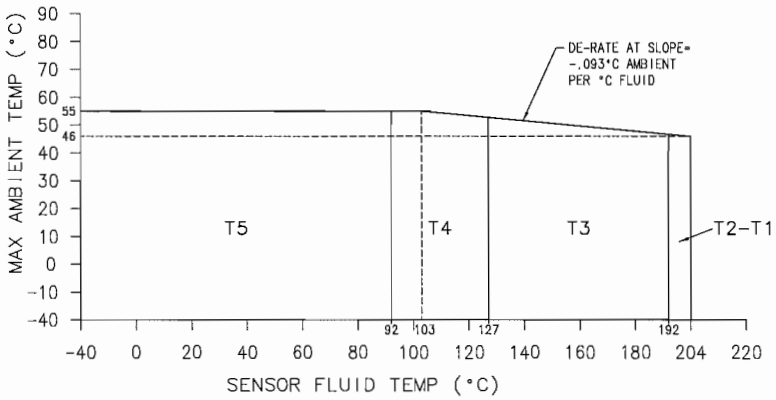
5.2.2 For types CMF400*****(C,F)*I**** CIC A3 and A4 or no marking with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +55 °C

5.2.3 For types CMF800*****(C,F)*I**** CIC A4 or no marking and CMFHC3*****(C,F)*I**** CIC A4 or no marking with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

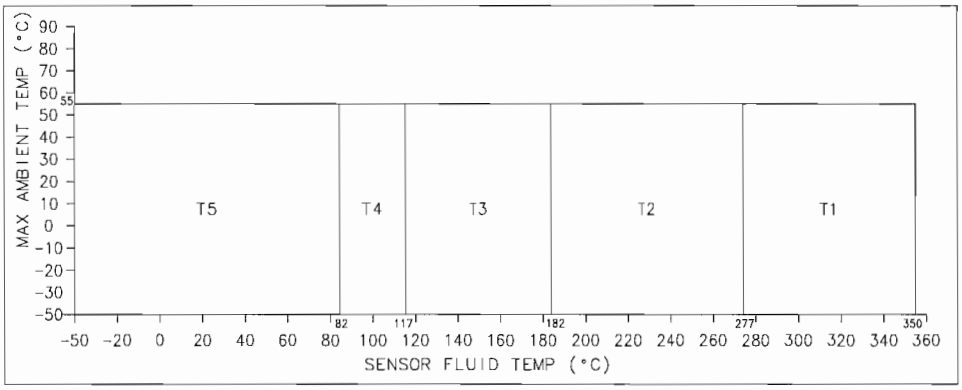
Ambient temperature range Ta -40 °C up to +55 °C

6 Type CMF***(A,B,C,E)****(C,F)*I**** inclusive Construction Identification Code (CIC) A5 or no marking

6.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

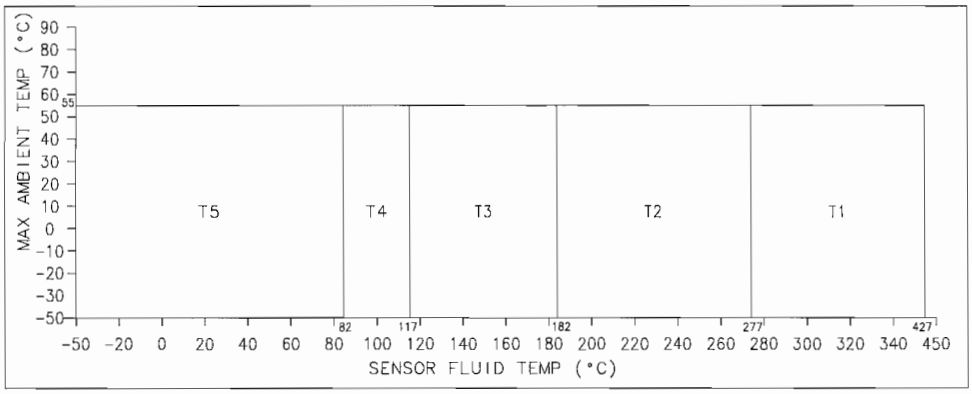
6.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

6.2.1 For types CMF200(A,B)****(C,F)*I**** CIC A5 or no marking, CMF300(A,B)****(C,F)*I**** CIC A5 or no marking and CMF400(A,B)****(C,F)*I**** CIC A5 or no marking with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

6.2.2 For types CMF200(C,E)****(C,F)*I**** CIC A5 or no marking, CMF300(C,E)****(C,F)*I**** CIC A5 or no marking, CMF400(C,E)****(C,F)*I**** CIC A5 or no marking with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

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Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

Type	Type of protection	Ambient/Fluid temperature range
CMF010*****[1]*|****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF025*****[1]*|****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF050*****[1]*|****	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*|****	Ex ib IIC T1-T6	- 60 °C ≤ Ta ≤ +55 °C
CMF100*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200*****[1]*|**** incl. CMF200*****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF200*****[1]*|**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF200[4]****[1]*|**** incl. CMF200[4]*****[1]*|**** CIC A5	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF300*****[1]*|**** incl. CMF300*****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 55 °C ≤ Ta ≤ +55 °C
CMF300*****[1]*|**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[1]*|**** incl. CMF300[4] ****[1]*|**** CIC A5	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[1]*|**** incl. CMF400 *****[1]*|**** CIC A3	Ex ib IIB T1-T6	- 68 °C ≤ Ta ≤ +60 °C
CMF400 *****[1]*|**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +60 °C
CMF400[4] ****[1]*|**** incl. CMF400[4] ****[1]*|**** CIC A5	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF800*****[1]*|****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF800*****[1]*|**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMF800[4] ****[1]*|****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF800[4] ****[1]*|**** CIC A4	Ex ib IIC T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMFHC3*****[1]*|****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMFHC3*****[1]*|**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C
CMFHC3[4] ****[1]*|****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMFHC3[4] ****[1]*|**** CIC A4	Ex ib IIC T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF010 *****[2]*|****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF025 *****[2]*|****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF050 *****[2]*|****	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF100 *****[2]*|**** incl. CMF100 *****[2]*|**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*|**** incl. CMF200 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200 *****[2]*|**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF200[4] ****[2]*|**** incl. CMF200[4] ****[2]*|**** CIC A5	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*|**** incl. CMF300 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300 *****[2]*|**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300[4] ****[2]*|**** incl. CMF300[4] ****[2]*|**** CIC A5	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF400 *****[2]*|**** incl. CMF400 *****[2]*|**** CIC A3	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +60 °C
CMF400 *****[2]*|**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C

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Type	Type of protection	Ambient/Fluid temperature range
CMF400[4] ****[2]*|**** incl. CMF400[4] ****[2]*|**** CIC A5	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF800*****[2]*|****	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF800*****[2]*|**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF800[4]****[2]*|****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMFHC3*****[2]*|****	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMFHC3*****[2]*|**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMFHC3[4]****[2]*|****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C

1) at this place the letter R, H, S or T may be inserted
2) at this place the number 2, 3 ,4 or 5 or the letter A, B, Q or V may be inserted
4) at this place the letter A, B, C or E may be inserted

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X issue No.:5	Certificate history: Issue No. 5 (2008-11-3) Issue No. 4 (2007-10-31) Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)
Status:	**Current**	
Date of Issue:	**2008-11-03** Page 1 of 4	
Applicant:	**Micro Motion, Inc.** Boulder, Co. 80301 **United States of America**	
Electrical Apparatus: *Optional accessory:*	**Sensor type CMF*** *******|****	
Type of Protection:	**Intrinsic Safety 'i'**	
Marking:	**Ex ib IIB/IIC T4/T5/T6**	
Approved for issue on behalf of the IECEx Certification Body:	Dr. R. Jockers	
Position:	Head of Certification Body	
Signature: *(for printed version)*		
Date:	03.11.2008	

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2008-11-03** Issue No.: **5**

Manufacturer: **Micro Motion, Inc.**
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Co., Ltd
1277 Xin Jin Qiao Rd
Jin Qiao Export Processing Zone
Pudong
Shanghai 201206
China

Emerson Process Management Flow B.V.
Neonstraat 1
6718 WX Ede
The Netherlands

Emerson Process Management Flow Technologies Co., Ltd.
111, Xing Min South Road, Jiangning,
Nanjing,
Jiangsu Province
211100
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/00 and DE/BVS/ExTR06.0009/01 and DE/BVS/ExTR06.0009/02 and DE/BVS/ExTR06.0009/03 and DE/BVS/ExTR06.0009/04 and DE/BVS/ExTR06.0009/05

File Reference:
DE/BVS/04/2024 and DE/BVS/04/2024/N1 and DE/BVS/04/2024/N2 and DE/BVS/04/2024/N3 and DE/BVS/04/2024/N4 and DE/BVS/04/2024/N5

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2008-11-03** Issue No.: **5**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The flow sensor in combination with a transmitter is used for flow measurement.
The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, resistors, temperature sensors and terminals and connectors.

Alternatively a transmitter type *700********** (IECEx BVS 04.0006X) can be mounted directly to the junction box; this variation gets the denomination **type CMF*** *****C*I**** and **type CMF*** *****F*I****.

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use
see Annex

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2008-11-03** Issue No.: **5**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The sensor can be modified:
Versions type CMF800*******I**** have been removed. Versions type CMFHC2********** have been added. New versions type CMF**********7***** (CMF100/200/300/400/HC2/HC3 for gas group IIC).Electronic interface codes 6 – 9, D, E, W, Y, U (direct host) and J,U (2200S) have been added. A new manufacturing location has been added: Emerson Process Management Flow Technologies Co., Ltd., Nanjing, China
For the modified equipment the existing ExTR´s are valid without change.

Annexe: BVS_04_0007x_issue_5_Micro Motion_Annex.pdf

Subject and Type

Sensor type CMF*** ********I****

Instead of the *** letters and numerals will be inserted which characterize the following modifications:

C M F * * * * * * * * * I * * * *

- Marking without influence to the type of protection
- Approval
  I = IECEx Zone 1
  7 = IECEx Zone 1 – CMF100/200/300/400/HC2/HC3 for gas group IIC
- Letter for conduit connections
- Letter for electronic interface
  2 = aluminum enhanced core processor
  3 = stainless enhanced core processor
  4 = aluminum enhanced core processor with extender
  5 = stainless enhanced core processor with extender
  6 = aluminum enhanced core processor for direct host
  7 = stainless enhanced core processor for direct host
  8 = aluminum enhanced core processor with extender for direct host
  9 = stainless enhanced core processor with extender for direct host
  A = local core processor
  B = local core processor with extender
  C = integral 1700/2700
  F = integral 1700/2700 with extender
  D = local core processor for direct host
  E = local core processor with extender for direct host
  R = with junction box for 9-wire
  H = 9 wire junction box with extender
  Q = aluminum core processor
  V = aluminum core processor with extender
  W = aluminum core processor for direct host
  Y = aluminum core processor with extender for direct host
  S = 9-wire Stainless junction box
  T = 9-wire Stainless junction box with extender
  J = integral 2200S
  U = integral 2200S with extender
- Marking without influence to the type of protection
- A = High Temp. Stainless Steel Tube 350°C
  B = High Temp. HY Tube 350°C
  C = High Temp. Stainless Steel Tube 427°C
  E = High Temp. HY Tube 427°C
  Other marking without influence to the type of protection
- 3 numerals for type of sensor

Parameters

1 Type CMF********(R,H,S,T)****** with J-box, inclusive Construction Identification Code (CIC) A3 and A4 and no marking, except type CMF***(A,B,C,E)****(R,H,S,T)******

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W

Internal capacitance negligible

Sensor type	Inductance [mH]	Coil resistance [Ω] at min. temperature	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF010*****(R,H,S,T)*I****	2.51	78.7	948.9	-40
CMF010*****(R,H,S,T)*I****	2.51	0	945.1	-240
CMF025*****(R,H,S,T)*I****	2.51	78.7	170.8	-40
CMF025*****(R,H,S,T)*I****	2.51	0	170.1	-240
CMF050*****(R,H,S,T)*I****	2.51	78.7	170.8	-40
CMF050*****(R,H,S,T)*I****	2.51	0	170.1	-240
CMF100*****(R,H,S,T)*I****	6.7	58.4	89.0	-40
CMF100*****(R,H,S,T)*I****	6.7	52.4	89.0	-60
CMF100*****(R,H,S,T)*I**** CIC A4 CMF100*****(R,H,S,T)*7****	6.7	0	177.0	-240
CMF200*****(R,H,S,T)*I**** CIC A3	9.5	92.9	0	-40
CMF200*****(R,H,S,T)*I**** CIC A3	9.5	85.8	0	-55
CMF200*****(R,H,S,T)*I**** CIC A4 CMF200*****(R,H,S,T)*7****	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*I**** CIC A3	9.5	92.9	0	-40
CMF300*****(R,H,S,T)*I**** CIC A3	9.5	85.8	0	-55
CMF300*****(R,H,S,T)*I**** CIC A4 CMF300*****(R,H,S,T)*7****	9.5	0	177.0	-240
CMF400*****(R,H,S,T)*I**** CIC A3	11.75	83.5	19.8	-40
CMF400*****(R,H,S,T)*I**** CIC A3	11.75	71.4	19.8	-68
CMF400 *****(R,H,S,T)*I**** CIC A4 CMF400 *****(R,H,S,T)*7****	11.75	0	187.1	-240
CMFHC2*****(R,H,S,T)*I****	5.0	19.5	38.5	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4 CMFHC2*****(R,H,S,T)*7****	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*I****	5.0	19.5	38.5	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4 CMFHC3*****(R,H,S,T)*7****	5.0	0	126.0	-240

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW

Sensor type	Inductance [mH]	Coil resistance [Ω] at min. temperature	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF010*****(R,H,S,T)*I****	2.51	78.7	0	-40
CMF010*****(R,H,S,T)*I****	2.51	0	0	-240
CMF025*****(R,H,S,T)*I****	2.51	78.7	0	-40
CMF025*****(R,H,S,T)*I****	2.51	0	0	-240
CMF050*****(R,H,S,T)*I****	2.51	78.7	0	-40
CMF050*****(R,H,S,T)*I****	2.51	0	0	-240
CMF100*****(R,H,S,T)*I****	0.441	11.1	0	-40
CMF100*****(R,H,S,T)*I****	0.441	9.9	0	-60
CMF100*****(R,H,S,T)*I**** CIC A4 CMF100*****(R,H,S,T)*7****	0.441	0	0	-240
CMF200*****(R,H,S,T)*I**** CIC A3	2.0	41.9	0 to 567.9	-40
CMF200*****(R,H,S,T)*I**** CIC A3	2.0	38.7	0 to 567.9	-55
CMF200*****(R,H,S,T)*I**** CIC A4 CMF200*****(R,H,S,T)*7****	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*I**** CIC A3	2.0	41.9	0 to 567.9	-40
CMF300*****(R,H,S,T)*I**** CIC A3	2.0	38.7	0 to 567.9	-55
CMF300*****(R,H,S,T)*I**** CIC A4 CMF300*****(R,H,S,T)*7****	2.0	0	0 to 567.9	-240
CMF400*****(R,H,S,T)*I**** CIC A3	12.4	128.3	0 to 566.4	-40
CMF400*****(R,H,S,T)*I**** CIC A3	12.4	109.8	0 to 566.4	-68
CMF400*****(R,H,S,T)*I**** CIC A4 CMF400*****(R,H,S,T)*7****	12.4	0	0 to 566.4	-240
CMFHC2*****(R,H,S,T)*I****	2.8	49.2	42.6 to 566.4	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4 CMFHC2*****(R,H,S,T)*7****	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*I****	2.8	49.2	42.6 to 566.4	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4 CMFHC3*****(R,H,S,T)*7****	2.8	0	198.4 to 566.4	-240

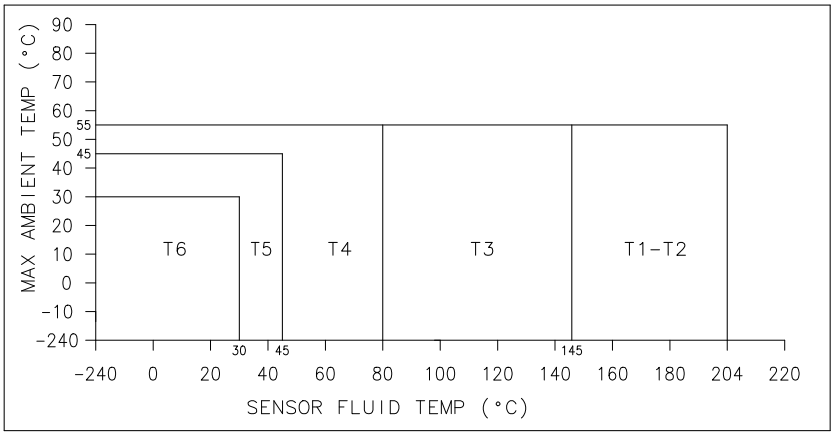
1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

1.4 Temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1 For types CMF010*****(R,H,S,T)*I**** , CMF025*****(R,H,S,T)*I**** and CMF050*****(R,H,S,T)*I**** with J-box

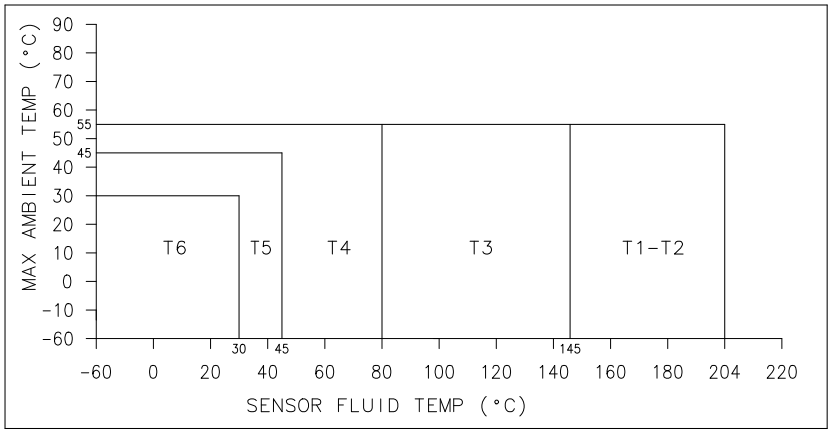


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.2 For types CMF100*****(R,H,S,T)*I**** with J-box connected to MVD transmitters

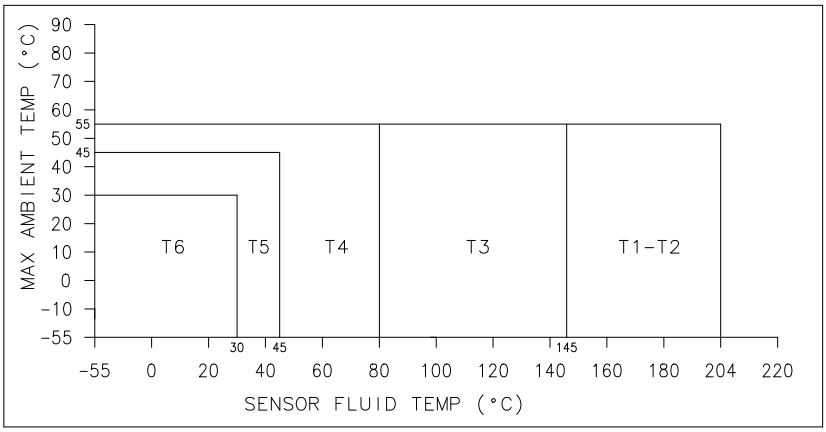


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.3 For types CMF200*****(R,H,S,T)*I**** and CMF300*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A3 with J-box

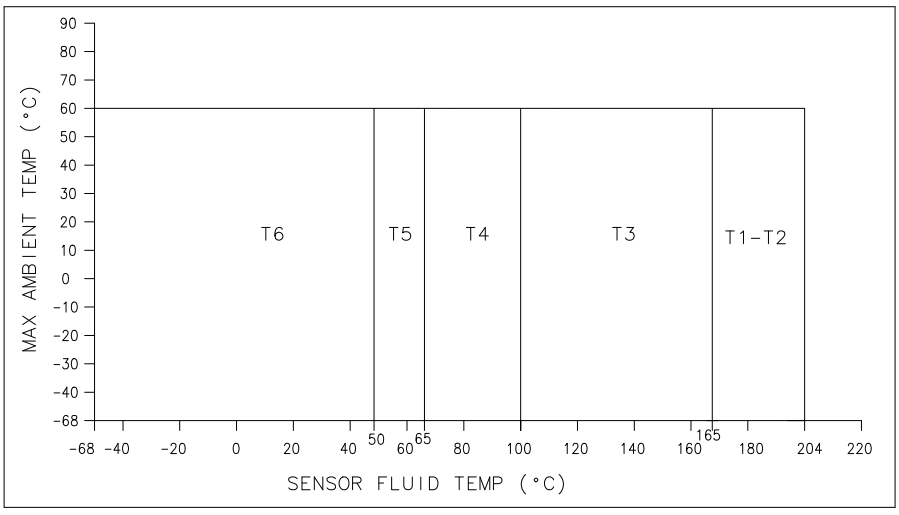


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-55 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.4 For types CMF400*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A3 with J-box connected to MVD transmitters

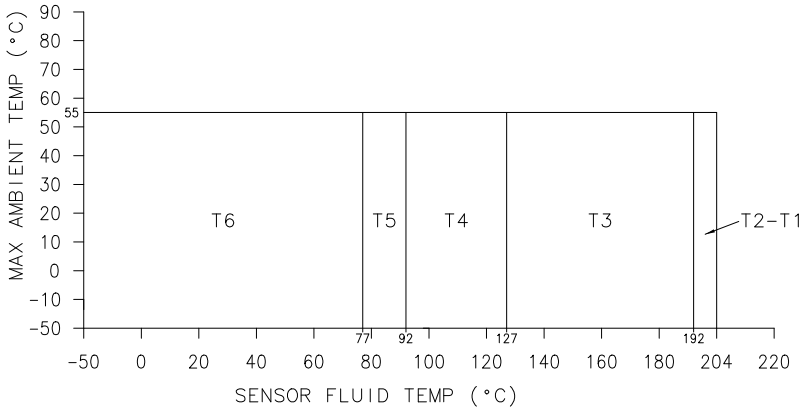


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-68 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.5 For types CMFHC2*****(R,H,S,T)*I**** and CMFHC3*****(R,H,S,T)*I**** with J-box connected to MVD transmitters

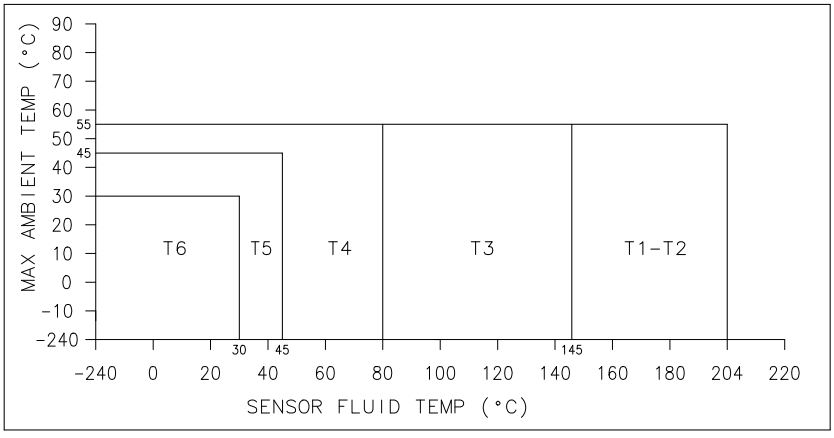


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6 For types CMF100*****(R,H,S,T)*I****, CMF200*****(R,H,S,T)*I**** and CMF300*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A4 with J-box and types CMF100*****(R,H,S,T)*7****, CMF200*****(R,H,S,T)*7**** and CMF300*****(R,H,S,T)*7**** with J-box

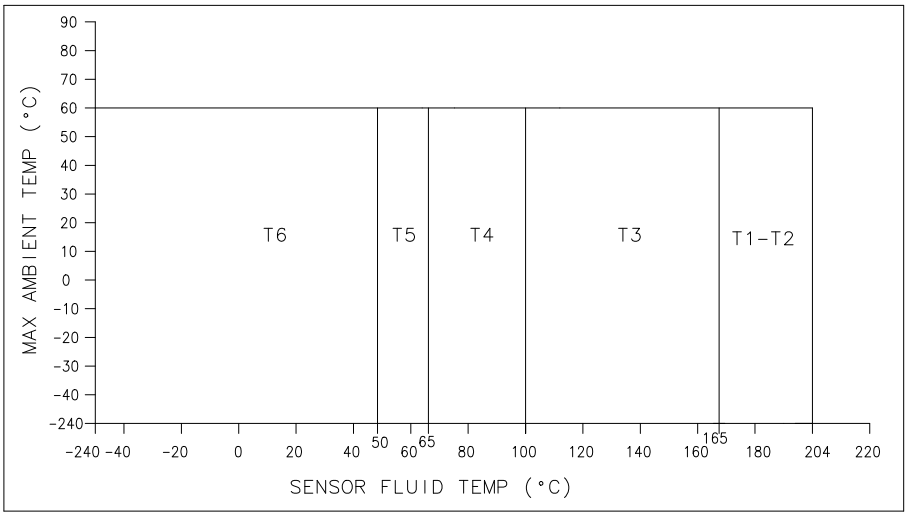


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.7 For types CMF400*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters and type CMF400*****(R,H,S,T)*7**** with J-box connected to MVD transmitters

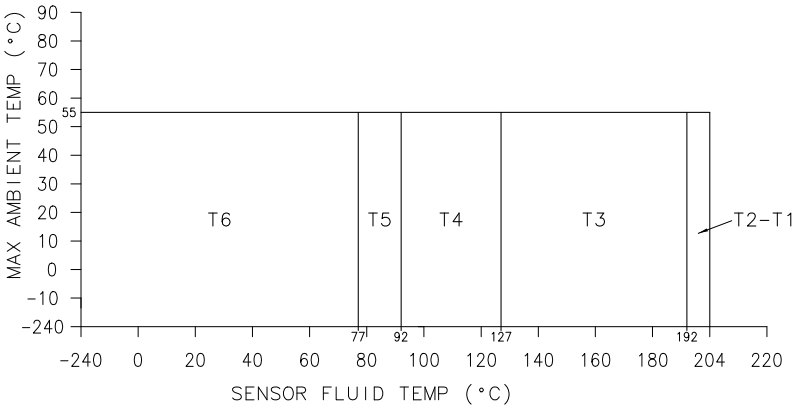


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-240 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.8 For types CMFHC2*****(R,H,S,T)*I**** and CMFHC3*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A4 with J-box connected to MVD transmitters and for types CMFHC2*****(R,H,S,T)*7**** and CMFHC3*****(R,H,S,T)*7**** with J-box connected to MVD transmitters



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2 Type CMF***(A,B,C,E)****(R,H,S,T)****** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W
Internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A,B,C,E)****(R,H,S,T)*I****	4.01	32.2	19.8	-50
CMF200(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMF200(A,B,C,E)****(R,H,S,T)*7****	1.1	15.4	41	-50
CMF200(A,B,C,E)****(R,H,S,T)*I**** CIC A5	1.1	15.4	9.6	-50
CMF300(A,B,C,E)****(R,H,S,T)*I****	4.0	32.3	19.8	-50
CMF300(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMF300(A,B,C,E)****(R,H,S,T)*7****	1.1	15.4	41	-50
CMF300(A,B,C,E)****(R,H,S,T)*I**** CIC A5	1.1	15.4	9.6	-50
CMF400(A,B,C,E)****(R,H,S,T)*I****	7.75	54.3	19.8	-50
CMF400(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMF400(A,B,C,E)****(R,H,S,T)*7****	3.4	35.2	63.2	-50
CMF400(A,B,C,E)****(R,H,S,T)*I**** CIC A5	3.4	35.2	12.8	-50
CMFHC2(A,B,C,E)****(R,H,S,T)*I****	5.95	51.3	12.8	-50
CMFHC2(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMFHC2(A,B,C,E)****(R,H,S,T)*7****	5.95	51.3	88.9	-50
CMFHC2(A,B,C,E)****(R,H,S,T)*I**** CIC A6	7.75	54.3	24.7	-50
CMFHC2(A,B,C,E)****(R,H,S,T)*7**** CIC A6	7.75	54.3	106.7	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I****	5.95	51.3	12.8	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMFHC3(A,B,C,E)****(R,H,S,T)*7****	5.95	51.3	88.9	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I**** CIC A6	7.75	54.3	24.7	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*7**** CIC A6	7.75	54.3	106.7	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Internal capacitance	Ci	negligible		

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF200(A,B,C,E)****(R,H,S,T)*I****	1.25	15.4	569.2	-50
CMF200(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMF200(A,B,C,E)****(R,H,S,T)*7**** CMF200(A,B,C,E)****(R,H,S,T)*I**** CIC A5	0.5	8.0	569.2	-50
CMF300(A,B,C,E)****(R,H,S,T)*I****	1.25	15.4	569.2	-50
CMF300(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMF300(A,B,C,E)****(R,H,S,T)*7**** CMF300(A,B,C,E)****(R,H,S,T)*I**** CIC A5	0.5	8.0	569.23	-50
CMF400(A,B,C,E)****(R,H,S,T)*I****	6.50	41.1	569.2	-50
CMF400(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMF400(A,B,C,E)****(R,H,S,T)*7**** CMF400(A,B,C,E)****(R,H,S,T)*I**** CIC A5	1.10	15.4	569.2	-50
CMFHC2(A,B,C,E)****(R,H,S,T)*I**** CMFHC2(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMFHC2(A,B,C,E)****(R,H,S,T)*7**** CMFHC2(A,B,C,E)****(R,H,S,T)*I**** CIC A6 CMFHC2(A,B,C,E)****(R,H,S,T)*7**** CIC A6	0.85	9.1	42.6	-50
CMFHC3(A,B,C,E)****(R,H,S,T)*I**** CMFHC3(A,B,C,E)****(R,H,S,T)*I**** CIC A4 CMFHC3(A,B,C,E)****(R,H,S,T)*7**** CMFHC3(A,B,C,E)****(R,H,S,T)*I**** CIC A6 CMFHC3(A,B,C,E)****(R,H,S,T)*7**** CIC A6	0.85	9.1	42.6	-50

2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

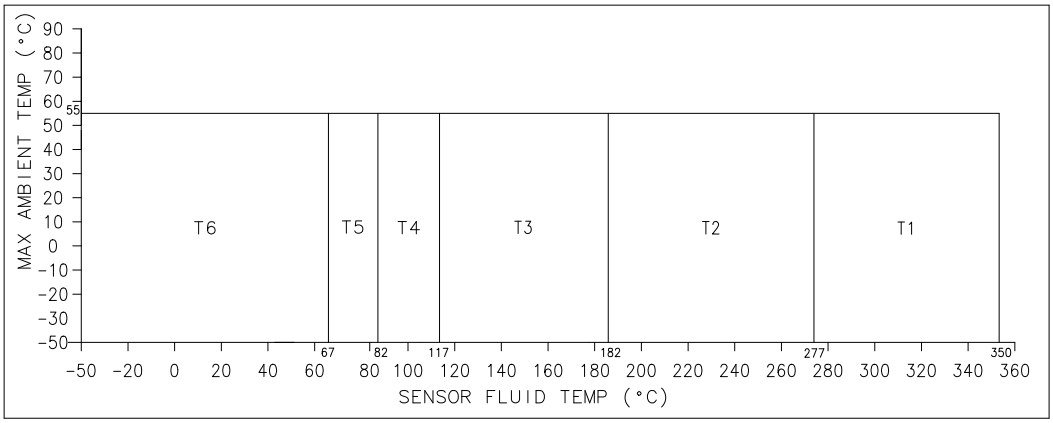
Voltage	Ui	DC	30	V
Current	Ii		101	mA
Power	Pi		750	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

2.4 Temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.4.1 For types CMF200(A,B)****(R,H,S,T)*I**** CIC A4 or CIC A5 or no marking and
CMF300(A,B)****(R,H,S,T)*I**** CIC A4 or CIC A5 or no marking with J-box and
CMF400(A,B)****(R,H,S,T)*I**** CIC A4 or CIC A5 or no marking and
CMFHC2(A,B)****(R,H,S,T)*I**** CIC A4 or CIC A6 or no marking and
CMFHC3(A,B)****(R,H,S,T)*I**** CIC A4 or CIC A6 or no marking with J-box connected to MVD transmitter only and
CMF200(A,B)****(R,H,S,T)*7**** and CMF300(A,B)****(R,H,S,T)*7**** with J-box and
CMF400(A,B)****(R,H,S,T)*7**** and

CMFHC2(A,B)****(R,H,S,T)*7**** with CIC A6 or no marking and
CMFHC3(A,B)****(R,H,S,T)*7**** with CIC A6 or no marking with J-box connected to MVD transmitter only

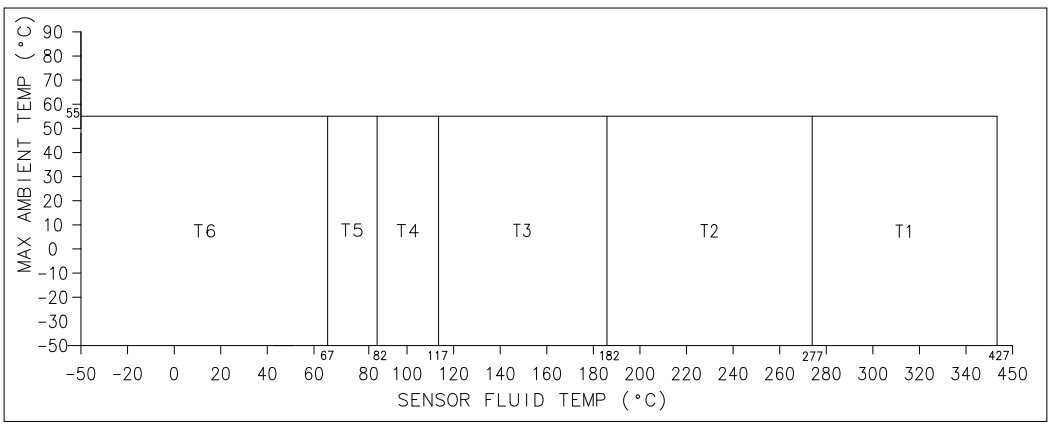


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.4.2 For types CMF200(C,E)****(R,H,S,T)*I**** CIC A4 or CIC A5 or no marking and
CMF300(C,E)****(R,H,S,T)*I**** CIC A4 or CIC A5 or no marking with J-box and
CMF400(C,E)****(R,H,S,T)*I**** CIC A4 or CIC A5 or no marking,
CMFHC2(C,E)****(R,H,S,T)*I**** CIC A4 or CIC A6 or no marking and
CMFHC3(C,E)****(R,H,S,T)*I**** CIC A4 or CIC A6 or no marking with J-box connected to MVD transmitter only and
CMF200(C,E)****(R,H,S,T)*7**** and CMF300(C,E)****(R,H,S,T)*7**** with J-box and
CMF400(C,E)****(R,H,S,T)*7**** , CMFHC2(C,E)****(R,H,S,T)*7**** with CIC A6 or no marking and
CMFHC3(C,E)****(R,H,S,T)*7**** with CIC A6 or no marking with J-box connected to MVD transmitter only



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

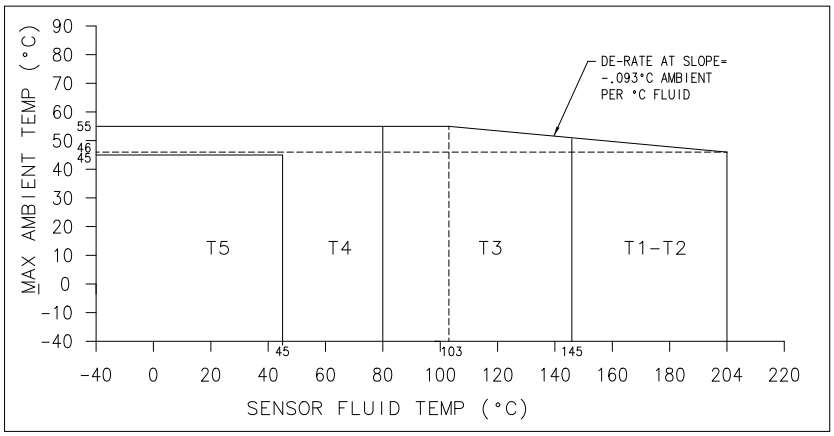
3 Type CMF********(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with integral Core Processor inclusive Construction Identification Code CIC A3 and A4 except type CMF***(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****

3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

3.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

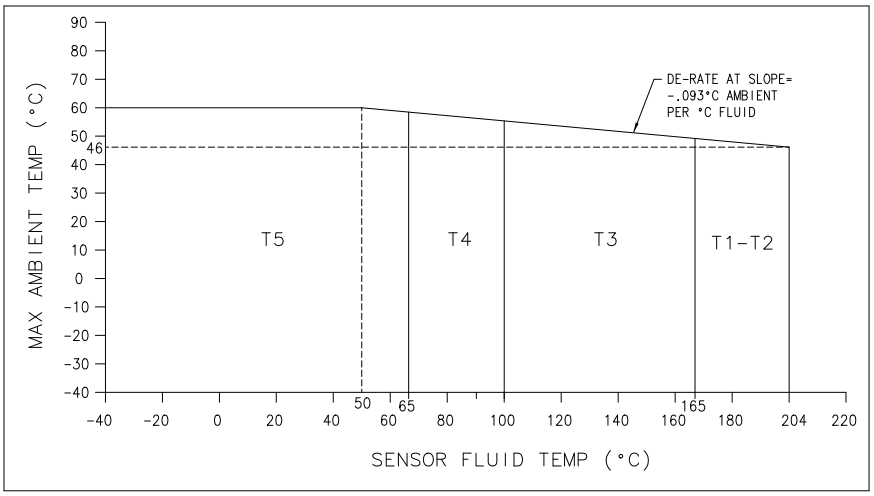
3.2.1 For types CMF010*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****, CMF025*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****, CMF050*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****, CMF100*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****, CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****, CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** and CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** and CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A3 with integrally mounted core processor and CMF100*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****, CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****, CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 with integrally mounted core processor and CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** andCMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

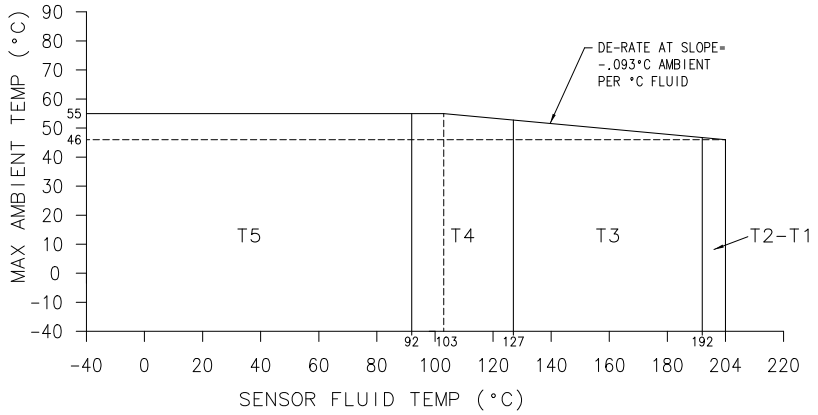
3.2.2 For type CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A3 and CIC A4 and CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** with integrally mounted core processor and



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

3.2.3 For type CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** and CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or no marking and CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** and CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

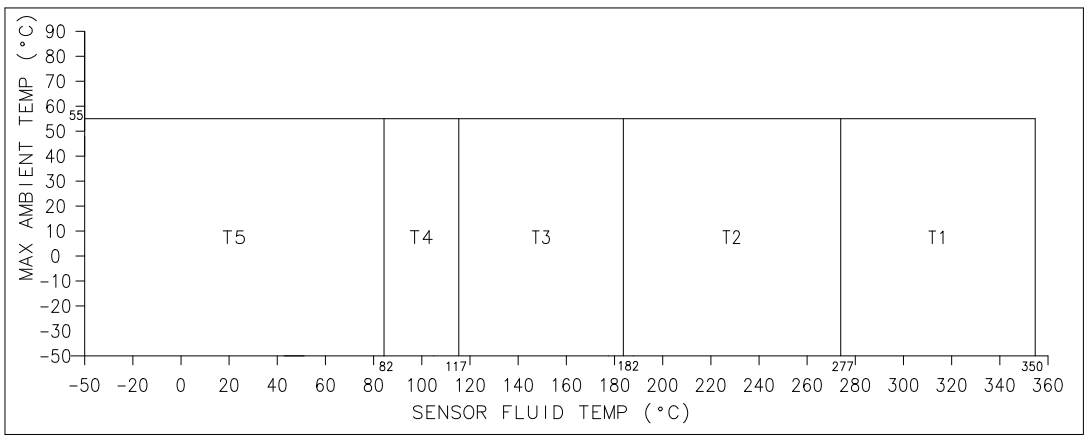
4 Type CMF***(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)******
For CMF200(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)******,
CMF300(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)******,
CMF400(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)******,
CMFHC2(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****and
CMFHC3(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)****** with integral Core Processor, inclusive Construction Identification Code CIC A4 or CIC A5 or CIC A6 or no marking

4.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Iinternal capacitance	Ci		2200	pF
Internal inductance	Li		30	µH

4.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

4.2.1 For types CMF200(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A5 or no marking, CMF300(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A5 or no marking,
CMF400(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A5 or no marking,
CMFHC2(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A6 or no marking and
CMFHC3(A,B)**** (2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A6 or no marking
CMF200(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****,
CMF300(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****,
CMF400(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****,
CMFHC2(A,B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** with CIC A6 or no marking and
CMFHC3(A,B)**** (2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7*** with CIC A6 or no marking
with integrally mounted core processor

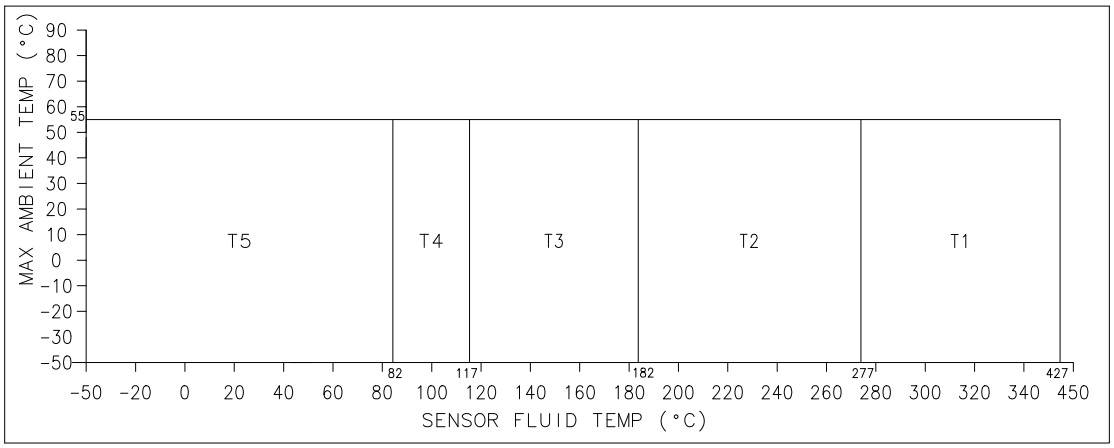


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.2.2 For types CMF200(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A5 or no marking, CMF300(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A5 or no marking, CMF400(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A5 or no marking, CMFHC2(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A6 or no marking and CMFHC3(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with CIC A4 or CIC A6 or no marking and
CMF200(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****,
CMF300(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****,
CMF400(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****,
CMFHC2(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** with CIC A6 or no marking and
CMFHC3(C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** with CIC A6 or no marking with integrally mounted core processor



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

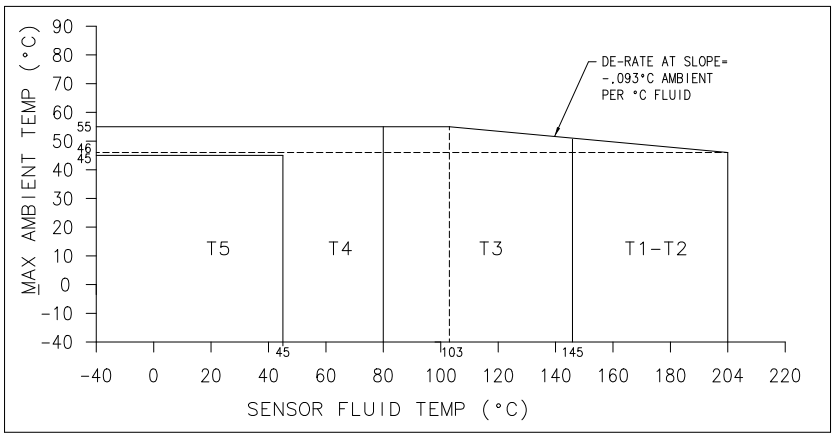
The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5 Type CMF********(C,F)****** inclusive Construction Identification Code (CIC) A3 and A4 or no marking, except CMF***(A,B,C,E)****(C,F)******

5.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

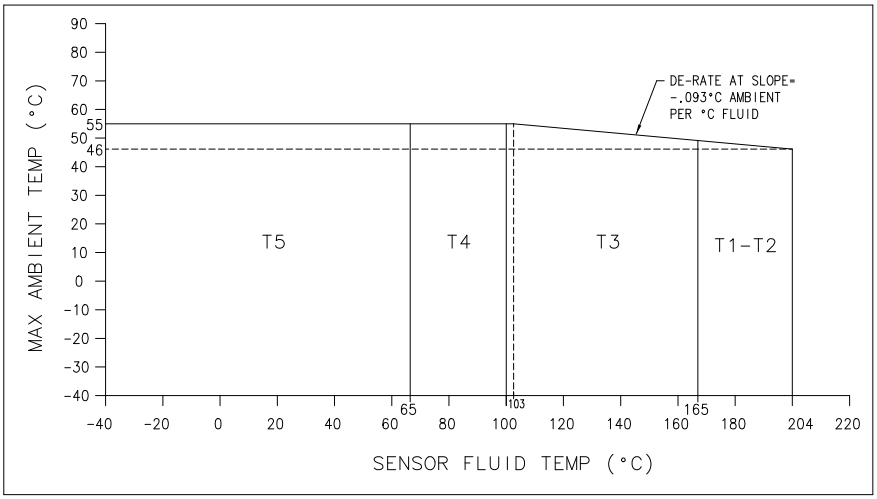
5.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

5.2.1 For types CMF010*****(C,F)*I****, CMF025*****(C,F)*I ****, CMF050*****(C,F)*I****, CMF100*****(C,F)*I****,CMF200*****(C,F)*I****,CMF300*****(C,F)*I**** and CMF200*****(C,F)*I**** and CMF300*****(C,F)*I**** CIC A3 and CMF200*****(C,F)*I**** and CMF300*****(C,F)*I**** CIC A4 and CMF200*****(C,F)*7**** and CMF300*****(C,F)*7**** with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

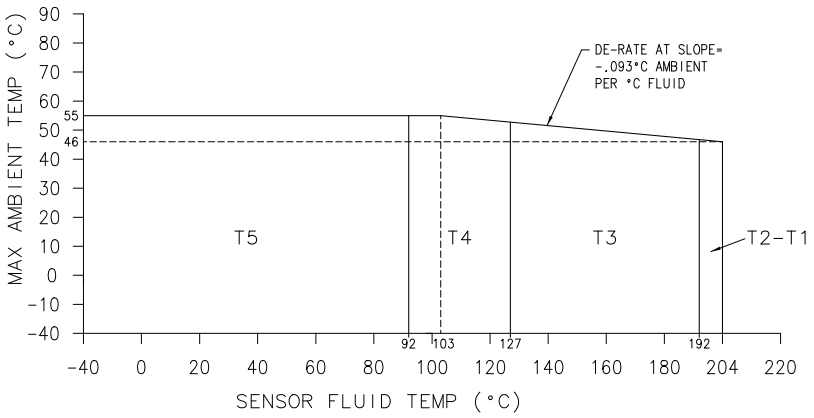
5.2.2 For types CMF400*****(C,F)*I**** CIC A3 and A4 or no marking and CMF400*****(C,F)*I**** with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

5.2.3 For types CMFHC2****(C,F)*I**** and CMFHC3*****(C,F)*I**** CIC A4 or no marking and CMFHC2****(C,F)*7**** and CMFHC3*****(C,F)*7**** with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +55 °C

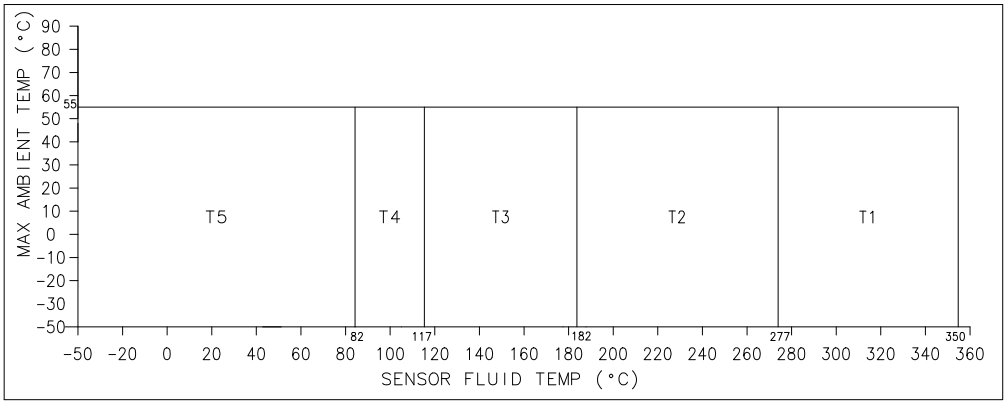
6 Type CMF***(A,B,C,E)****(C,F)****** inclusive Construction Identification Code CIC A4 or CIC A5 or CIC A6 or no marking

For type CMF200(A,B,C,E)****(C,F)******, CMF300(A,B,C,E)****(C,F)******, CMF400(A,B,C,E)****(C,F)******, CMFHC2(A,B,C,E)****(C,F)****** and CMFHC3(A,B,C,E)****(C,F)****** with 1700/2700 with integral 700 core processor

6.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

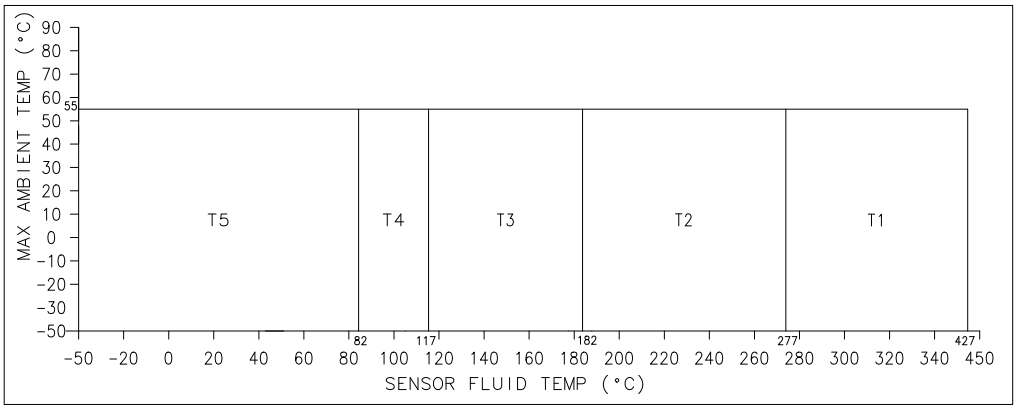
6.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

6.2.1 For types CMF200(A,B)****(C,F)*I**** with CIC A4 or CIC A5 or no marking,
CMF300(A,B)****(C,F)*I**** CIC A4 or CIC A5 or no marking,
CMF400(A,B)****(C,F)*I**** CIC A4 or CIC A5 or no marking,
CMFHC2(A,B)****(C,F)*I**** CIC A4 or CIC A6 or no marking and
CMFHC3(A,B)****(C,F)*I**** CIC A4 or CIC A6 or no marking and
CMF200(A,B)****(C,F)*7****, CMF300(A,B)****(C,F)*7****,
CMF400(A,B)****(C,F)*7****, CMFHC2(A,B)****(C,F)*7**** with CIC A6 or no marking and
CMFHC3(A,B)****(C,F)*7**** with CIC A6 or no marking with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

6.2.2 For types CMF200(C,E)****(C,F)*I**** with CIC A4 or CIC A5 or no marking,
CMF300(C,E)****(C,F)*I**** with CIC A4 or CIC A5 or no marking,
CMF400(C,E)****(C,F)*I**** with CIC A4 or CIC A5 or no marking,
CMFHC2(C,E)****(C,F)*I**** with CIC A4 or CIC A6 or no marking and
CMFHC3(C,E)****(C,F)*I**** with CIC A4 or CIC A6 or no marking and
CMF200(C,E)****(C,F)*7****, CMF300(C,E)****(C,F)*7****,
CMF400(C,E)****(C,F)*7****, CMFHC2(C,E)****(C,F)*I**** with CIC A6 or no marking and
CMFHC3(C,E)****(C,F)*I**** with CIC A6 or no marking with integrally mounted transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

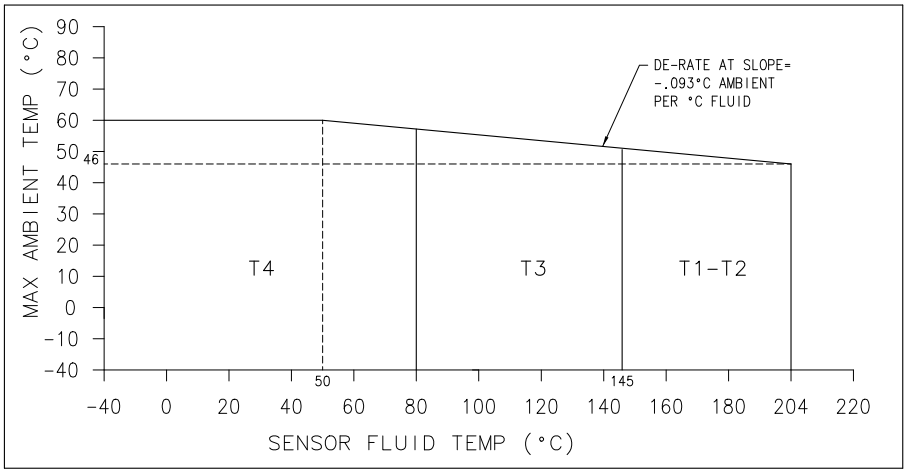
7 Types CMF********(J,U)****** incl. CIC A4 with 2200S transmitter, except type CMF***(A,B,C,E)****J,U)******

7.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		30	µH

7.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

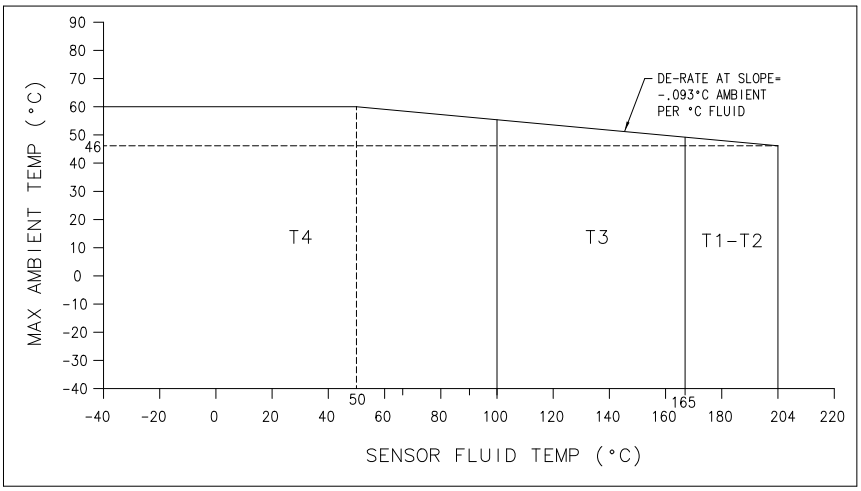
7.2.1 For types CMF010*****(J,U)*I****, CMF025*****(J,U)*I****, CMF050*****(J,U)*I****, CMF100*****(J,U)*I****, CMF200*****(J,U)*I****, CMF300*****(J,U)*I****, CMF200*****(J,U)*I**** CIC A4, CMF200*****(J,U)*7****, CMF300*****(J,U)*I**** CIC A4 and CMF300*****(J,U)*7**** with integrally mounted transmitter 2200S



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

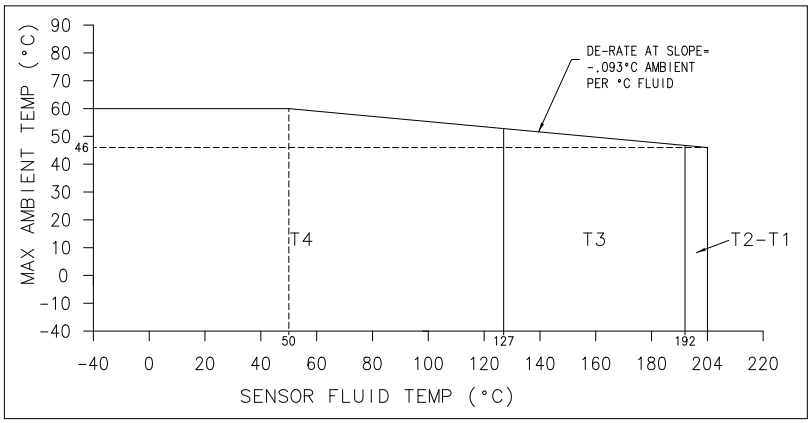
7.2.2 For types CMF400*****(J,U)*I**** CIC A4 and CMF400*****(J,U)*7**** with integrally mounted transmitter 2200S



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

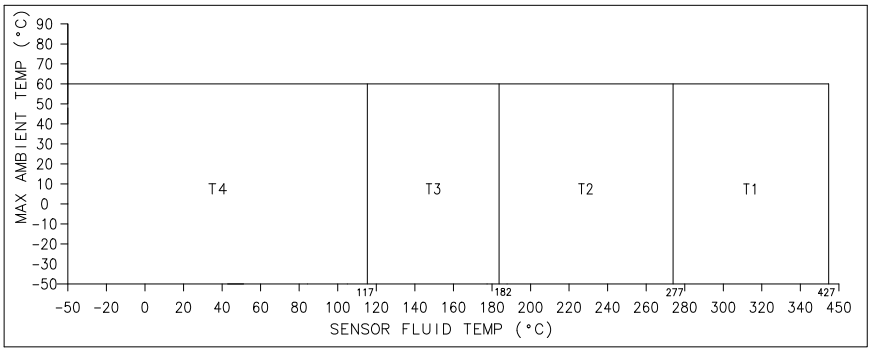
7.2.3 For types CMFHC2*****(J,U)*I****, CMFHC3*****(J,U)*I**** CIC A4 or no marking, CMFHC2*****(J,U)*7**** and CMFHC3*****(J,U)*7**** with integrally mounted transmitter 2200S



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

8.2.2 For types CMF200(C,E)****(J,U)*I**** CIC A4 or CIC A5 or no marking,
CMF300(C,E)****(J,U)*I**** CIC A4 or CIC A5 or no marking,
CMF400(C,E)****(J,U)*I**** CIC A4 or CIC A5 or no marking,
CMFHC2(C,E)****(J,U)*I**** CIC A4 or CIC A6 or no marking,
CMFHC3(C,E)****(J,U)*I**** CIC A4 or CIC A6 or no marking,
CMF200(C,E)****(J,U)*7****, CMF300(C,E)****(J,U)*7****,
CMF400(C,E)****(J,U)*7****, CMFHC2(C,E)****(J,U)*7**** CIC A6 or no marking and
CMFHC3(C,E)****(J,U)*7**** CIC A6 or no marking with integrally mounted 2200S transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

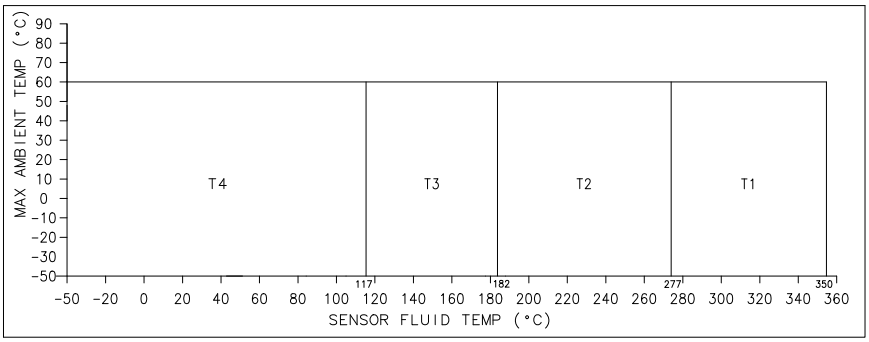
8 Types CMF200(A,B,C,E)****(J,U)******, CMF300(A,B,C,E)****(J,U)******, CMF400(A,B,C,E)****(J,U)******, CMFHC2(A,B,C,E)****(J,U)****** and CMFHC3(A,B,C,E)****(J,U)****** with 2200S transmitter

8.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		30	µH

8.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

8.2.1 For types CMF200(A,B)****(J,U)*I**** CIC A4 or CIC A5 or no marking,
CMF300(A,B)****(J,U)*I**** CIC A4 or CIC A5 or no marking,
CMF400(A,B)****(J,U)*I**** CIC A4 or CIC A5 or no marking,
CMFHC2(A,B)****(J,U)*I**** CIC A4 or CIC A6 or no marking,
CMFHC3(A,B)****(J,U)*I**** CIC A4 or CIC A6 or no marking,
CMF200(A,B)****(J,U)*7****, CMF300(A,B)****(J,U)*7****,
CMF400(A,B)****(J,U)*7****, CMFHC2(A,B)****(J,U)*7**** CIC A6 or no marking and
CMFHC3(A,B)****(J,U)*7**** CIC A6 or no marking with integrally mounted 2200S transmitter



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Special conditions for safe use

By mounting the sensor type CMF********(C.F)****** directly to the transmitter *700********** the use of the unit will be modified according to the following:

Transmitter type	Sensor type	
	CMF010*****(C.F)*I**** CMF025*****(C.F)*I**** CMF050*****(C F)*I**** CMF100*****(C.F)*I**** CMF100*****(C.F)*I**** CIC A4 CMF100*****(C.F)*7**** CMF200*****(C.F)*I**** CIC A4 CMF200*****(C.F)*7**** CMF300*****(C.F)*I**** CIC A4 CMF300*****(C.F)*7**** CMF400*****(C.F)*I**** CIC A4 CMF400*****(C.F)*7**** CMFHC2*****(C.F)*I**** CIC A4 CMFHC2*****(C.F)*7**** CMFHC3*****(C.F)*I**** CIC A4 CMFHC3*****(C.F)*7**** CMF200(A.B.C.E)****(C.F)*I**** CIC A4 CMF200(A.B.C.E)****(C.F)*7**** CMF300(A.B.C.E)****(C.F)*I**** CIC A4 CMF300(A.B.C.E)****(C.F)*7**** CMF400(A.B.C.E)****(C.F)*I**** CIC A4 CMF400(A.B.C.E)****(C.F)*7**** CMFHC2(A.B.C.E)****(C.F)*I**** CIC A4 CMFHC2(A.B.C.E)****(C.F)*7**** CMFHC2(A.B.C.E)****(C.F)*I**** CIC A6 CMFHC3(A.B.C.E)****(C.F)*I**** CIC A4 CMFHC3(A.B.C.E)****(C.F)*7**** CMFHC3(A.B.C.E)****(C.F)*I**** CIC A6	CMF200*****(C.F)*I**** CIC A3 CMF300*****(C.F)*I**** CIC A3 CMF400*****(C.F)*I**** CIC A3 CMFHC2*****(C.F)*I**** CMFHC3*****(C.F)*I**** CMF200(A.B.C.E)****(C.F)*I**** CMF200(A.B.C.E)****(C.F)*I**** CIC A5 CMF300(A.B.C.E)****(C.F)*I**** CMF300(A.B.C.E)****(C.F)*I**** CIC A5 CMF400(A.B.C.E)****(C.F)*I**** CMF400(A.B.C.E)****(C.F)*I**** CIC A5 CMFHC2(A.B.C.E)****(C.F)*I**** CMFHC2(A.B.C.E)****(C.F)*I**** CIC A6 CMFHC3(A.B.C.E)****(C.F)*I**** CMFHC3(A.B.C.E)****(C.F)*I**** CIC A6
*700*1[1)] *******	Ex ib IIB+H_2 T1-T5	Ex ib IIB T1-T5
*700*1[2)] *******	Ex ib IIC T1-T5	Ex ib IIB T1-T5

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3. 4 or 5 will be inserted.

By mounting the sensor type CMF********(J.U)****** directly to the transmitter 22**S********* the use of the unit will be modified according to the following:

	Sensor Typ	
Sensor type	CMF010*****(J.U)*I**** CMF025*****(J.U)*I**** CMF050*****(J.U)*I**** CMF100*****(J.U)*I**** CMF100*****(J.U)*I**** CIC A4 CMF100*****(J.U)*7**** CMF200*****(J.U)*I**** CIC A4 CMF200*****(J.U)*7**** CMF300*****(J.U)*I**** CIC A4 CMF300*****(J.U)*7**** CMF400*****(J.U)*I**** CIC A4 CMF400*****(J.U)*7**** CMFHC2*****(J.U)*I**** CIC A4 CMFHC2*****(J.U)*7**** CMFHC3*****(J.U)*I**** CIC A4 CMFHC3*****(J.U)*7**** CMF200(A.B.C.E)****(J.U)*I**** CIC A4 CMF200(A.B.C.E)****(J.U)*7**** CMF300(A.B.C.E)****(J.U)*I**** CIC A4 CMF300(A.B.C.E)****(J.U)*7**** CMF400(A.B.C.E)****(J.U)*I**** CIC A4 CMF400(A.B.C.E)****(J.U)*7**** CMFHC2(A.B.C.E)****(J.U)*I**** CIC A4 CMFHC2(A.B.C.E)****(J.U)*7**** CMFHC2(A.B.C.E)****(J.U)*I**** CIC A6 CMFHC3(A.B.C.E)****(J.U)*I**** CIC A4 CMFHC3(A.B.C.E)****(J.U)*7**** CMFHC3(A.B.C.E)****(J.U)*I**** CIC A6	CMF200*****(J.U)*I**** CMF300*****(J.U)*I**** CMF400*****(J.U)*I**** CMFHC2*****(J.U)*I**** CMFHC3*****(J.U)*I**** CMF200(A.B.C.E)****(J.U)*I**** CMF200(A.B.C.E)****(J.U)*I**** CIC A5 CMF300(A.B.C.E)****(J.U)*I**** CMF300(A.B.C.E)****(J.U)*I**** CIC A5 CMF400(A.B.C.E)****(J.U)*I**** CMF400(A.B.C.E)****(J.U)*I**** CIC A5 CMFHC2(A.B.C.E)****(J.U)*I**** CMFHC2(A.B.C.E)****(J.U)*I**** CIC A6 CMFHC3(A.B.C.E)****(J.U)*I**** CMFHC3(A.B.C.E)****(J.U)*I**** CIC A6
Transmitter type 2200S***1******	Ex ib IIC T1-T4	Ex ib IIB T1-T4

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X issue No.:6	Certificate history: Issue No. 6 (2009-8-12) Issue No. 5 (2008-11-3) Issue No. 4 (2007-10-31) Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)
Status:	Current	
Date of Issue:	2009-08-12 Page 1 of 4	
Applicant:	**Micro Motion, Inc.** Boulder, Co. 80301 **United States of America**	
Electrical Apparatus: *Optional accessory:*	**Type CMF*** **********	
Type of Protection:	**Intrinsic Safety 'i'**	
Marking:	**Ex ib IIB/IIC T4/T5/T6**	
Approved for issue on behalf of the IECEx Certification Body:	Dr. F. Eickhoff	
Position:	Deputy Head of Certification Body	
Signature: *(for printed version)*		
Date:	2009-08-12	

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: 2009-08-12 Issue No.: 6

Manufacturer:

Micro Motion, Inc.
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle
Boulder, CO 80301
United States of America

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Flow B.V.
Neonstraat 1
6718 WX Ede
The Netherlands

Emerson Process Management Flow Technologies Co., Ltd.
111, Xing Min South Road,
Jiangning, Nanjing,
Jiangsu Province
211100
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/06

File Reference:
DE/BVS/04/2024/N6

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: 2009-08-12 Issue No.: 6

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Subject and type:
see Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use
see Annex

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2009-08-12** Issue No.: **6**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The sensor can be modified:
Versions type CMF********(C,F)*(I or 7)**** inclusive Construction Identification Code (CIC) A4 or no marking, except CMF***(A,B,C,E)****C*(I or 7)**** have been removed.
New versions type CMFHC*Y******(I or 7)**** have been added. Electrical parameters for sensors with junction box have been changed. For the modified equipment the existing ExTR´s are valid without change.
This issue of the certificate is also issued to remove manufacturing location Pudong, China, from the manufacturing locations due to a decision by the manufacturer to no longer produce products covered by this CoC at this location, from September 2009. Products produced at this facility prior to September 2009 remain covered by this CoC.

Annexe: BVS_04_0007x_issue 6_Micro_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007X Issue 6**
Annex

Subject and Type

Sensor type CMF*** ********|****

Instead of the *** letters and numerals will be inserted which characterize the following modifications:

C M F * * * * * * * * * * | * * * *

- Marking without influence to the type of protection
- Approval
  I = IECEx Zone 1
  7 = IECEx Zone 1 – CMF100/200/300/400/HC2/HC3 for gas group IIC
- Letter for conduit connections
- Letter for electronic interface
  2 = aluminum enhanced core processor
  3 = stainless enhanced core processor
  4 = aluminum enhanced core processor with extender
  5 = stainless enhanced core processor with extender
  6 = aluminum enhanced core processor for direct host
  7 = stainless enhanced core processor for direct host
  8 = aluminum enhanced core processor with extender for direct host
  9 = stainless enhanced core processor with extender for direct host
  A = local core processor
  B = local core processor with extender
  C = integral 1700/2700
  F = integral 1700/2700 with extender (obsolete)
  D = local core processor for direct host
  E = local core processor with extender for direct host
  R = with junction box for 9-wire
  H = 9 wire junction box with extender
  Q = aluminum core processor
  V = aluminum core processor with extender
  W = aluminum core processor for direct host
  Y = aluminum core processor with extender for direct host
  S = 9-wire Stainless junction box
  T = 9-wire Stainless junction box with extender
  J = integral 2200S
  U = integral 2200S with extender
- Marking without influence to the type of protection
- A = High Temp. Stainless Steel Tube 350°C
  B = High Temp. HY Tube 350°C
  C = High Temp. Stainless Steel Tube 427°C
  E = High Temp. HY Tube 427°C
  Y = Standard Version Duplex Tube
  Other marking without influence to the type of protection
- 3 numerals for type of sensor

Parameters

1 Type CMF********(R,H,S,T)****** with J-box, inclusive Construction Identification Code (CIC) A3 and A4 and no marking, except type CMF***(A,B,C,E)****(R,H,S,T)******

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	A
Power	Pi		2,54	W

Internal capacitance negligible

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	945.1	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF100*****(R,H,S,T)*I****		(IIC)	6.7	52.4	89.0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	6.7	0	177.0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	6.7	0	177.0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF200*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF400*****(R,H,S,T)*I**** CIC A3		(IIB)	11.75	71.4	19.8	-68
CMF400*****(R,H,S,T)*I**** CIC A4		(IIC)	11.75	0	187.1	-240
CMF400*****(R,H,S,T)*7****		(IIC)	11.75	0	187.1	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50/-29
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240/-29
CMFHC*Y****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240/-29

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	21,13	V
Current	Ii		18,05	mA
Power	Pi		45	mW

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF100*****(R,H,S,T)*I****		(IIC)	0.441	9.9	0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	0.441	0	0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	0.441	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF200*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF400*****(R,H,S,T)*I**** CIC A3		(IIB)	12.4	109.8	0 to 566.4	-68
CMF400*****(R,H,S,T)*I**** CIC A4		(IIC)	12.4	0	0 to 566.4	-240
CMF400*****(R,H,S,T)*7****		(IIC)	12.4	0	0 to 566.4	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50/-29
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240/-29
CMFHC*Y****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240/-29

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

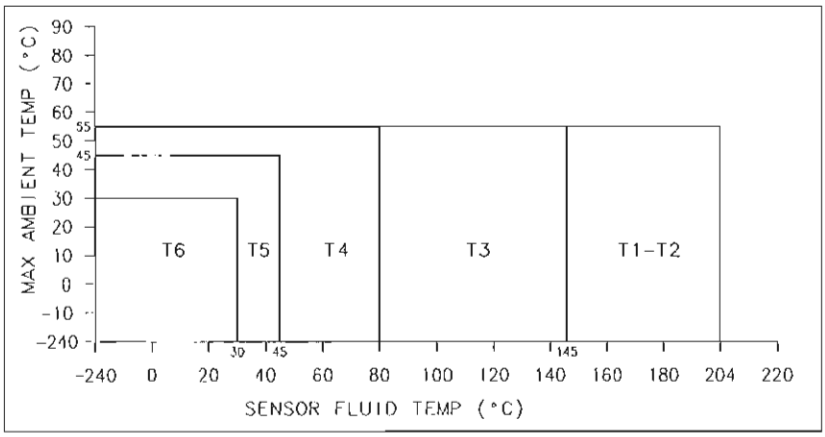
Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

Sensor type	inductance [mH]	coil resistance [Ω]	serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF400*****(R,H,S,T)*I****	N/A	N/A	39.7 to 42.2	-68
CMF400*****(R,H,S,T)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-240
CMF400*****(R,H,S,T)*7****	N/A	N/A	39.7 to 42.2	-240

1.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1

Sensor type				
	CMF010*****(R,H,S,T)*I****	(IIC)	CMF025*****(R,H,S,T)*I****	(IIC)
			CMF050*****(R,H,S,T)*I****	(IIC)



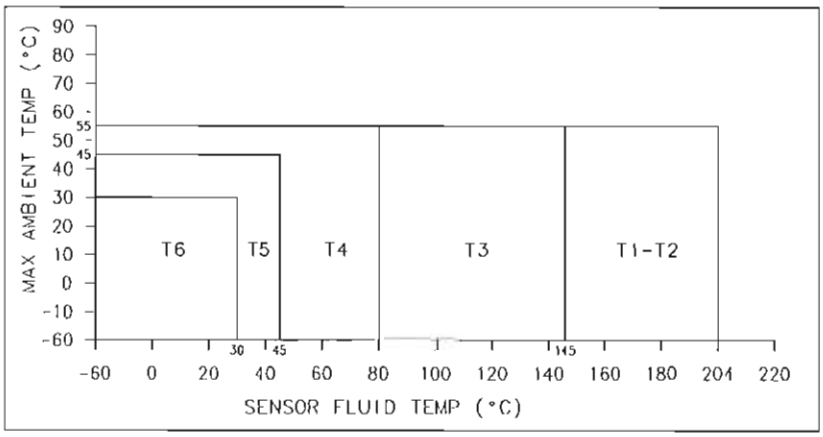
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.2

Sensor type		
CMF100*****(R,H,S,T)*I****	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



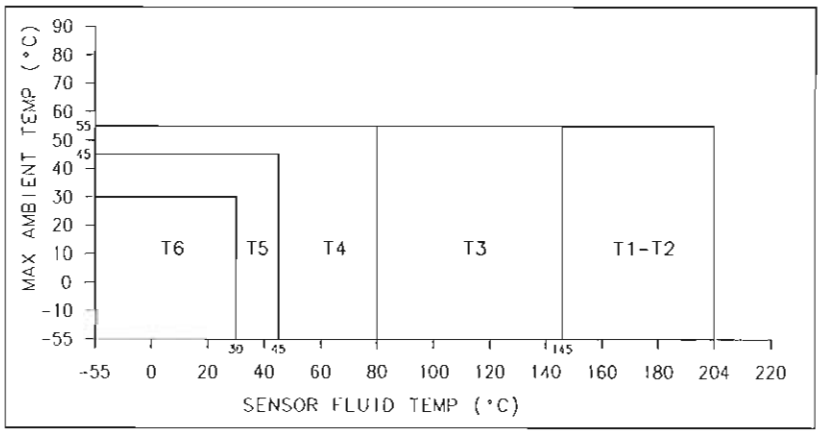
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.3

Sensor type	
CMF200*****(R,H,S,T)*I**** CIC A3	(IIB)
CMF300*****(R,H,S,T)*I**** CIC A3	(IIB)



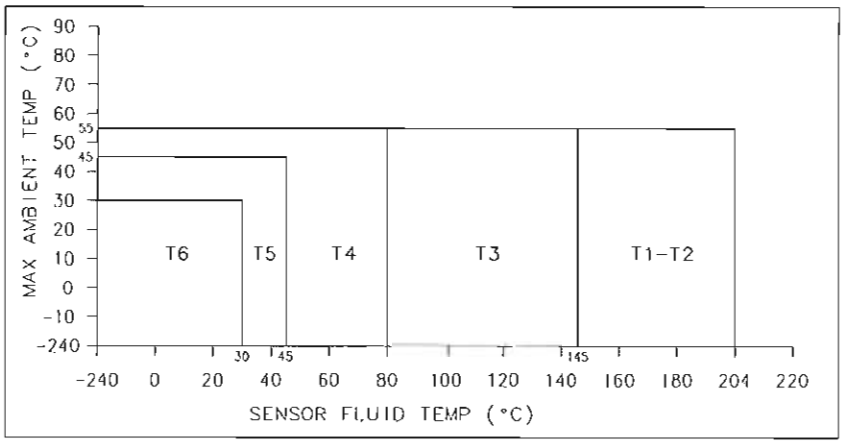
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.4

Sensor type				
	CMF100*****(R,H,S,T)*I**** CIC A4	(IIC)	CMF200*****(R,H,S,T)*I**** CIC A4	(IIC)
	CMF100*****(R,H,S,T)*7****	(IIC)	CMF200*****(R,H,S,T)*7****	(IIC)
			CMF300*****(R,H,S,T)*I**** CIC A4	(IIC)
			CMF300*****(R,H,S,T)*7****	(IIC)



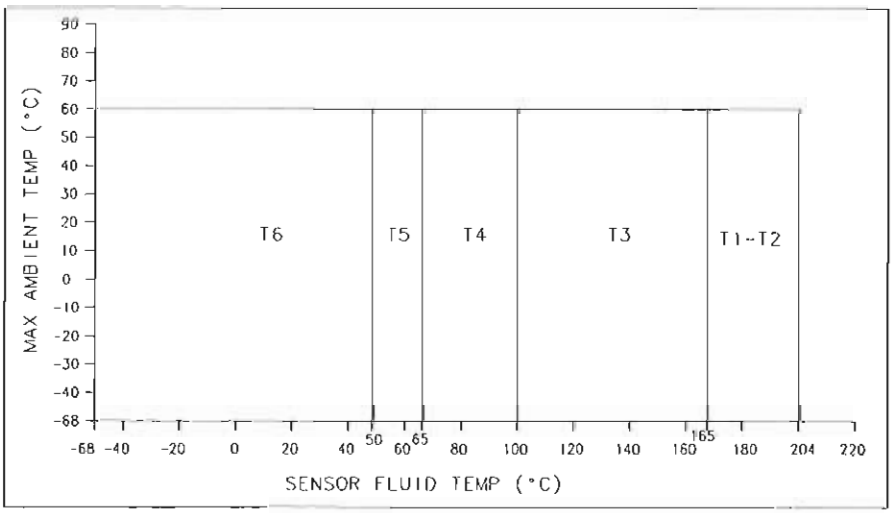
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.5

Sensor type		
CMF400*****(R,H,S,T)*I**** CIC A3	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



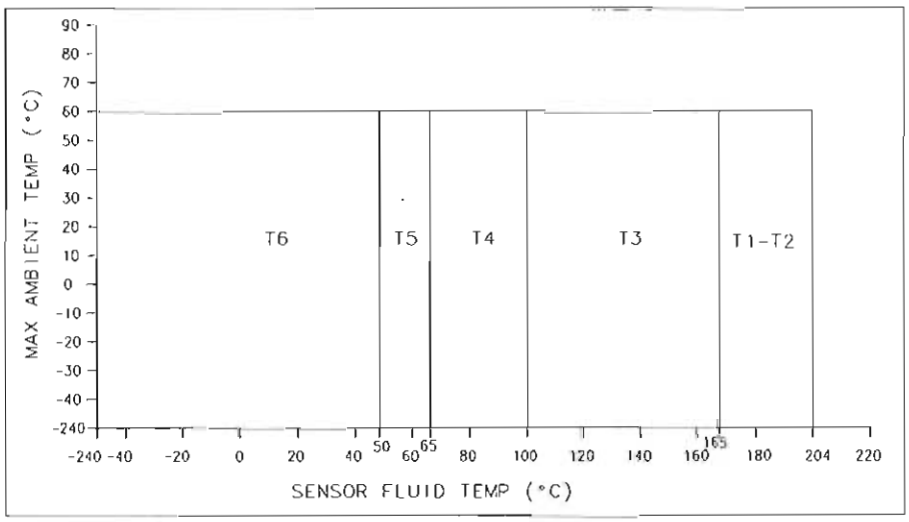
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6

Sensor type		
CMF400*****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF400*****(R,H,S,T)*7****	(IIC)	



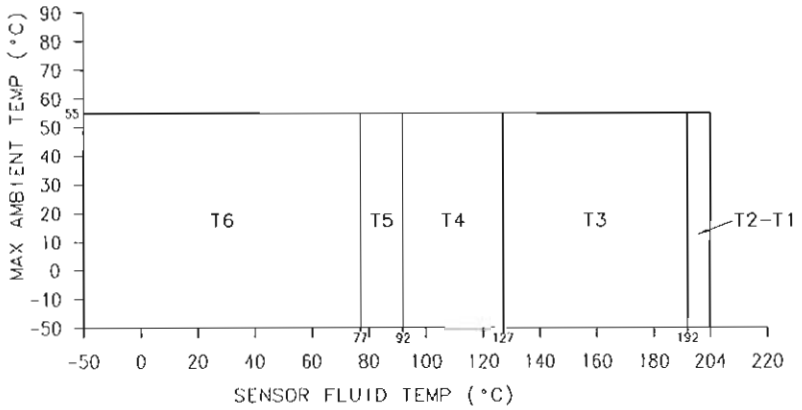
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240°C to +60°C

The use of the sensor at an ambient temperature higher than +60°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.7

Sensor type		
CMFHC2*****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC3*****(R,H,S,T)*I****	(IIB)	



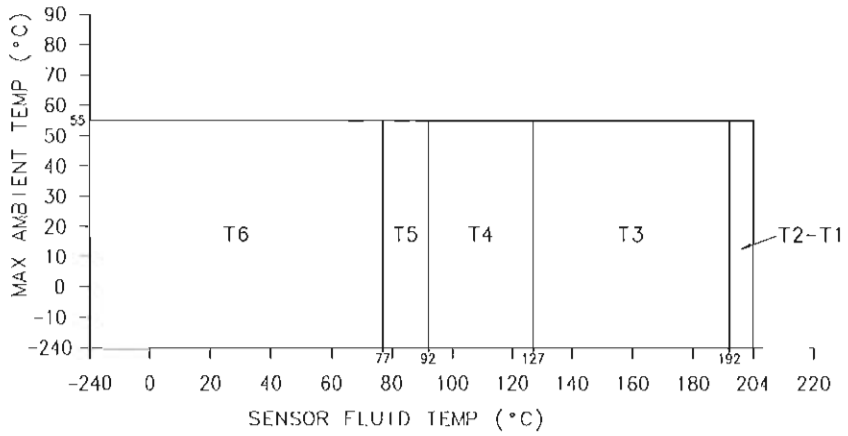
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.8

Sensor type			
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC2*****(R,H,S,T)*7****		(IIC)	
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	
CMFHC3*****(R,H,S,T)*7****		(IIC)	



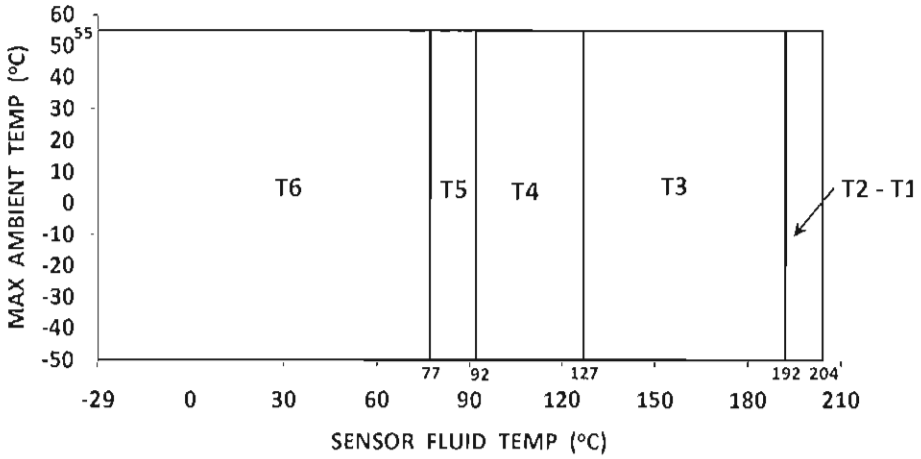
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240°C to + 55°C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.9

Sensor type		
CMFHC*Y****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



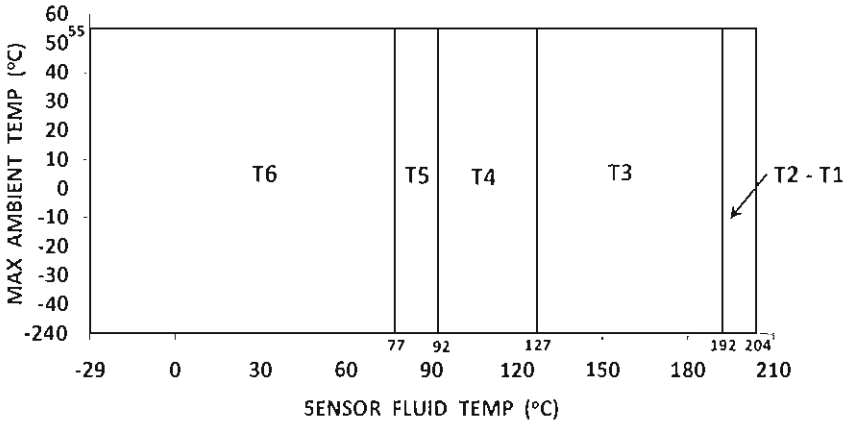
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –50°C to + 55°C

The use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.10

Sensor type		
CMFHC*Y****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC*Y****(R,H,S,T)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240°C to + 55°C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2 Type CMF***(A,B,C,E)****(R,H,S,T)****** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W
Internal capacitance	Ci	negligible		

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200(A, B, C, E)****(R,H,S,T)*I****		(IIB)	4.0	32.3	19.8	-50
CMF200(A, B, C, E)****(R,H,S,T)*I**** CIC A5		(IIB)	1.1	15.4	9.6	-50
CMF200(A, B, C, E)****(R,H,S,T)*I**** CIC A4		(IIC)	1.1	15.4	41	-50
CMF200(A, B, C, E)****(R,H,S,T)*7****		(IIC)	1.1	15.4	41	-50
CMF300(A, B, C, E)****(R,H,S,T)*I****		(IIB)	4.0	32.3	19.8	-50
CMF300(A, B, C, E)****(R,H,S,T)*I**** CIC A5		(IIB)	1.1	15.4	9.6	-50
CMF300(A, B, C, E)****(R,H,S,T)*I**** CIC A4		(IIC)	1.1	15.4	41	-50
CMF300(A, B, C, E)****(R,H,S,T)*7****		(IIC)	1.1	15.4	41	-50
CMF400(A, B, C, E)****(R,H,S,T)*I****		(IIB)	7.75	54.3	19.8	-50
CMF400(A, B, C, E)****(R,H,S,T)*I**** CIC A5		(IIB)	3.4	35.2	12.8	-50
CMF400(A, B, C, E)****(R,H,S,T)*I**** CIC A4		(IIC)	3.4	35.2	63.2	-50
CMF400(A, B, C, E)****(R,H,S,T)*7****		(IIC)	3.4	35.2	63.2	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	21.13	V
Current	Ii		18.05	mA
Power	Pi		45	mW
Internal capacitance	Ci	negligible		

Sensor type:			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/ Fluid Temp (°C)
CMF200(A, B, C, E)****(R,H,S,T)*I****		(IIB)	1.25	15.4	569.2	-50
CMF200(A, B, C, E)****(R,H,S,T)*I**** CIC A5		(IIB)	0.50	8.0	569.2	-50
CMF200(A, B, C, E)****(R,H,S,T)*I**** CIC A4		(IIC)	0.50	8.0	569.2	-50
CMF200(A, B, C, E)****(R,H,S,T)*7****		(IIC)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,H,S,T)*I****		(IIB)	1.25	15.4	569.2	-50
CMF300(A, B, C, E)****(R,H,S,T)*I**** CIC A5		(IIB)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,H,S,T)*I**** CIC A4		(IIC)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,H,S,T)*7****		(IIC)	0.50	8.0	569.2	-50

CMF400(A, B, C, E)****(R,H,S,T)*I****	(IIB)	6.50	41.1	569.2	-50
CMF400(A, B, C, E)****(R,H,S,T)*I**** CIC A5	(IIB)	1.10	15.4	569.2	-50
CMF400(A, B, C, E)****(R,H,S,T)*I**** CIC A4	(IIC)	1.10	15.4	569.2	-50
CMF400(A, B, C, E)****(R,H,S,T)*7****	(IIC)	1.10	15.4	569.2	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,H,S,T)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50

2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

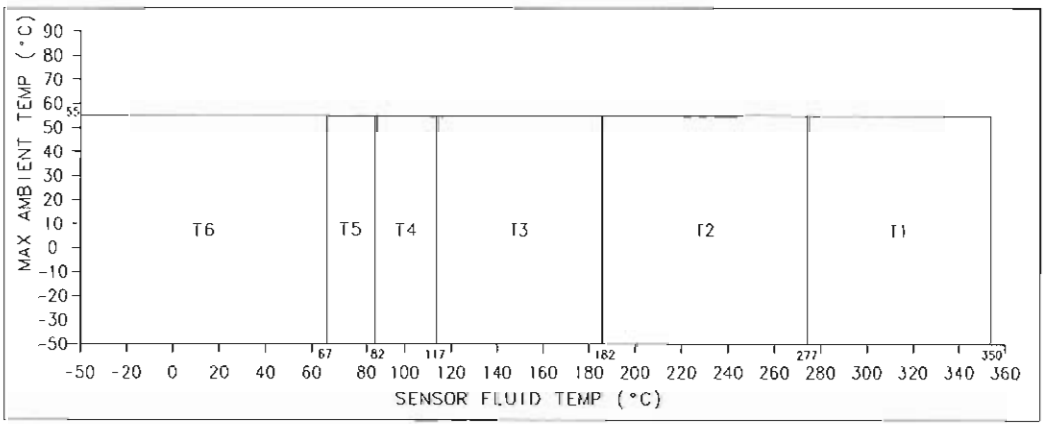
Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF400(A,B,C,E)****(R,H,S,T)*I****	N/A	N/A	39.7 to 42.2	-50
CMF400(A,B,C,E)****(R,H,S,T)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-50
CMF400(A,B,C,E)****(R,H,S,T)*7****	N/A	N/A	39.7 to 42.2	-50

2.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.4.1

Sensor type		

CMF200(A or B)****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF200(A or B)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMF200(A or B)****(R,H,S,T)*I**** CIC A5	(IIB)	
CMF200(A or B)****(R,H,S,T)*7****	(IIC)	
CMF300(A or B)****(R,H,S,T)*I****	(IIB)	
CMF300(A or B)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMF300(A or B)****(R,H,S,T)*I**** CIC A5	(IIB)	
CMF300(A or B)****(R,H,S,T)*7****	(IIC)	
CMF400(A or B)****(R,H,S,T)*I****	(IIB)	
CMF400(A or B)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMF400(A or B)****(R,H,S,T)*I**** CIC A5	(IIB)	
CMF400(A or B)****(R,H,S,T)*7****	(IIC)	
CMFHC2(A or B)****(R,H,S,T)*I****	(IIB)	
CMFHC2(A or B)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC2(A or B)****(R,H,S,T)*I**** CIC A6	(IIB)	
CMFHC2(A or B)****(R,H,S,T)*7****	(IIC)	
CMFHC2(A or B)****(R,H,S,T)*7**** CIC A6	(IIC)	
CMFHC3(A or B)****(R,H,S,T)*I****	(IIB)	
CMFHC3(A or B)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC3(A or B)****(R,H,S,T)*I**** CIC A6	(IIB)	
CMFHC3(A or B)****(R,H,S,T)*7****	(IIC)	
CMFHC3(A or B)****(R,H,S,T)*7**** CIC A6	(IIC)	



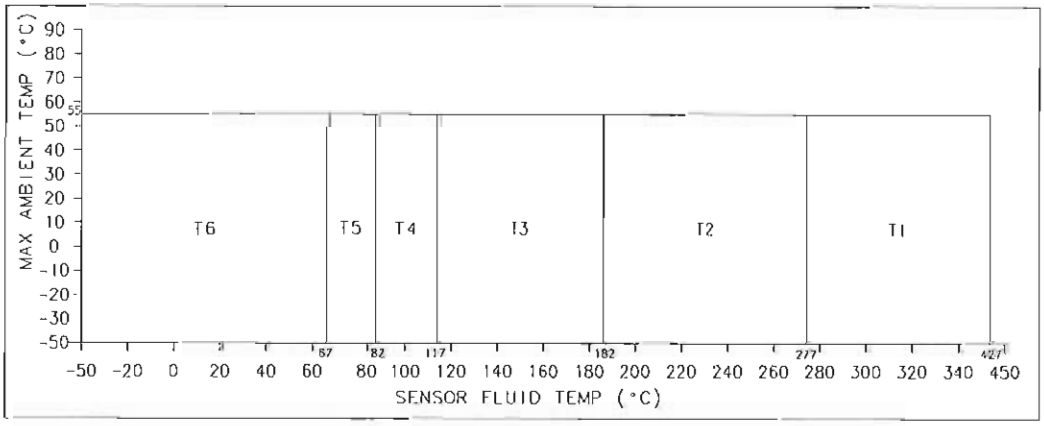
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.4.2

Sensor type		
CMF200(C or E)****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF200(C or E)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMF200(C or E)****(R,H,S,T)*I**** CIC A5	(IIB)	
CMF200(C or E)****(R,H,S,T)*7****	(IIC)	
CMF300(C or E)****(R,H,S,T)*I****	(IIB)	
CMF300(C or E)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMF300(C or E)****(R,H,S,T)*I**** CIC A5	(IIB)	
CMF300(C or E)****(R,H,S,T)*7****	(IIC)	
CMF400(C or E)****(R,H,S,T)*I****	(IIB)	
CMF400(C or E)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMF400(C or E)****(R,H,S,T)*I**** CIC A5	(IIB)	
CMF400(C or E)****(R,H,S,T)*7****	(IIC)	
CMFHC2(C or E)****(R,H,S,T)*I****	(IIB)	
CMFHC2(C or E)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC2(C or E)****(R,H,S,T)*I**** CIC A6	(IIB)	
CMFHC2(C or E)****(R,H,S,T)*7****	(IIC)	
CMFHC2(C or E)****(R,H,S,T)*7**** CIC A6	(IIC)	
CMFHC3(C or E)****(R,H,S,T)*I****	(IIB)	
CMFHC3(C or E)****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC3(C or E)****(R,H,S,T)*I**** CIC A6	(IIB)	
CMFHC3(C or E)****(R,H,S,T)*7****	(IIC)	
CMFHC3(C or E)****(R,H,S,T)*7**** CIC A6	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3 Type CMF********(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with integral Core Processor inclusive Construction Identification Code CIC A3 and A4 except type CMF***(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****

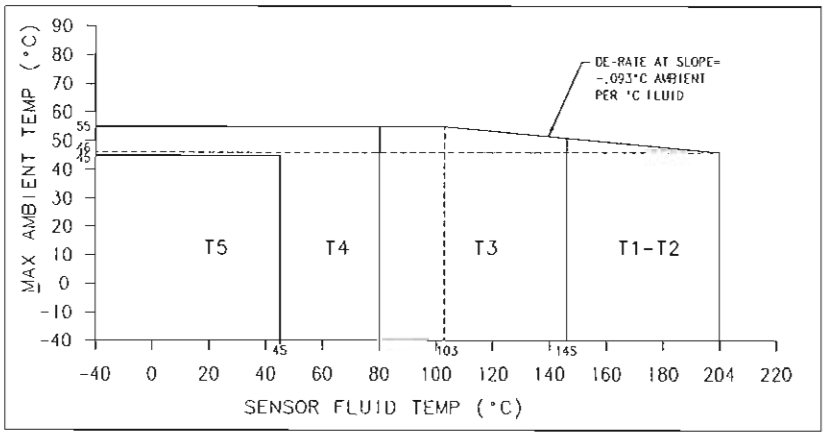
3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

3.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

3.2.1

Sensor type	 CMF010	 CMF100	 CMF200/300		
CMF010*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****				(IIC)	With integral core processor
CMF025*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****				(IIC)	
CMF050*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****				(IIC)	
CMF100*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****				(IIC)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3				(IIB)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4				(IIC)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****				(IIC)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3				(IIB)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4				(IIC)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****				(IIC)	

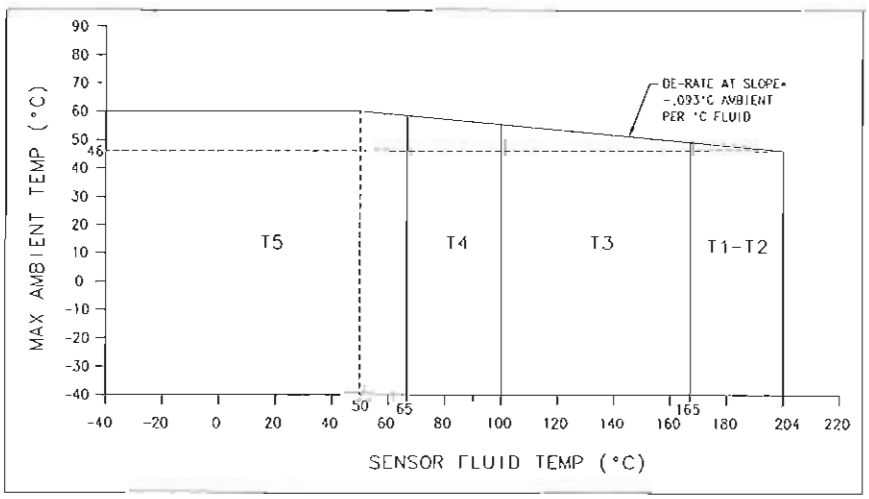


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +55 °C

3.2.2

Sensor type			
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3		(IIB)	With integral core processor
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	

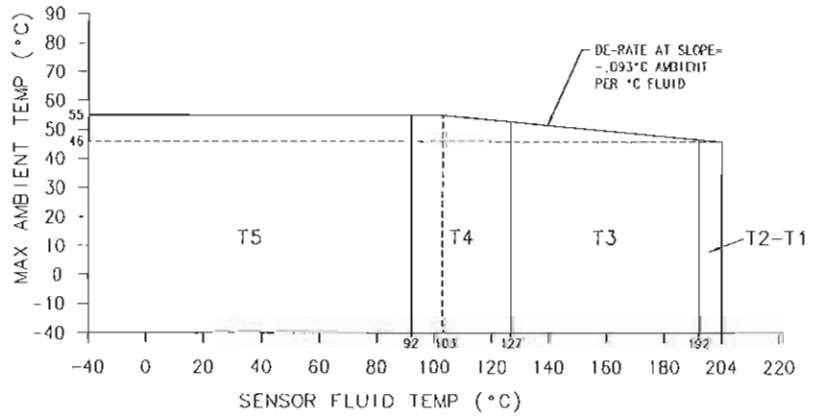


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.3

Sensor type		
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral core processor
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	

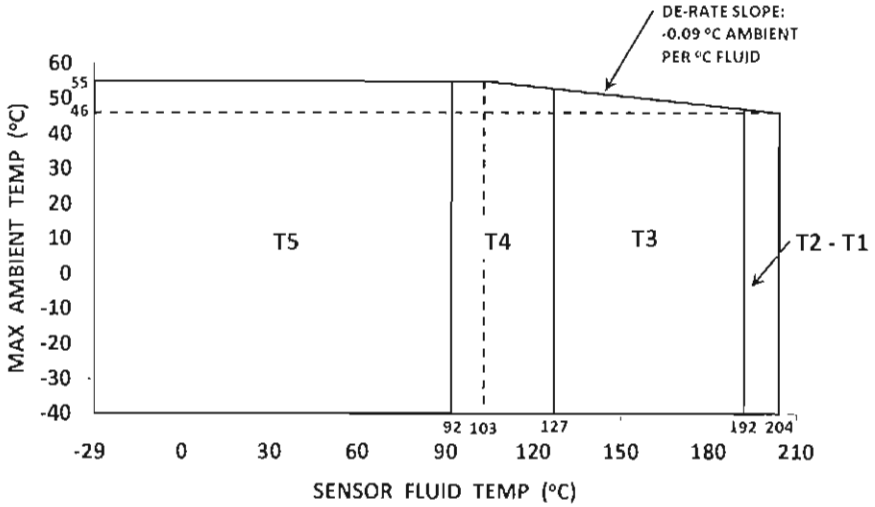


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +55 °C

3.2.4

Sensor type		
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral core processor
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +55 °C

4 Type CMF***(A, B, C or E)****(2 – 9, A, B, D, E, Q, V, W or Y)****** with integral core processor.

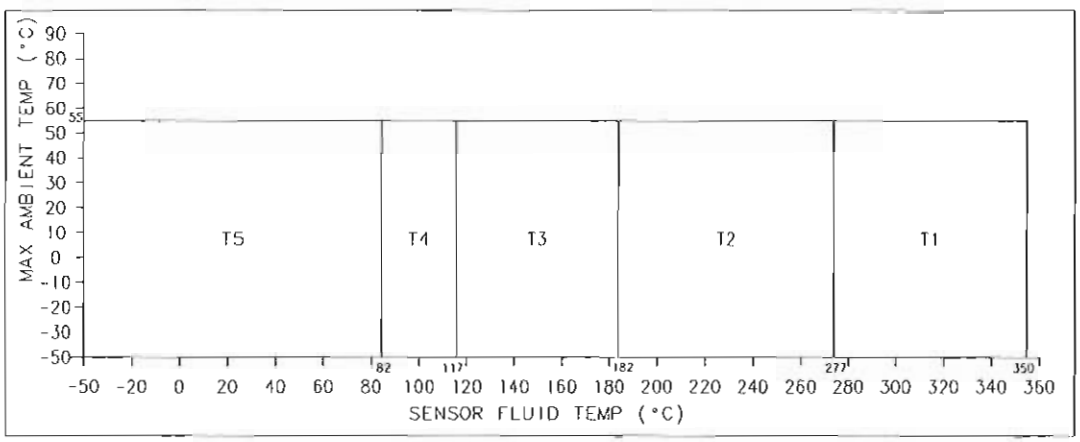
4.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Iinternal capacitance	Ci		2200	pF
Internal inductance	Li		30	µH

4.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

4.2.1

Sensor type			
CMF200(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	With integral core processor
CMF200(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMF200(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A5		(IIB)	
CMF200(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMF300(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMF300(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMF300(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A5		(IIB)	
CMF300(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMF400(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMF400(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMF400(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A5		(IIB)	
CMF400(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC2(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMFHC2(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMFHC2(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A6		(IIB)	
CMFHC2(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC2(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** CIC A6		(IIC)	
CMFHC3(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMFHC3(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMFHC3(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A6		(IIB)	
CMFHC3(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC3(A or B)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** CIC A6		(IIC)	



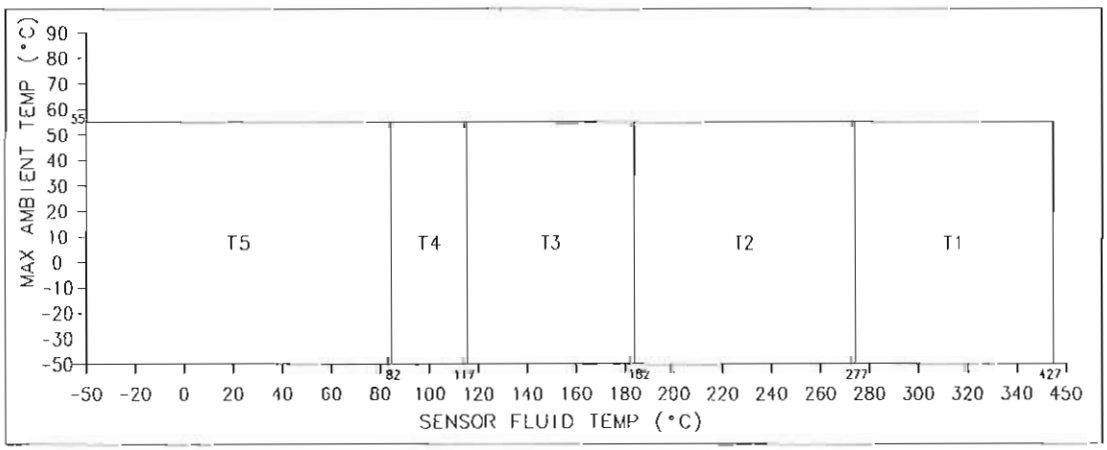
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

4.2.2

Sensor type			
CMF200(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	With integral core processor
CMF200(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMF200(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A5		(IIB)	
CMF200(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMF300(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMF300(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMF300(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A5		(IIB)	
CMF300(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMF400(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMF400(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMF400(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A5		(IIB)	
CMF400(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC2(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMFHC2(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMFHC2(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A6		(IIB)	
CMFHC2(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC2(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** CIC A6		(IIC)	
CMFHC3(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMFHC3(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMFHC3(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A6		(IIB)	
CMFHC3(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC3(C or E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** CIC A6		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

5 Type CMF********(C,F)****** inclusive Construction Identification Code (CIC) A3 and A4 or no marking, except CMF***(A,B,C,E)****C******

Obsolete

6 Type CMF***(A, B, C or E)****C*I**** High-temperature sensor with integral 1700/2700 transmitter

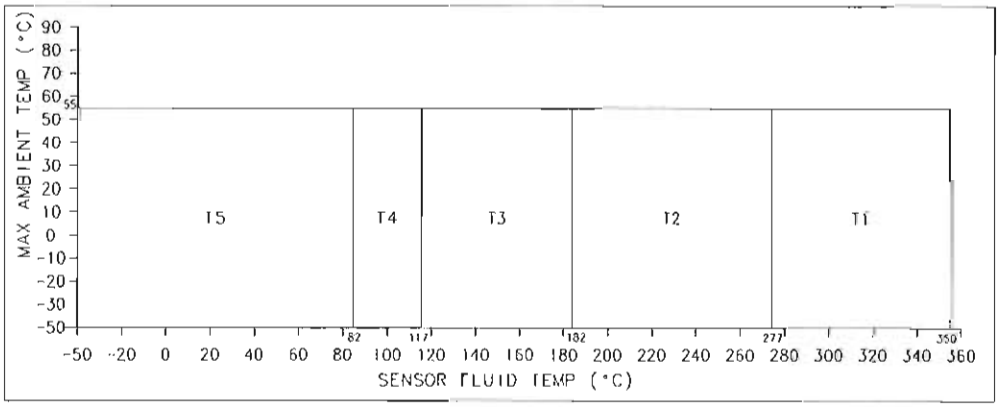
6.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

6.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

6.2.1

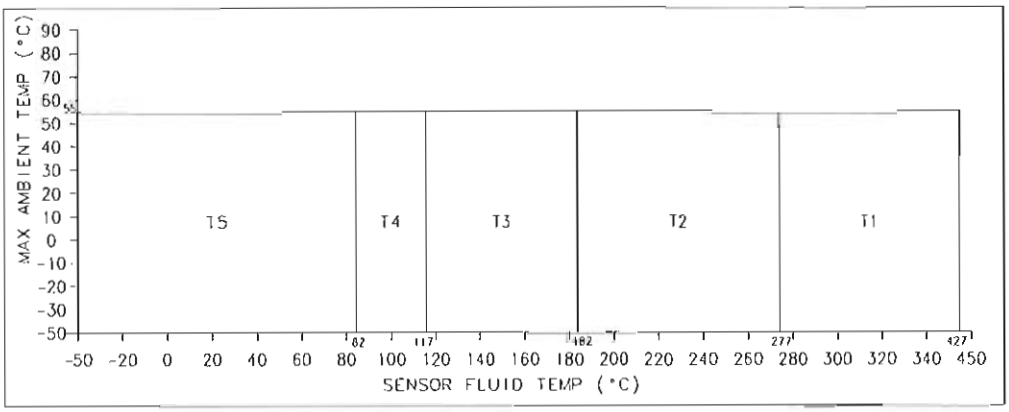
Sensor type		
CMF200(A or B)****C*I****	(IIB)	With Integral 1700/2700 Transmitter
CMF200(A or B)****C*I**** CIC A5	(IIB)	
CMF200(A or B)****C*I**** CIC A4	(IIC)	
CMF200(A or B)****C*7****	(IIC)	
CMF300(A or B)****C*I****	(IIB)	
CMF300(A or B)****C*I**** CIC A5	(IIB)	
CMF300(A or B)****C*I**** CIC A4	(IIC)	
CMF300(A or B)****C*7****	(IIC)	
CMF400(A or B)****C*I****	(IIB)	
CMF400(A or B)****C*I**** CIC A5	(IIB)	
CMF400(A or B)****C*I**** CIC A4	(IIC)	
CMF400(A or B)****C*7****	(IIC)	
CMFHC2(A or B)****C*I****	(IIB)	
CMFHC2(A or B)****C*I**** CIC A6	(IIB)	
CMFHC2(A or B)****C*I**** CIC A4	(IIC)	
CMFHC2(A or B)****C*7****	(IIC)	

CMFHC2(A or B)****C*7**** CIC A6	(IIC)
CMFHC3(A or B)****C*I****	(IIB)
CMFHC3(A or B)****C*I**** CIC A6	(IIB)
CMFHC3(A or B)****C*I**** CIC A4	(IIC)
CMFHC3(A or B)****C*7****	(IIC)
CMFHC3(A or B)****C*7**** CIC A6	(IIC)



6.2.2

Sensor type		
CMF200(C or E)****C*Z****	(IIB)	With Integral 1700/2700 Transmitter
CMF200(C or E)****C*Z**** CIC A5	(IIB)	
CMF200(C or E)****C*Z**** CIC A4	(IIC)	
CMF200(C or E)****C*6****	(IIC)	
CMF300(C or E)****C*Z****	(IIB)	
CMF300(C or E)****C*Z**** CIC A5	(IIB)	
CMF300(C or E)****C*Z**** CIC A4	(IIC)	
CMF300(C or E)****C*6****	(IIC)	
CMF400(C or E)****C*Z****	(IIB)	
CMF400(C or E)****C*Z**** CIC A5	(IIB)	
CMF400(C or E)****C*Z**** CIC A4	(IIC)	
CMF400(C or E)****C*6****	(IIC)	
CMFHC2(C or E)****C*Z****	(IIB)	
CMFHC2(C or E)****C*Z**** CIC A6	(IIB)	
CMFHC2(C or E)****C*Z**** CIC A4	(IIC)	
CMFHC2(C or E)****C*6****	(IIC)	
CMFHC2(C or E)****C*6**** CIC A6	(IIC)	
CMFHC3(C or E)****C*Z****	(IIB)	
CMFHC3(C or E)****C*Z**** CIC A6	(IIB)	
CMFHC3(C or E)****C*Z**** CIC A4	(IIC)	
CMFHC3(C or E)****C*6****	(IIC)	
CMFHC3(C or E)****C*6**** CIC A6	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

7 Types CMF********(J,U)*I**** incl. CIC A4 with 2200S transmitter, except type CMF***(A,B,C,E)****J,U)*I****

7.1 Input circuits (terminals 1 - 2)

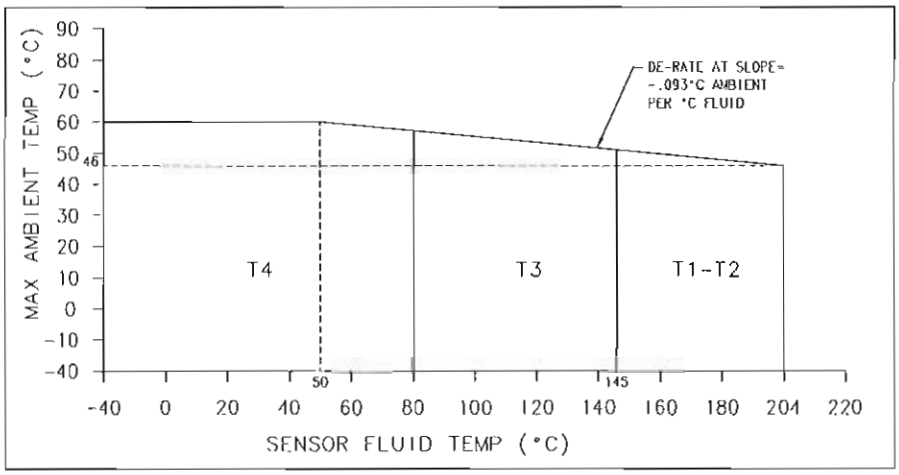
Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

7.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

7.2.1

Sensor type	 CMF010	 CMF100	 CMF200/300	
CMF010*****(J or U)*I****			(IIC)	With integral 2200S
CMF025*****(J or U)*I****			(IIC)	
CMF050*****(J or U)*I****			(IIC)	
CMF100*****(J or U)*I****			(IIC)	
CMF200*****(J or U)*I**** CIC A3			(IIB)	
CMF200*****(J or U)*I**** CIC A4			(IIC)	

CMF200*****(J or U)*7****	(IIC)	
CMF300*****(J or U)*I**** CIC A3	(IIB)	
CMF300*****(J or U)*I**** CIC A4	(IIC)	
CMF300*****(J or U)*7****	(IIC)	

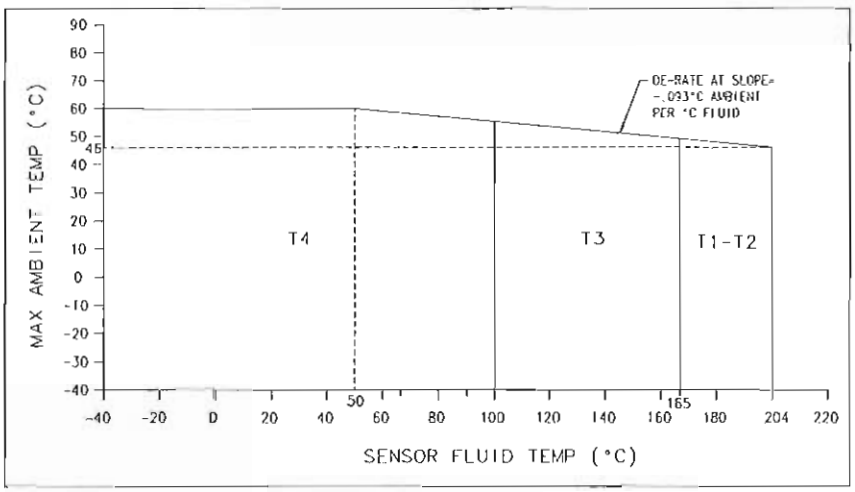


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

7.2.2

Sensor type		
CMF400*****(J or U)*I**** CIC A3	(IIB)	With integral 2200S
CMF400*****(J or U)*I**** CIC A4	(IIC)	
CMF400*****(J or U)*7****	(IIC)	

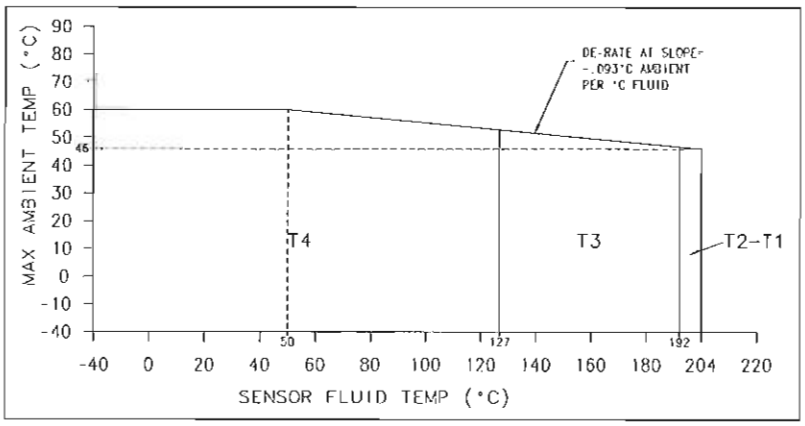


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

7.2.3

Sensor type		
CMFHC2*****(J or U)*I****	(IIB)	With integral 2200S
CMFHC2*****(J or U)*I**** CIC A4	(IIC)	
CMFHC2*****(J or U)*7****	(IIC)	
CMFHC3*****(J or U)*I****	(IIB)	
CMFHC3*****(J or U)*I**** CIC A4	(IIC)	
CMFHC3*****(J or U)*7****	(IIC)	

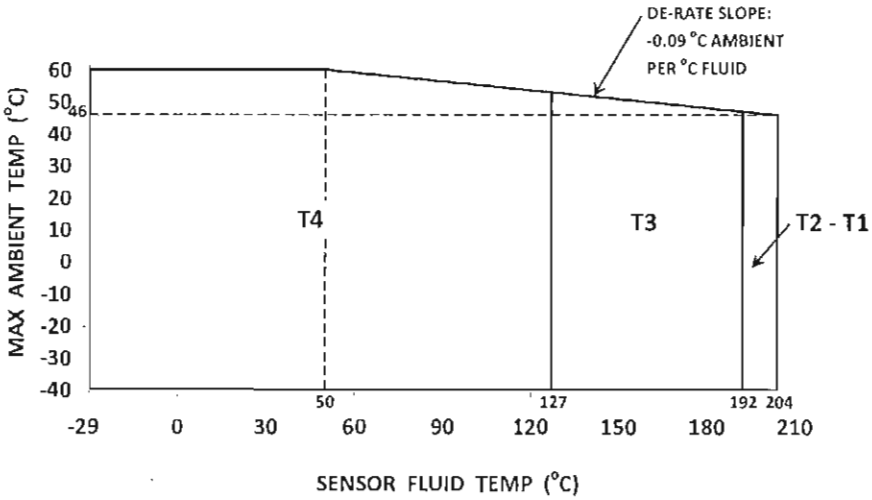


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

7.2.4

Sensor type		
CMFHC*Y****(J or U)*I****	(IIB)	With integral 2200S
CMFHC*Y****(J or U)*I**** CIC A4	(IIC)	
CMFHC*Y****(J or U)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

8 Type CMF***(A, B, C or E)****(J or U)****** with integral 2200S transmitter.

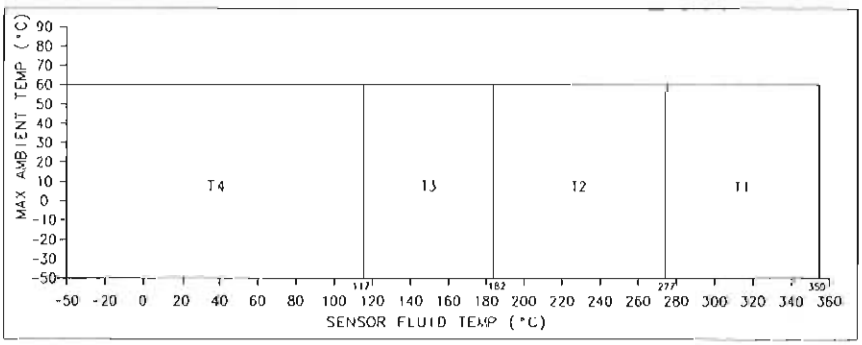
8.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

8.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

8.2.1

Sensor type			
CMF200(A or B)****(J or U)*I****		(IIB)	With integral 2200S
CMF200(A or B)****(J or U)*I**** CIC A4		(IIC)	
CMF200(A or B)****(J or U)*I**** CIC A5		(IIB)	
CMF200(A or B)****(J or U)*7****		(IIC)	
CMF300(A or B)****(J or U)*I****		(IIB)	
CMF300(A or B)****(J or U)*I**** CIC A4		(IIC)	
CMF300(A or B)****(J or U)*I**** CIC A5		(IIB)	
CMF300(A or B)****(J or U)*7****		(IIC)	
CMF400(A or B)****(J or U)*I****		(IIB)	
CMF400(A or B)****(J or U)*I**** CIC A4		(IIC)	
CMF400(A or B)****(J or U)*I**** CIC A5		(IIB)	
CMF400(A or B)****(J or U)*7****		(IIC)	
CMFHC2(A or B)****(J or U)*I****		(IIB)	
CMFHC2(A or B)****(J or U)*I**** CIC A4		(IIC)	
CMFHC2(A or B)****(J or U)*I**** CIC A6		(IIB)	
CMFHC2(A or B)****(J or U)*7****		(IIC)	
CMFHC2(A or B)****(J or U)*7**** CIC A6		(IIC)	
CMFHC3(A or B)****(J or U)*I****		(IIB)	
CMFHC3(A or B)****(J or U)*I**** CIC A4		(IIC)	
CMFHC3(A or B)****(J or U)*I**** CIC A6		(IIB)	
CMFHC3(A or B)****(J or U)*7****		(IIC)	
CMFHC3(A or B)****(J or U)*7**** CIC A6		(IIC)	



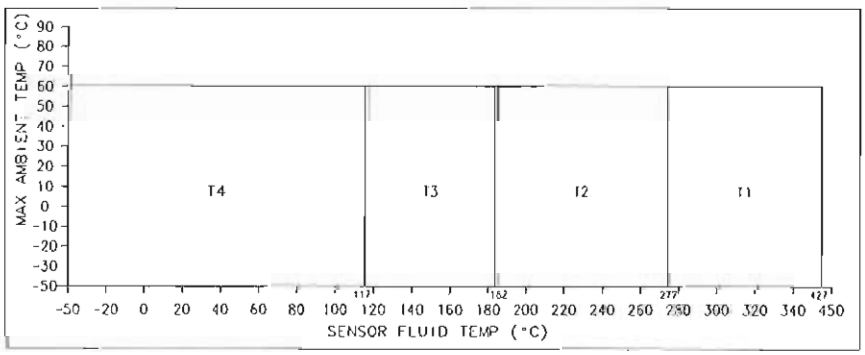
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

8.2.2

Sensor type		
CMF200(C or E)****(J or U)*I****	(IIB)	With integral 2200S
CMF200(C or E)****(J or U)*I**** CIC A4	(IIC)	
CMF200(C or E)****(J or U)*I**** CIC A5	(IIB)	
CMF200(C or E)****(J or U)*7****	(IIC)	
CMF300(C or E)****(J or U)*I****	(IIB)	
CMF300(C or E)****(J or U)*I**** CIC A4	(IIC)	
CMF300(C or E)****(J or U)*I**** CIC A5	(IIB)	
CMF300(C or E)****(J or U)*7****	(IIC)	
CMF400(C or E)****(J or U)*I****	(IIB)	
CMF400(C or E)****(J or U)*I**** CIC A4	(IIC)	
CMF400(C or E)****(J or U)*I**** CIC A5	(IIB)	
CMF400(C or E)****(J or U)*7****	(IIC)	
CMFHC2(C or E)****(J or U)*I****	(IIB)	
CMFHC2(C or E)****(J or U)*I**** CIC A4	(IIC)	
CMFHC2(C or E)****(J or U)*I**** CIC A6	(IIB)	
CMFHC2(C or E)****(J or U)*7****	(IIC)	
CMFHC2(C or E)****(J or U)*7**** CIC A6	(IIC)	
CMFHC3(C or E)****(J or U)*I****	(IIB)	
CMFHC3(C or E)****(J or U)*I**** CIC A4	(IIC)	
CMFHC3(C or E)****(J or U)*I**** CIC A6	(IIB)	
CMFHC3(C or E)****(J or U)*7****	(IIC)	
CMFHC3(C or E)****(J or U)*7**** CIC A6	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

for sensors with junction box connected to MVD transmitter

Type	Type of protection	Min. ambient/fluid temperature
CMF010*****[1]*|****	Ex ib IIC T1-T6	-240°C
CMF025*****[1]*|****	Ex ib IIC T1-T6	-240°C
CMF050*****[1]*|****	Ex ib IIC T1-T6	-240°C
CMF100*****[1]*|****	Ex ib IIC T1-T6	-60°C
CMF100*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240°C
CMF100*****[1]*7****	Ex ib IIC T1-T6	-240°C
CMF200*****[1]*|**** CIC A3	Ex ib IIB T1-T6	-55°C
CMF200*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240°C
CMF200*****[1]*7****	Ex ib IIC T1-T6	-240°C
CMF200[4]*****[1]*|****	Ex ib IIB T1-T6	-50°C
CMF200[4]*****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50°C
CMF200[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-50°C
CMF200[4]*****[1]*7****	Ex ib IIC T1-T6	-50°C
CMF300*****[1]*|**** CIC A3	Ex ib IIB T1-T6	-55°C
CMF300*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240°C
CMF300*****[1]*7****	Ex ib IIC T1-T6	-240°C
CMF300[4]*****[1]*|****	Ex ib IIB T1-T6	-50°C
CMF300[4]*****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50°C
CMF300[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-50°C
CMF300[4]*****[1]*7****	Ex ib IIC T1-T6	-50°C
CMF400*****[1]*|**** CIC A3	Ex ib IIB T1-T6	-68°C
CMF400*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240°C
CMF400*****[1]*7****	Ex ib IIC T1-T6	-240°C
CMF400[4]*****[1]*|****	Ex ib IIB T1-T6	-50°C
CMF400[4]*****[1]*|**** CIC A5	Ex ib IIB T1-T6	-50°C
CMF400[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-50°C
CMF400[4]*****[1]*7****	Ex ib IIC T1-T6	-50°C
CMFHC*Y*****[1]*|****	Ex ib IIB T1-T6	-50°C / -29°C
CMFHC*Y*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240°C / -29°C
CMFHC*Y*****[1]*7****	Ex ib IIC T1-T6	-240°C / -29°C
CMFHC2*****[1]*|****	Ex ib IIB T1-T6	-50°C
CMFHC2*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240°C
CMFHC2*****[1]*7****	Ex ib IIC T1-T6	-240°C
CMFHC2[4]*****[1]*|****	Ex ib IIB T1-T6	-50°C
CMFHC2[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-50°C
CMFHC2[4]*****[1]*7****	Ex ib IIC T1-T6	-50°C
CMFHC2[4]*****[1]*|**** CIC A6	Ex ib IIB T1-T6	-50°C
CMFHC2[4]*****[1]*7**** CIC A6	Ex ib IIC T1-T6	-50°C
CMFHC3*****[1]*|****	Ex ib IIB T1-T6	-50°C
CMFHC3*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-240°C
CMFHC3*****[1]*7****	Ex ib IIC T1-T6	-240°C
CMFHC3[4]*****[1]*|****	Ex ib IIB T1-T6	-50°C
CMFHC3[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6	-50°C
CMFHC3[4]*****[1]*7****	Ex ib IIC T1-T6	-50°C
CMFHC3[4]*****[1]*|**** CIC A6	Ex ib IIB T1-T6	-50°C
CMFHC3[4]*****[1]*7**** CIC A6	Ex ib IIC T1-T6	-50°C

[1] At this place the letter R, H, S or T will be inserted.

[4] At this place the letter A, B, C or E will be inserted.

for sensor with integral 700 or 800 core processor

Type	Type of protection	Min. ambient/fluid temperature
CMF010*****[2]*|****	Ex ib IIC T1-T5	-40°C
CMF025*****[2]*|****	Ex ib IIC T1-T5	-40°C
CMF050*****[2]*|****	Ex ib IIC T1-T5	-40°C
CMF100*****[2]*|****	Ex ib IIC T1-T5	-40°C
CMF100*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-40°C
CMF100*****[2]*7****	Ex ib IIC T1-T5	-40°C
CMF200*****[2]*|**** CIC A3	Ex ib IIB T1-T5	-40°C
CMF200*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-40°C
CMF200*****[2]*7****	Ex ib IIC T1-T5	-40°C
CMF200[4]*****[2]*|****	Ex ib IIB T1-T5	-50°C
CMF200[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5	-50°C
CMF200[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-50°C
CMF200[4]*****[2]*7****	Ex ib IIC T1-T5	-50°C
CMF300*****[2]*|**** CIC A3	Ex ib IIB T1-T5	-40°C
CMF300*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-40°C
CMF300*****[2]*7****	Ex ib IIC T1-T5	-40°C
CMF300[4]*****[2]*|****	Ex ib IIB T1-T5	-50°C
CMF300[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5	-50°C
CMF300[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-50°C
CMF300[4]*****[2]*7****	Ex ib IIC T1-T5	-50°C
CMF400*****[2]*|**** CIC A3	Ex ib IIB T1-T5	-40°C
CMF400*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-40°C
CMF400*****[2]*7****	Ex ib IIC T1-T5	-40°C
CMF400[4]*****[2]*|****	Ex ib IIB T1-T5	-50°C
CMF400[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5	-50°C
CMF400[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-50°C
CMF400[4]*****[2]*7****	Ex ib IIC T1-T5	-50°C
CMFHC*Y*****[2]*|****	Ex ib IIB T1-T5	-40°C / -29°C
CMFHC*Y*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-40°C / -29°C
CMFHC*Y*****[2]*7****	Ex ib IIC T1-T5	-40°C / -29°C
CMFHC2******[2]*|****	Ex ib IIB T1-T5	-40°C
CMFHC2******[2]*|**** CIC A4	Ex ib IIC T1-T5	-40°C
CMFHC2******[2]*7****	Ex ib IIC T1-T5	-40°C
CMFHC2[4]*****[2]*|****	Ex ib IIB T1-T5	-50°C
CMFHC2[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-50°C
CMFHC2[4]*****[2]*7****	Ex ib IIC T1-T5	-50°C
CMFHC2[4]*****[2]*|**** CIC A6	Ex ib IIB T1-T5	-50°C
CMFHC2[4]*****[2]*7**** CIC A6	Ex ib IIC T1-T5	-50°C
CMFHC3******[2]*|****	Ex ib IIB T1-T5	-40°C
CMFHC3******[2]*|**** CIC A4	Ex ib IIC T1-T5	-40°C
CMFHC3******[2]*7****	Ex ib IIC T1-T5	-40°C
CMFHC3[4]*****[2]*|****	Ex ib IIB T1-T5	-50°C
CMFHC3[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5	-50°C
CMFHC3[4]*****[2]*7****	Ex ib IIC T1-T5	-50°C
CMFHC3[4]*****[2]*|**** CIC A6	Ex ib IIB T1-T5	-50°C
CMFHC3[4]*****[2]*7**** CIC A6	Ex ib IIC T1-T5	-50°C

[2] at this place the number 2, 3 ,4, 5, 6, 7, 8 or 9 or the letter A, B, D, E, Q, V, W or Y may be inserted
[4] at this place the letter A, B, C or E may be inserted

Special conditions for safe use

By mounting the sensor type CMF********(J,U)****** directly to the transmitter 22**S********** the use of the unit will be modified according to the following:

	Sensor type	
	CMF010*****(J,U)*I**** CMF025*****(J,U)*I**** CMF050*****(J,U)*I**** CMF100*****(J,U)*I**** CMF200*****(J,U)*I**** CIC A4 CMF200*****(J,U)*7**** CMF300*****(J,U)*I**** CIC A4 CMF300*****(J,U)*7**** CMF400*****(J,U)*I*** CIC A4 CMF400*****(J,U)*7**** CMFHC2*****(J,U)*I**** CIC A4 CMFHC2*****(J,U)*7**** CMFHC3*****(J,U)*I**** CIC A4 CMFHC3*****(J,U)*7**** CMF200(A,B,C,E)****(J,U)*I**** CIC A4 CMF200(A,B,C,E)****(J,U)*7**** CMF300(A,B,C,E)****(J,U)*I**** CIC A4 CMF300(A,B,C,E)****(J,U)*7**** CMF400(A,B,C,E)****(J,U)*I**** CIC A4 CMF400(A,B,C,E)****(J,U)*7**** CMFHC2(A,B,C,E)****(J,U)*I**** CIC A4 CMFHC2(A,B,C,E)****(J,U)*7**** CMFHC2(A,B,C,E)****(J,U)*I**** CIC A6 CMFHC3(A,B,C,E)****(J,U)*7**** CIC A4 CMFHC3(A,B,C,E)****(J,U)*I**** CMFHC3(A,B,C,E)****(J,U)*7**** CIC A6	CMF200*****(J,U)*I**** CIC A3 CMF300*****(J,U)*I**** CIC A3 CMF400*****(J,U)*I**** CIC A3 CMFHC2*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMF200(A,B,C,E)****(J,U)*I**** CMF200(A,B,C,E)****(J,U)*I**** CIC A5 CMF300(A,B,C,E)****(J,U)*I**** CMF300(A,B,C,E)****(J,U)*I**** CIC A5 CMF400(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CIC A5 CMFHC2(A,B,C,E)****(J,U)*I**** CMFHC2(A,B,C,E)****(J,U)*I**** CIC A6 CMFHC3(A,B,C,E)****(J,U)*I**** CMFHC3(A,B,C,E)****(J,U)*I**** CIC A6
Transmitter type 2200S***1*I****	Ex ib IIC T1-T4	Ex ib IIB T1-T4

Certificate No.: **IECEx BVS 04.0007X Issue 6**
Annex

By mounting the sensor type CMF********C****** directly to the transmitter *700********** the use of the unit will be modified according to the following:

Transmitter type	Sensor type	
	CMF200(A,B,C,E)****C*I**** CIC A4 CMF200(A,B,C,E)****C*7**** CMF300(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*7**** CMF400(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*7**** CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*7**** CMFHC2(A,B,C,E)****C*7**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*7**** CMFHC3(A,B,C,E)****C*I**** CIC A6	CMF200(A,B,C,E)****C*I**** CMF200(A,B,C,E)****C*I**** CIC A5 CMF300(A,B,C,E)****C*I**** CMF300(A,B,C,E)****C*I**** CIC A5 CMF400(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CIC A5 CMFHC2(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CIC A6
*700*1[1)] *******	Ex ib IIB+H_2 T1-T5	Ex ib IIB T1-T5
*700*1[2)] *******	Ex ib IIC T1-T5	Ex ib IIB T1-T5

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3, 4 or 5 will be inserted.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X	issue No.:7
Status:	**Current**	
Date of Issue:	**2010-02-16**	Page 1 of 4

Certificate history:
Issue No. 7 (2010-2-16)
Issue No. 6 (2009-8-12)
Issue No. 5 (2008-11-3)
Issue No. 4 (2007-10-31)
Issue No. 3 (2007-8-1)
Issue No. 2 (2006-6-2)

Applicant: **Micro Motion, Inc.**
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Electrical Apparatus: **Sensor type CMF*** ************
Optional accessory:

Type of Protection: **Intrinsic Safety 'i'**

Marking: **Ex ib IIB/IIC T4/T5/T6 Gb**

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 16.02.2010

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2010-02-16** Issue No.: 7

Manufacturer:

Micro Motion, Inc.
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion, Inc.
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Emerson Process Management Flow Technologies Co., Ltd.
111, Xing Min South Road,
Jiangning, Nanjing,
Jiangsu Province
211100
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0:Equipment - General requirements
Edition: 5

IEC 60079-11 : 2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 5

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/07

File Reference:
DE/BVS/04/2024/N7

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2010-02-16** Issue No.: **7**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Subject and type:

See Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use

See Annex

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2010-02-16** Issue No.: **7**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The sensor can be modified:
Sensors type CMFHC4*******(I,7)**** and type CMFHC4(A,B,C,E)******(I,7)**** have been added,

Temperature diagrams for type CMF400*******(I,7)**** and type CMF400*****(J,U)*(I,7)**** have been modified,

Flex Conduit for High Temp Sensors have been revised.

Sensors type CMF********(R,H,S,T)*(I,7)**** can also be executed with the alternate junction box covered in IECEx BVS 09.0022U.

New sensors type CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** & ETO 17192,
type CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4 & ETO 17192,
type CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** & ETO 16995, type CMFHC3*****
(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4 & ETO 16995,
type CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** & ETO 17076,
type CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4 & ETO 17076,
type CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** & ETO 17151 and
type CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4 & ETO 17151 for a minimum ambient-/process temperature of -240 °C are possible.

The following modifications have also been carried out:

Transmitters type *700*1*4****** and associated temperature diagrams have been added.

Transmitters Type 22**S*(5,6)***I**** have been added.

Ambient Temperature Limit for sensors type CMF********(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I***** has been changed to +60°C.

Also for the sensors have been assessed in acc. with the latest revisions of standard IEC 60079-0:2007, which leads to modified marking.

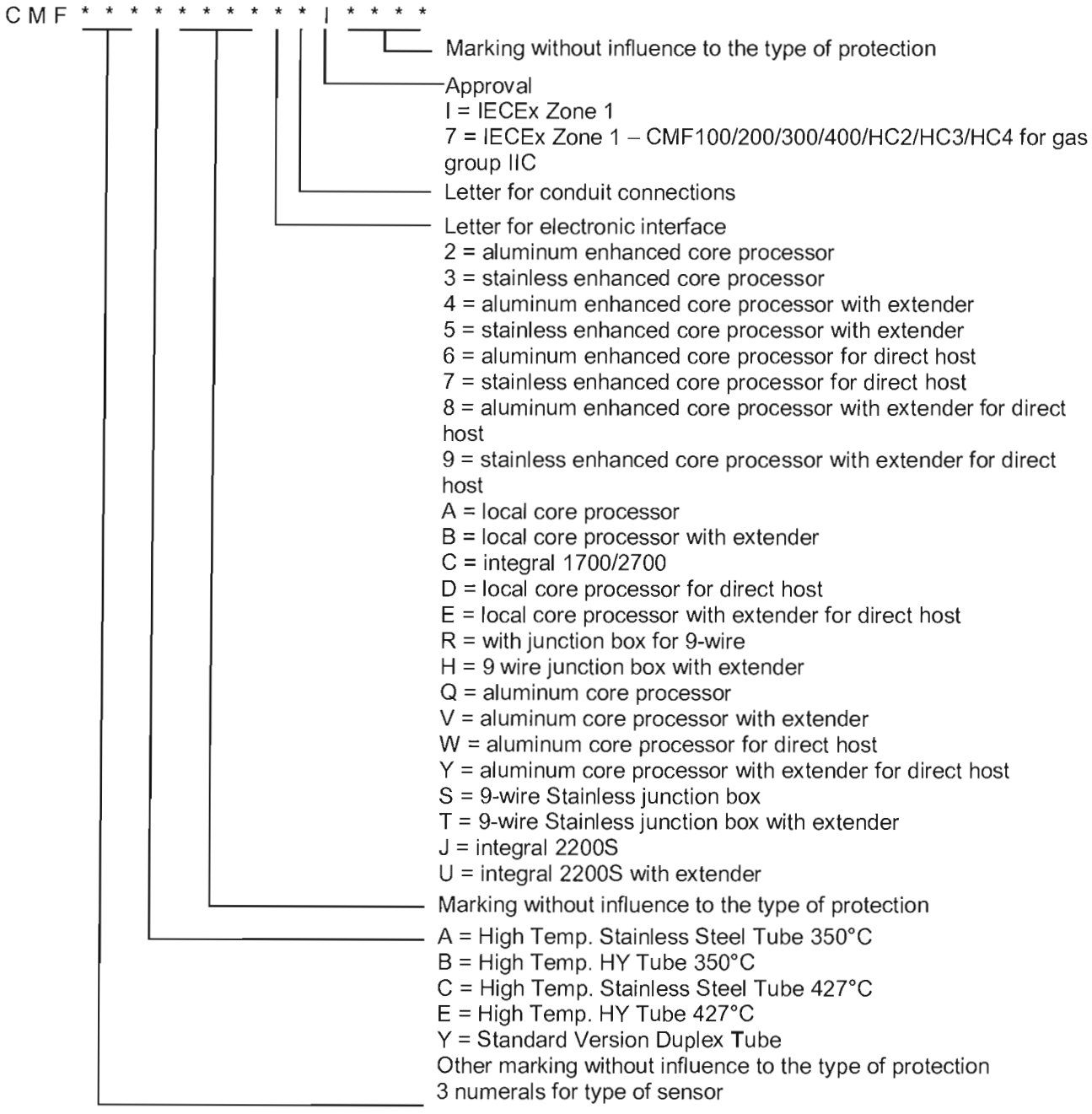
IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007 X issue 7**
Annex

Subject and Type

Sensor type CMF*** ********|****

Instead of the *** letters and numerals will be inserted which characterize the following modifications:



IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007 X issue 7**
Annex

Parameters

1 Type CMF********(R,H,S,T)****** with J-box, inclusive Construction Identification Code (CIC) A3 and A4 and no marking, except type CMF***(A,B,C,E)****(R,H,S,T)******

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W

Internal capacitance negligible

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	945.1	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF100*****(R,H,S,T)*I****		(IIC)	6.7	52.4	89.0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	6.7	0	177.0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	6.7	0	177.0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF200*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF400*****(R,H,S,T)*I**** CIC A3		(IIB)	11.75	71.4	19.8	-68
CMF400*****(R,H,S,T)*I**** CIC A4		(IIC)	11.75	0	187.1	-240
CMF400*****(R,H,S,T)*7****		(IIC)	11.75	0	187.1	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC4*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC4*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC4*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50/-29
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240/-29
CMFHC*Y****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240/-29

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	21.13	V
Current	Ii		18.05	mA
Power	Pi		45	mW

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF100*****(R,H,S,T)*I****		(IIC)	0.441	9.9	0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	0.441	0	0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	0.441	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF200*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF400*****(R,H,S,T)*I**** CIC A3		(IIB)	12.4	109.8	0 to 566.4	-68
CMF400*****(R,H,S,T)*I**** CIC A4		(IIC)	12.4	0	0 to 566.4	-240
CMF400*****(R,H,S,T)*7****		(IIC)	12.4	0	0 to 566.4	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC4*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC4*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC4*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50/-29
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240/-29
CMFHC*Y****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240/-29

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

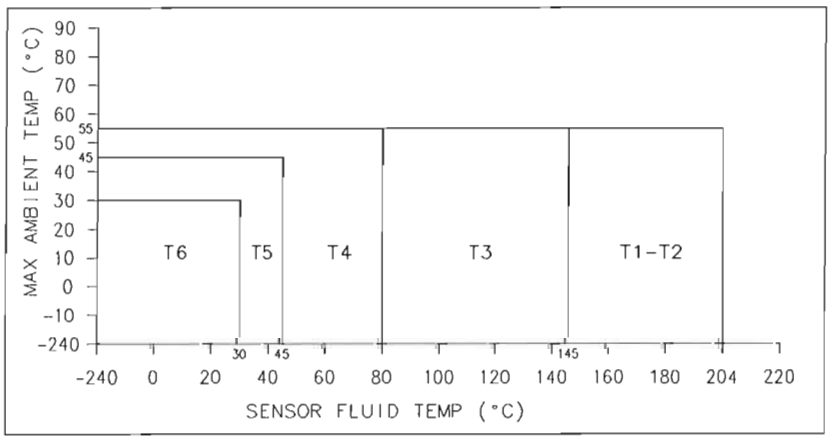
Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

sensor type	inductance [mH]	coil resistance [Ω]	serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF400*****(R,H,S,T)*I****	N/A	N/A	39.7 to 42.2	-68
CMF400*****(R,H,S,T)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-240
CMF400*****(R,H,S,T)*7****	N/A	N/A	39.7 to 42.2	-240

1.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1

Sensor type				
	CMF010*****(R,H,S,T)*I****	(IIC)	CMF025*****(R,H,S,T)*I****	(IIC)
			CMF050*****(R,H,S,T)*I****	(IIC)



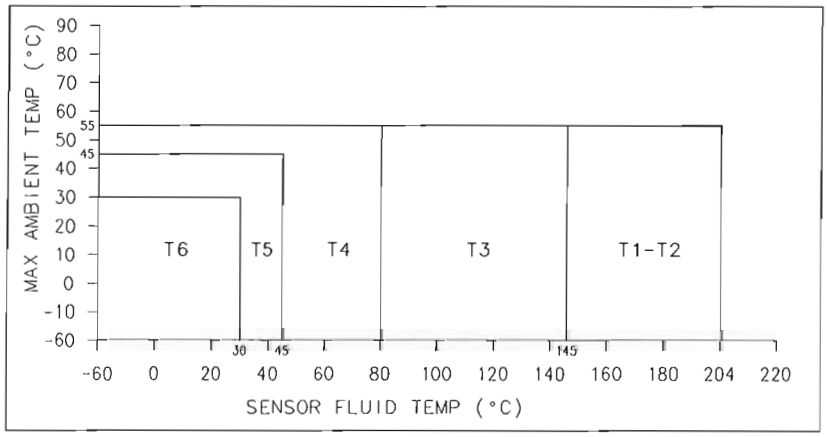
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.2

Sensor type		
CMF100*****(R,H,S,T)*I****	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



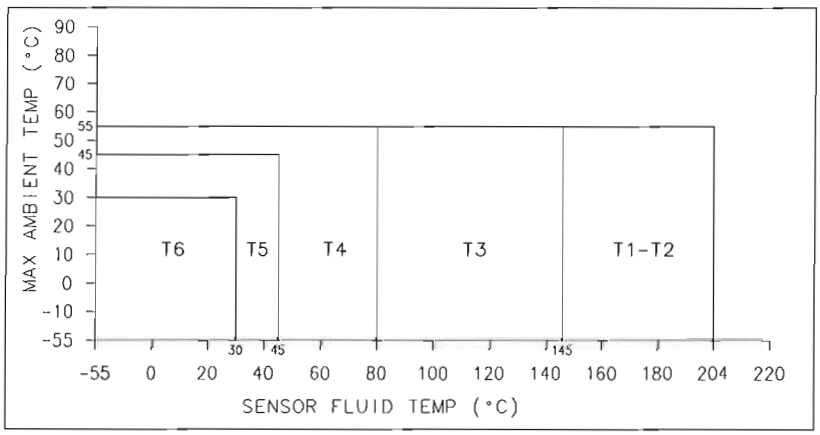
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.3

Sensor type	
CMF200*****(R,H,S,T)*I**** CIC A3	(IIB)
CMF300*****(R,H,S,T)*I**** CIC A3	(IIB)



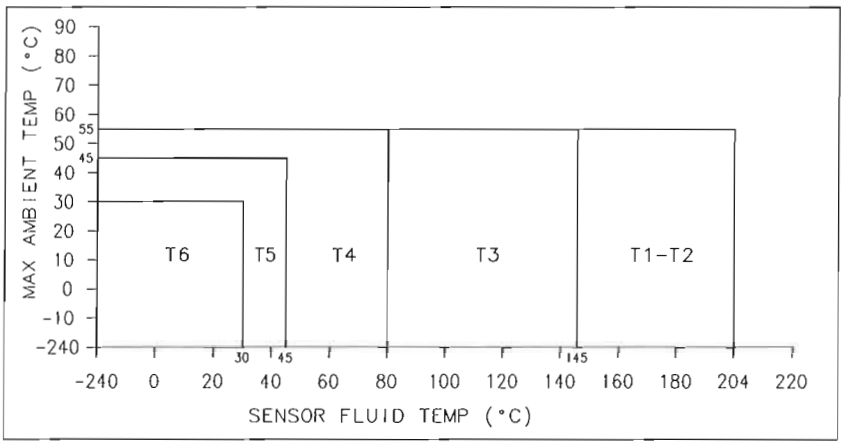
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.4

Sensor type				
	CMF100*****(R,H,S,T)*I**** CIC A4	(IIC)	CMF200*****(R,H,S,T)*I**** CIC A4	(IIC)
	CMF100*****(R,H,S,T)*7****	(IIC)	CMF200*****(R,H,S,T)*7****	(IIC)
			CMF300*****(R,H,S,T)*I**** CIC A4	(IIC)
			CMF300*****(R,H,S,T)*7****	(IIC)



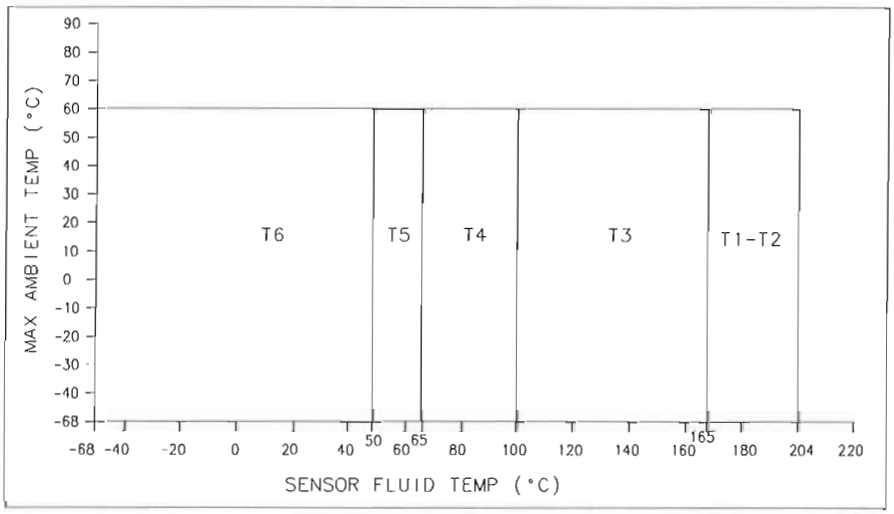
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.5

Sensor type		
CMF400*****(R,H,S,T)*I**** CIC A3	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



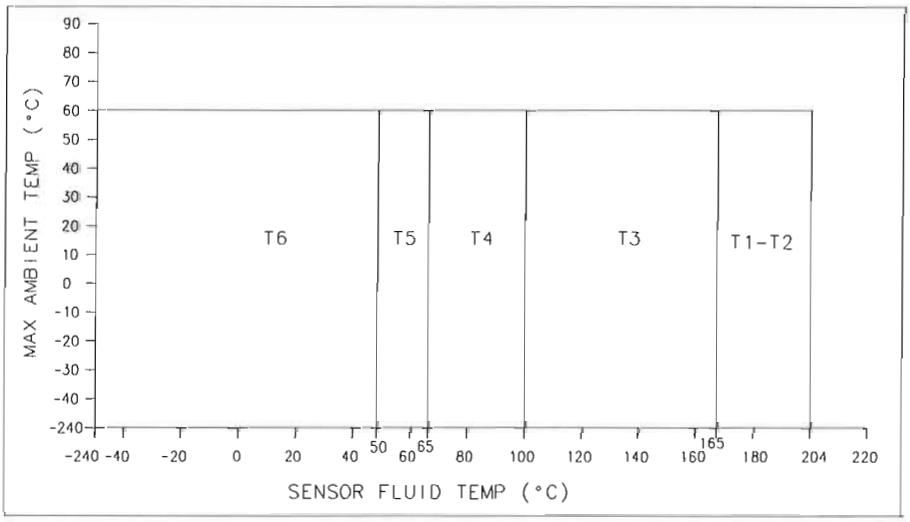
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6

Sensor type		
CMF400*****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF400*****(R,H,S,T)*7****	(IIC)	



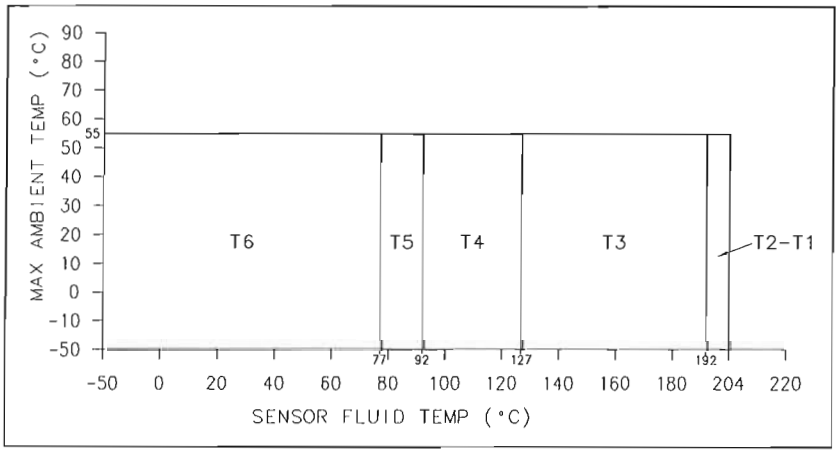
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240°C to +60°C

The use of the sensor at an ambient temperature higher than +60°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.7

Sensor type		
CMFHC2*****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC3*****(R,H,S,T)*I****	(IIB)	
CMFHC4*****(R,H,S,T)*I****	(IIB)	



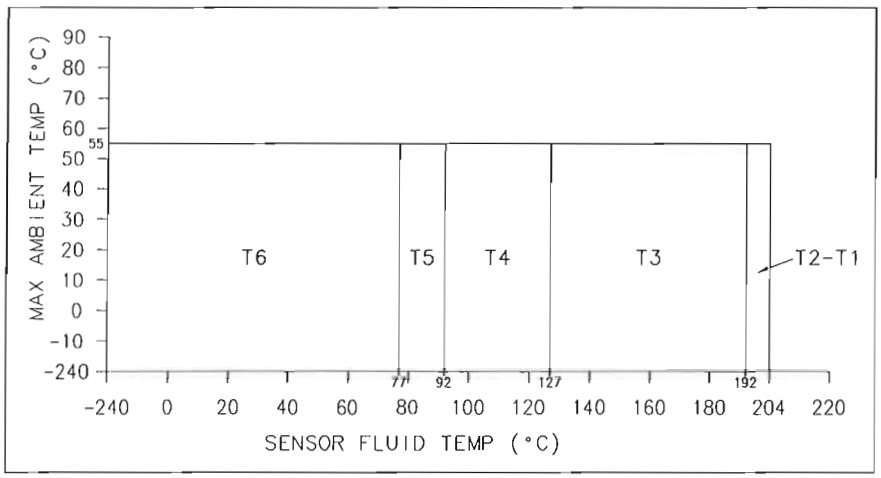
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.8

Sensor type		
CMFHC2*****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC2*****(R,H,S,T)*7****	(IIC)	
CMFHC3*****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC3*****(R,H,S,T)*7****	(IIC)	
CMFHC4*****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC4*****(R,H,S,T)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

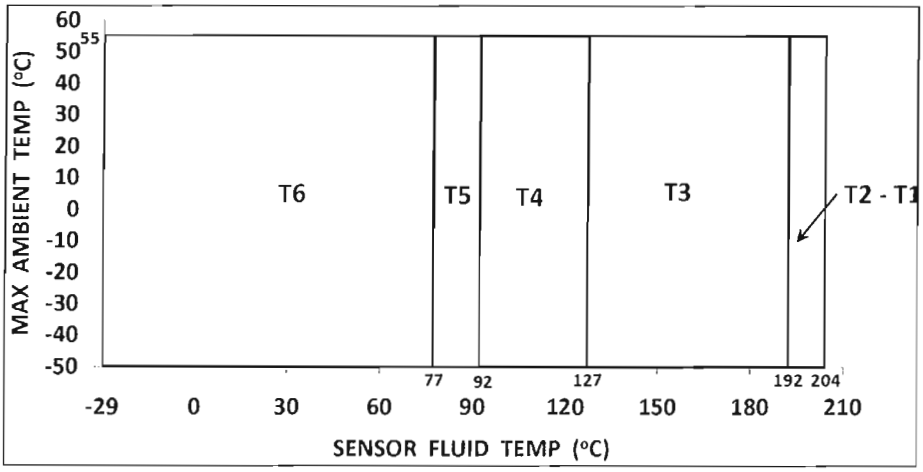
Ambient temperature range: Ta –240°C to + 55°C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Above listed sensors can also be executed with the alternate junction box covered in IECEx BVS 09.0022U.

1.4.9

Sensor type		
CMFHC*Y****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



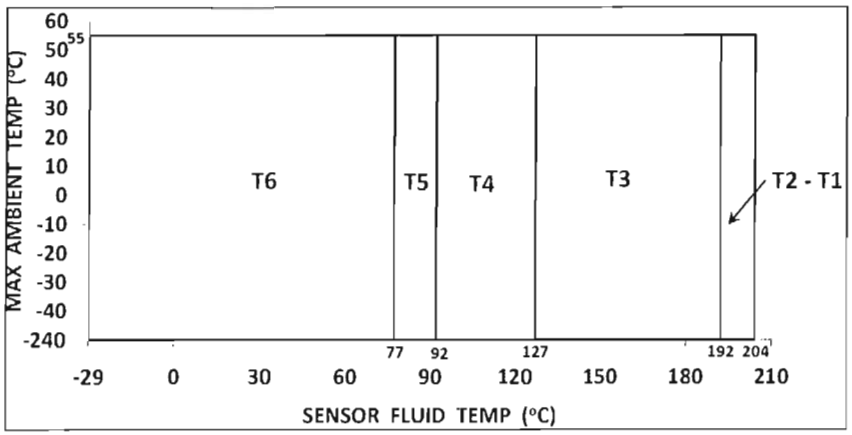
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –50°C to + 55°C

The use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.10

Sensor type		
CMFHC*Y****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC*Y****(R,H,S,T)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240°C to + 55°C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Above listed sensors can also be executed with the alternate junction box covered in IECEx BVS 09.0022U.

2 Type CMF***(A,B,C,E)****(R,S)****** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W
Internal capacitance	Ci	negligible		

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200(A, B, C, E)****(R,S)*I****		(IIB)	4.0	32.3	19.8	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A5		(IIB)	1.1	15.4	9.6	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	1.1	15.4	41	-50
CMF200(A, B, C, E)****(R,S)*7****		(IIC)	1.1	15.4	41	-50
CMF300(A, B, C, E)****(R,S)*I****		(IIB)	4.0	32.3	19.8	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A5		(IIB)	1.1	15.4	9.6	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	1.1	15.4	41	-50
CMF300(A, B, C, E)****(R,S)*7****		(IIC)	1.1	15.4	41	-50
CMF400(A, B, C, E)****(R,S)*I****		(IIB)	7.75	54.3	19.8	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A5		(IIB)	3.4	35.2	12.8	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	3.4	35.2	63.2	-50
CMF400(A, B, C, E)****(R,S)*7****		(IIC)	3.4	35.2	63.2	-50
CMFHC2(A, B, C, E)****(R,S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, B, C, E)****(R,S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC2(A, B, C, E)****(R,S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50
CMFHC3(A, B, C, E)****(R,S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, B, C, E)****(R,S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC3(A, B, C, E)****(R,S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50
CMFHC4(A, B, C, E)****(R,S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC4(A, B, C, E)****(R,S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC4(A, B, C, E)****(R,S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	21.13	V
Current	Ii		18.05	mA
Power	Pi		45	mW
Internal capacitance	Ci	negligible		

Sensor type: 		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/ Fluid Temp (°C)
CMF200(A, B, C, E)****(R,S)*I****	(IIB)	1.25	15.4	569.2	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A5	(IIB)	0.50	8.0	569.2	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.50	8.0	569.2	-50
CMF200(A, B, C, E)****(R,S)*7****	(IIC)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,S)*I****	(IIB)	1.25	15.4	569.2	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A5	(IIB)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,S)*7****	(IIC)	0.50	8.0	569.2	-50
CMF400(A, B, C, E)****(R,S)*I****	(IIB)	6.50	41.1	569.2	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A5	(IIB)	1.10	15.4	569.2	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	1.10	15.4	569.2	-50
CMF400(A, B, C, E)****(R,S)*7****	(IIC)	1.10	15.4	569.2	-50
CMFHC2(A, B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50

2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

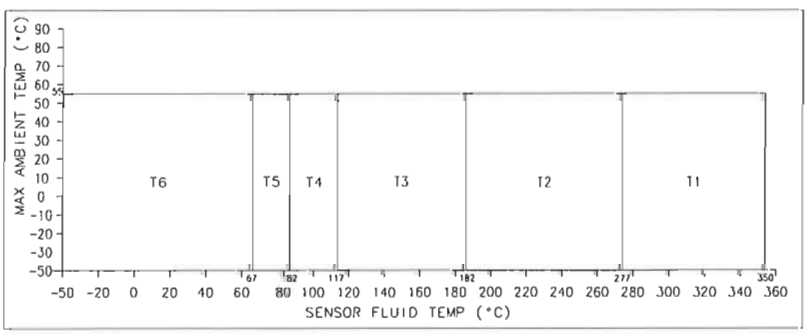
Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF400(A,B,C,E)****(R,S)*I****	N/A	N/A	39.7 to 42.2	-50
CMF400(A,B,C,E)****(R,S)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-50
CMF400(A,B,C,E)****(R,S)*7****	N/A	N/A	39.7 to 42.2	-50

2.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.4.1

Sensor type		
CMF200(A or B)****(R,S)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF200(A or B)****(R,S)*I**** CIC A4	(IIC)	
CMF200(A or B)****(R,S)*I**** CIC A5	(IIB)	
CMF200(A or B)****(R,S)*7****	(IIC)	
CMF300(A or B)****(R,S)*I****	(IIB)	
CMF300(A or B)****(R,S)*I**** CIC A4	(IIC)	
CMF300(A or B)****(R,S)*I**** CIC A5	(IIB)	
CMF300(A or B)****(R,S)*7****	(IIC)	
CMF400(A or B)****(R,S)*I****	(IIB)	
CMF400(A or B)****(R,S)*I**** CIC A4	(IIC)	
CMF400(A or B)****(R,S)*I**** CIC A5	(IIB)	
CMF400(A or B)****(R,S)*7****	(IIC)	
CMFHC2(A or B)****(R,S)*I****	(IIB)	
CMFHC2(A or B)****(R,S)*I**** CIC A4	(IIC)	
CMFHC2(A or B)****(R,S)*I**** CIC A6	(IIB)	
CMFHC2(A or B)****(R,S)*7****	(IIC)	
CMFHC2(A or B)****(R,S)*7**** CIC A6	(IIC)	
CMFHC3(A or B)****(R,S)*I****	(IIB)	
CMFHC3(A or B)****(R,S)*I**** CIC A4	(IIC)	
CMFHC3(A or B)****(R,S)*I**** CIC A6	(IIB)	
CMFHC3(A or B)****(R,S)*7****	(IIC)	
CMFHC3(A or B)****(R,S)*7**** CIC A6	(IIC)	
CMFHC4(A or B)****(R,S)*I****	(IIB)	
CMFHC4(A or B)****(R,S)*I**** CIC A4	(IIC)	
CMFHC4(A or B)****(R,S)*I**** CIC A6	(IIB)	
CMFHC4(A or B)****(R,S)*7****	(IIC)	
CMFHC4(A or B)****(R,S)*7**** CIC A6	(IIC)	



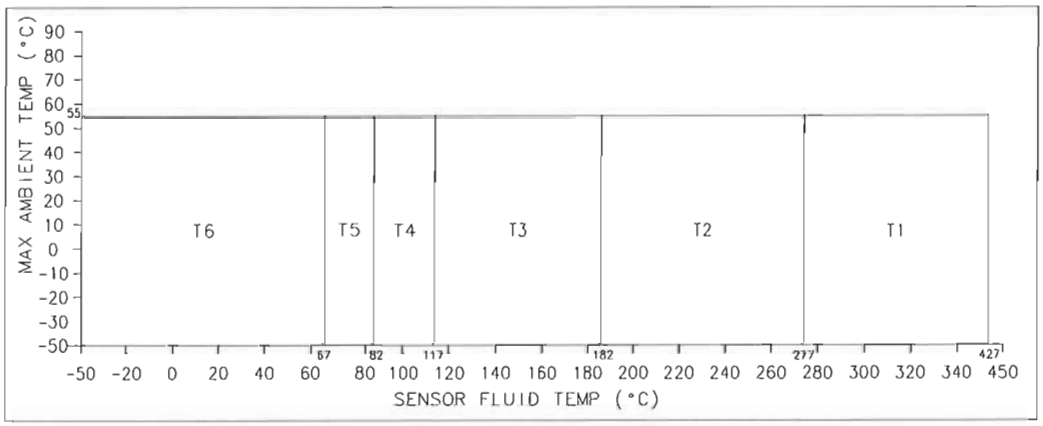
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.4.2

Sensor type			
CMF200(C or E)****(R,S)*I****		(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF200(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMF200(C or E)****(R,S)*I**** CIC A5		(IIB)	
CMF200(C or E)****(R,S)*7****		(IIC)	
CMF300(C or E)****(R,S)*I****		(IIB)	
CMF300(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMF300(C or E)****(R,S)*I**** CIC A5		(IIB)	
CMF300(C or E)****(R,S)*7****		(IIC)	
CMF400(C or E)****(R,S)*I****		(IIB)	
CMF400(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMF400(C or E)****(R,S)*I**** CIC A5		(IIB)	
CMF400(C or E)****(R,S)*7****		(IIC)	
CMFHC2(C or E)****(R,S)*I****		(IIB)	
CMFHC2(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMFHC2(C or E)****(R,S)*I**** CIC A6		(IIB)	
CMFHC2(C or E)****(R,S)*7****		(IIC)	
CMFHC2(C or E)****(R,S)*7**** CIC A6		(IIC)	
CMFHC3(C or E)****(R,S)*I****		(IIB)	
CMFHC3(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMFHC3(C or E)****(R,S)*I**** CIC A6		(IIB)	
CMFHC3(C or E)****(R,S)*7****		(IIC)	
CMFHC3(C or E)****(R,S)*7**** CIC A6		(IIC)	
CMFHC4(C or E)****(R,S)*I****		(IIB)	
CMFHC4(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMFHC4(C or E)****(R,S)*I**** CIC A6		(IIB)	
CMFHC4(C or E)****(R,S)*7****		(IIC)	
CMFHC4(C or E)****(R,S)*7**** CIC A6		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3 Type CMF********(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with integral Core Processor inclusive Construction Identification Code CIC A3 and A4 except type CMF***(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****

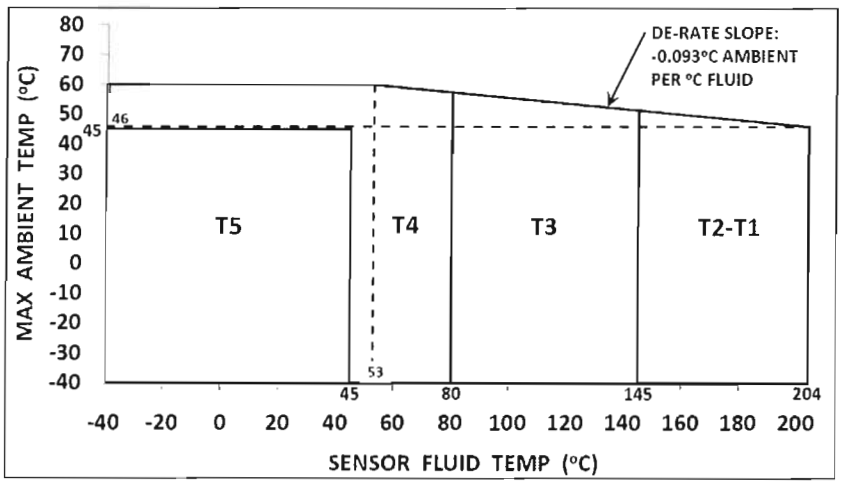
3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

3.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

3.2.1

Sensor type	 CMF010	 CMF100	 CMF200/300	
CMF010*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	With integral core processor
CMF025*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	
CMF050*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	
CMF100*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3			(IIB)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4			(IIC)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****			(IIC)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3			(IIB)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4			(IIC)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****			(IIC)	

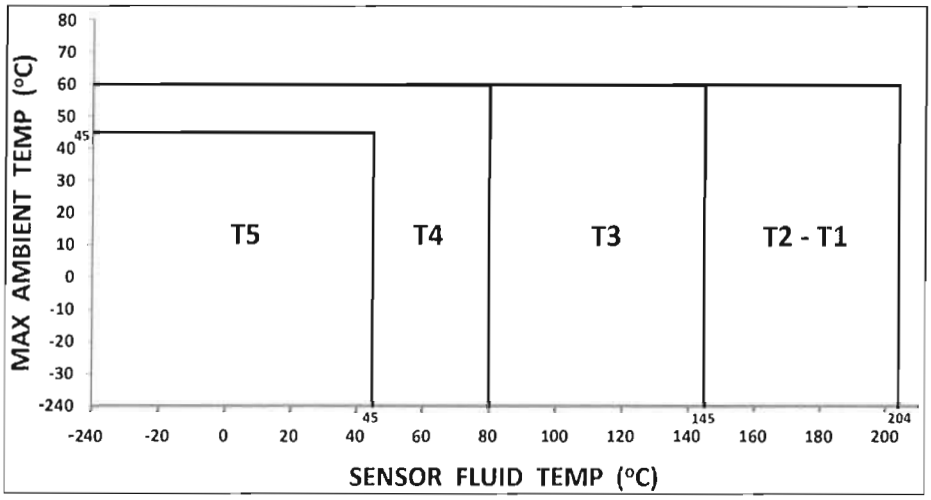


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.2

Sensor type		
CMF300*****(2,3,6,7,A,D,Q,W)*I**** CIC A4 and ETO 17151	(IIC)	With integral core processor
CMF300*****(2,3,6,7,A,D,Q,W)*7**** and ETO 17151	(IIC)	



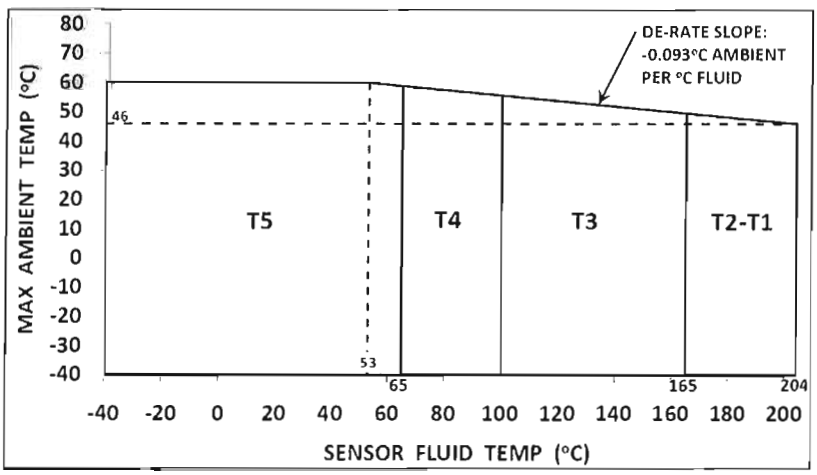
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240°C up to +60°C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted minimum 1 meter away from the sensor by means of a flexible stainless steel hose, and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.3

Sensor type		
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3	(IIB)	With integral core processor
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	



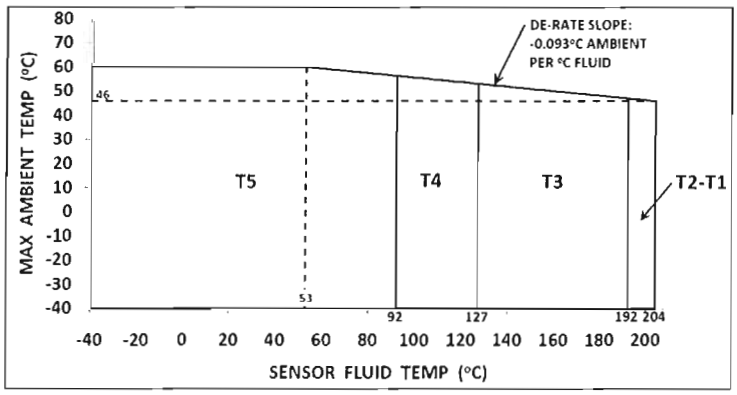
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

3.2.4

Sensor type		

CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral core processor
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	
CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	
CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	



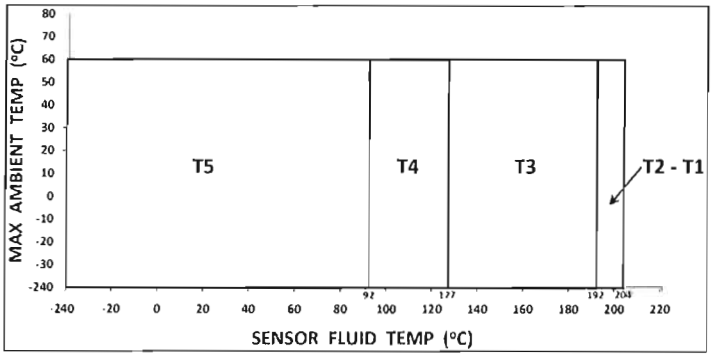
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

3.2.5

Sensor type		

CMFHC2*****(2,3,6,7,A,D,Q,W)*I**** CIC A4 and ETO 17076	(IIC)	With integral core processor
CMFHC2*****(2,3,6,7,A,D,Q,W)*7**** and ETO 17076	(IIC)	
CMFHC3*****(2,3,6,7,A,Q,W)*I**** CIC A4 and ETO 16995	(IIC)	
CMFHC3*****(2,3,6,7,A,Q,W)*7**** and ETO 16995	(IIC)	
CMFHC4*****(2,3,6,7,A,D,W)*I**** CIC A4 and ETO 17192	(IIC)	
CMFHC4*****(2,3,6,7,A,D,W)*7**** and ETO 17192	(IIC)	



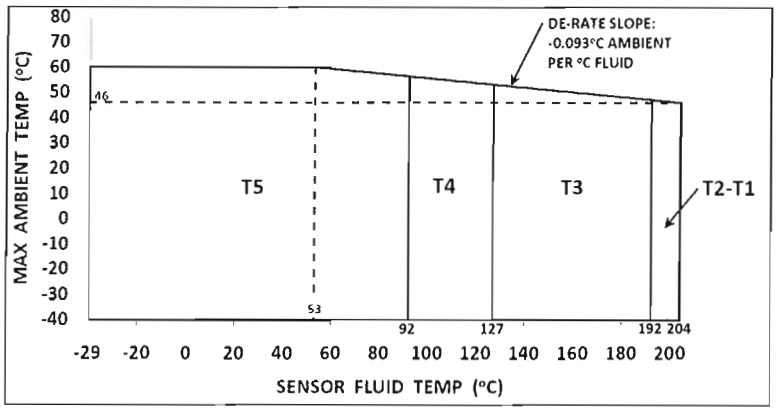
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +60 °C

3.2.6

Sensor type		

CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral core processor
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range °C	Ta	-40 °C up to +60

4 Type CMF***(A, B, C or E)****(2,3,6,7,A,D,Q,V,W)****** with integral core processor.

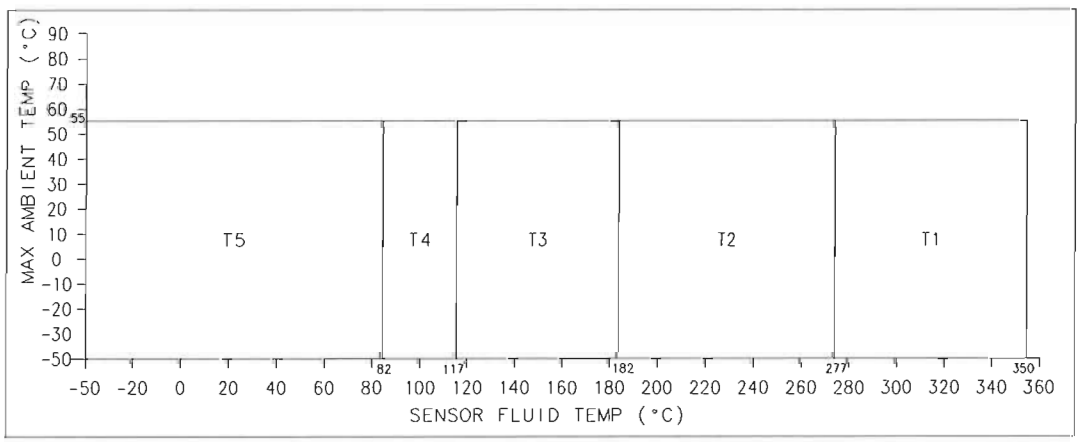
4.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Iinternal capacitance	Ci		2200	pF
Internal inductance	Li		30	µH

4.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

4.2.1

Sensor type		
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	With integral core processor
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A5	(IIB)	
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A5	(IIB)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A5	(IIB)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A6	(IIB)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A6	(IIC)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A6	(IIB)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A6	(IIC)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A6	(IIB)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A6	(IIC)	



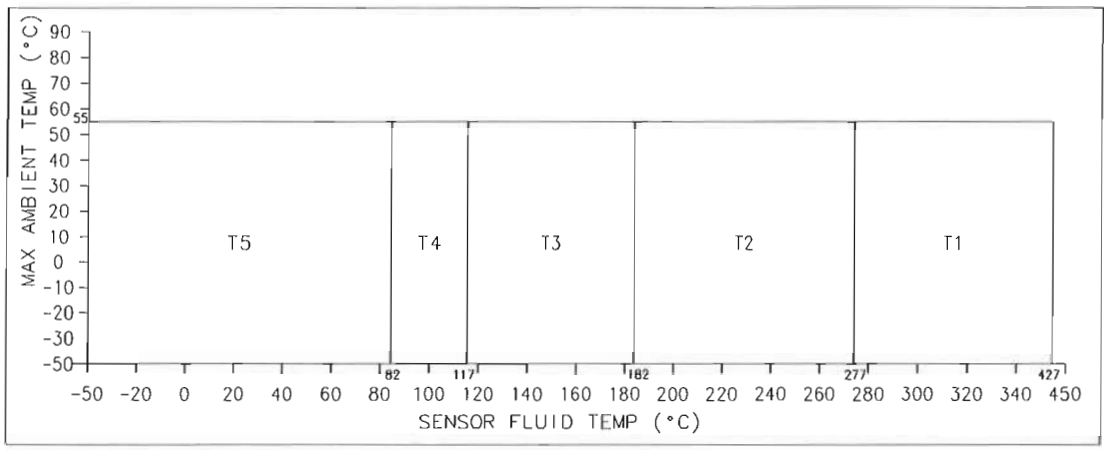
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

4.2.2

Sensor type			
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	With integral core processor
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A5		(IIB)	
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A5		(IIB)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A5		(IIB)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A6		(IIB)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A6		(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A6		(IIB)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A6		(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A6		(IIB)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A6		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

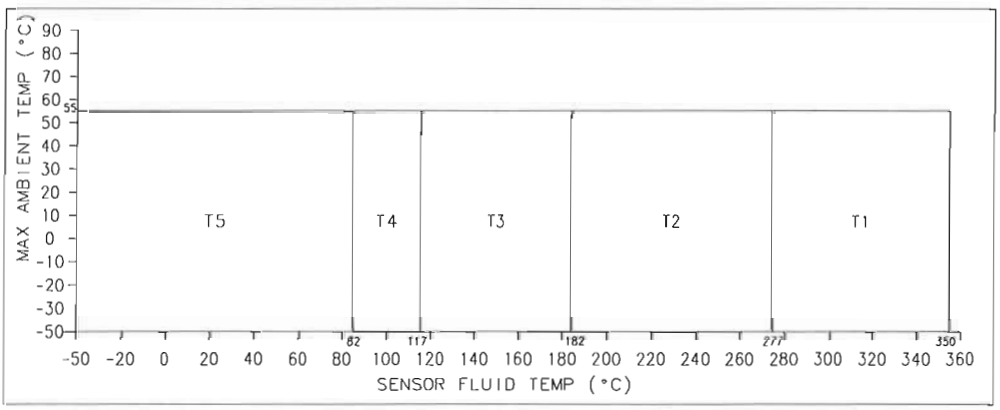
5 Type CMF***(A, B, C or E)****C*I**** High-temperature sensor with integral 1700/2700 transmitter

5.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

5.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

5.2.1

Sensor type		
CMF200(A or B)****C*I****	(IIB)	With Integral 1700/2700 Transmitter
CMF200(A or B)****C*I**** CIC A5	(IIB)	
CMF200(A or B)****C*I**** CIC A4	(IIC)	
CMF200(A or B)****C*7****	(IIC)	
CMF300(A or B)****C*I****	(IIB)	
CMF300(A or B)****C*I**** CIC A5	(IIB)	
CMF300(A or B)****C*I**** CIC A4	(IIC)	
CMF300(A or B)****C*7****	(IIC)	
CMF400(A or B)****C*I****	(IIB)	
CMF400(A or B)****C*I**** CIC A5	(IIB)	
CMF400(A or B)****C*I**** CIC A4	(IIC)	
CMF400(A or B)****C*7****	(IIC)	
CMFHC2(A or B)****C*I****	(IIB)	
CMFHC2(A or B)****C*I**** CIC A6	(IIB)	
CMFHC2(A or B)****C*I**** CIC A4	(IIC)	
CMFHC2(A or B)****C*7****	(IIC)	
CMFHC2(A or B)****C*7**** CIC A6	(IIC)	
CMFHC3(A or B)****C*I****	(IIB)	
CMFHC3(A or B)****C*I**** CIC A6	(IIB)	
CMFHC3(A or B)****C*I**** CIC A4	(IIC)	
CMFHC3(A or B)****C*7****	(IIC)	
CMFHC3(A or B)****C*7**** CIC A6	(IIC)	
CMFHC4(A or B)****C*I****	(IIB)	
CMFHC4(A or B)****C*I**** CIC A6	(IIB)	
CMFHC4(A or B)****C*I**** CIC A4	(IIC)	
CMFHC4(A or B)****C*7****	(IIC)	
CMFHC4(A or B)****C*7**** CIC A6	(IIC)	

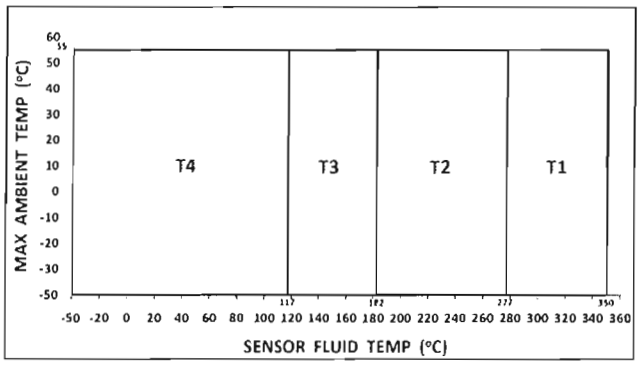


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

When used with Transmitter type *700*1*4****** (Wireless HART Output Option Code "4"):



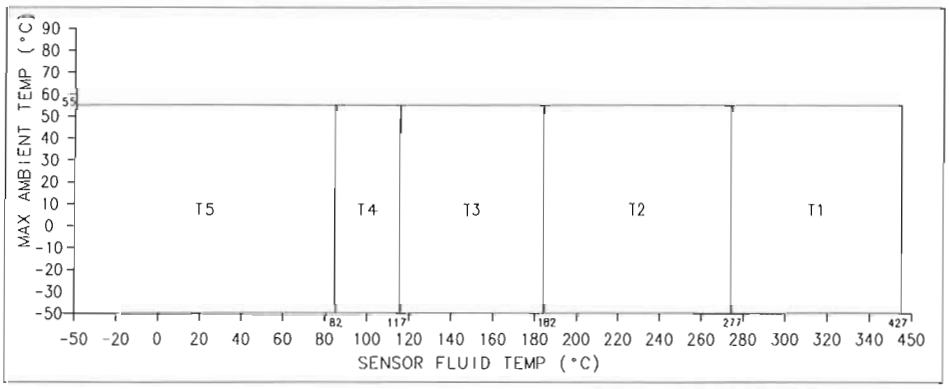
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5.2.2

Sensor type		
CMF200(C or E)****C*I****	(IIB)	With Integral 1700/2700 Transmitter
CMF200(C or E)****C*I**** CIC A5	(IIB)	
CMF200(C or E)****C*I**** CIC A4	(IIC)	
CMF200(C or E)****C*7****	(IIC)	
CMF300(C or E)****C*I****	(IIB)	
CMF300(C or E)****C*I**** CIC A5	(IIB)	
CMF300(C or E)****C*I**** CIC A4	(IIC)	
CMF300(C or E)****C*7****	(IIC)	
CMF400(C or E)****C*I****	(IIB)	
CMF400(C or E)****C*I**** CIC A5	(IIB)	
CMF400(C or E)****C*I**** CIC A4	(IIC)	
CMF400(C or E)****C*7****	(IIC)	
CMFHC2(C or E)****C*I****	(IIB)	
CMFHC2(C or E)****C*I**** CIC A6	(IIB)	
CMFHC2(C or E)****C*I**** CIC A4	(IIC)	
CMFHC2(C or E)****C*7****	(IIC)	
CMFHC2(C or E)****C*7**** CIC A6	(IIC)	
CMFHC3(C or E)****C*I****	(IIB)	
CMFHC3(C or E)****C*I**** CIC A6	(IIB)	
CMFHC3(C or E)****C*I**** CIC A4	(IIC)	
CMFHC3(C or E)****C*7****	(IIC)	
CMFHC3(C or E)****C*7**** CIC A6	(IIC)	
CMFHC4(C or E)****C*I****	(IIB)	
CMFHC4(C or E)****C*I**** CIC A6	(IIB)	
CMFHC4(C or E)****C*I**** CIC A4	(IIC)	
CMFHC4(C or E)****C*7****	(IIC)	
CMFHC4(C or E)****C*7**** CIC A6	(IIC)	

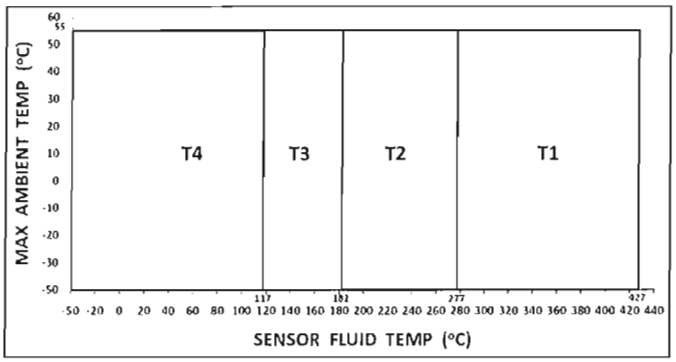


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

When used with Transmitter type *700*1***4****** (Wireless HART Output Option Code "4"):



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

6 Types CMF********(J,U)*I**** incl. CIC A4 with 2200S transmitter, except type CMF***(A,B,C,E)****J,U)*I****

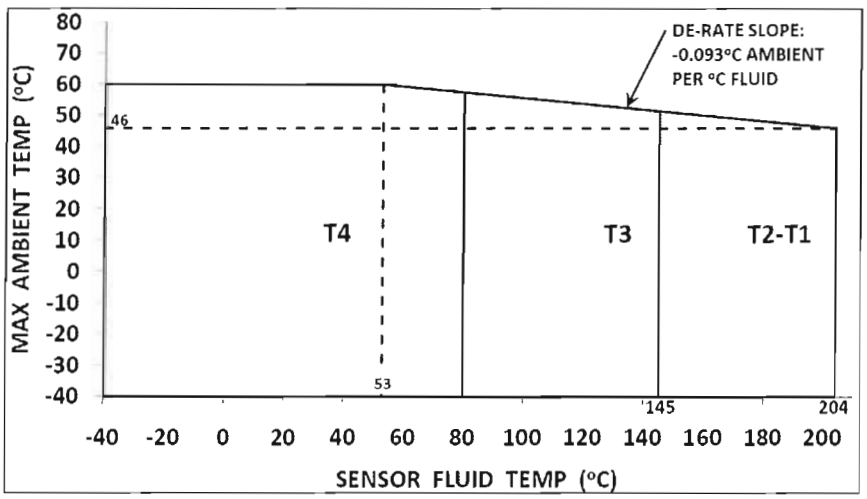
6.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

6.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

6.2.1

Sensor type	 CMF010	 CMF100	 CMF200/300	
CMF010*****(J or U)*I****			(IIC)	With integral 2200S
CMF025*****(J or U)*I****			(IIC)	
CMF050*****(J or U)*I****			(IIC)	
CMF100*****(J or U)*I****			(IIC)	
CMF200*****(J or U)*I**** CIC A3			(IIB)	
CMF200*****(J or U)*I**** CIC A4			(IIC)	
CMF200*****(J or U)*7****			(IIC)	
CMF300*****(J or U)*I**** CIC A3			(IIB)	
CMF300*****(J or U)*I**** CIC A4			(IIC)	
CMF300*****(J or U)*7****			(IIC)	

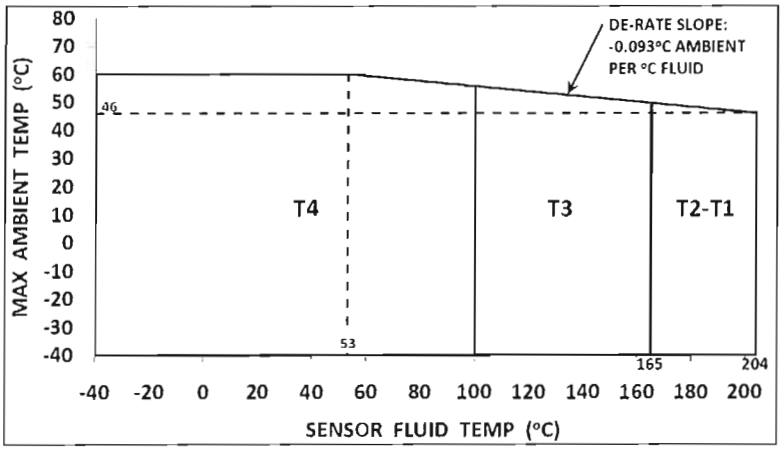


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.2

Sensor type			
CMF400*****(J or U)*I**** CIC A3	(IIB)		With integral 2200S
CMF400*****(J or U)*I**** CIC A4	(IIC)		
CMF400*****(J or U)*7****	(IIC)		

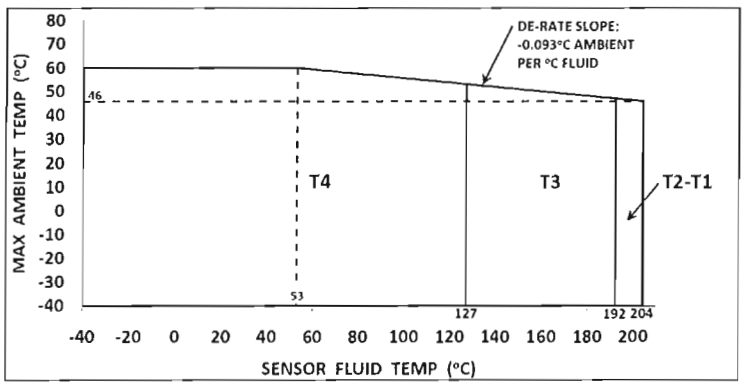


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.3

Sensor type		
CMFHC2*****(J or U)*I****	(IIB)	With integral 2200S
CMFHC2*****(J or U)*I**** CIC A4	(IIC)	
CMFHC2*****(J or U)*7****	(IIC)	
CMFHC3*****(J or U)*I****	(IIB)	
CMFHC3*****(J or U)*I**** CIC A4	(IIC)	
CMFHC3*****(J or U)*7****	(IIC)	
CMFHC4*****(J or U)*I****	(IIB)	
CMFHC4*****(J or U)*I**** CIC A4	(IIC)	
CMFHC4*****(J or U)*7****	(IIC)	

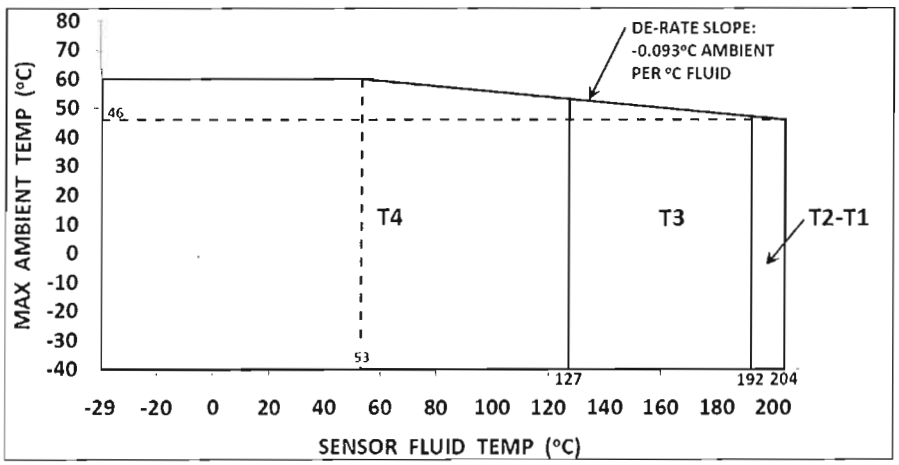


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.4

Sensor type		
CMFHC*Y****(J or U)*I****	(IIB)	With integral 2200S
CMFHC*Y****(J or U)*I**** CIC A4	(IIC)	
CMFHC*Y****(J or U)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

7 Type CMF***(A, B, C or E)****J****** with integral 2200S transmitter.

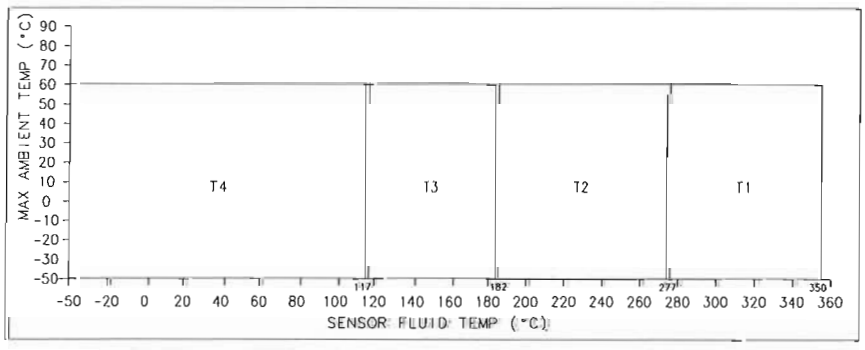
7.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

7.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

7.2.1

Sensor type		
CMF200(A or B)****J*I****	(IIB)	With integral 2200S
CMF200(A or B)****J*I**** CIC A4	(IIC)	
CMF200(A or B)****J*I**** CIC A5	(IIB)	
CMF200(A or B)****J*7****	(IIC)	
CMF300(A or B)****J*I****	(IIB)	
CMF300(A or B)****J)*I**** CIC A4	(IIC)	
CMF300(A or B)****J*I**** CIC A5	(IIB)	
CMF300(A or B)****J*7****	(IIC)	
CMF400(A or B)****J*I****	(IIB)	
CMF400(A or B)****J*I**** CIC A4	(IIC)	
CMF400(A or B)****J*I**** CIC A5	(IIB)	
CMF400(A or B)****J*7****	(IIC)	
CMFHC2(A or B)****J*I****	(IIB)	
CMFHC2(A or B)****J*I**** CIC A4	(IIC)	
CMFHC2(A or B)****J*I**** CIC A6	(IIB)	
CMFHC2(A or B)****J*7****	(IIC)	
CMFHC2(A or B)****J*7**** CIC A6	(IIC)	
CMFHC3(A or B)****J*I****	(IIB)	
CMFHC3(A or B)****J*I**** CIC A4	(IIC)	
CMFHC3(A or B)****J*I**** CIC A6	(IIB)	
CMFHC3(A or B)****J*7****	(IIC)	
CMFHC3(A or B)****J*7**** CIC A6	(IIC)	
CMFHC4(A or B)****J*I****	(IIB)	
CMFHC4(A or B)****J*I**** CIC A4	(IIC)	
CMFHC4(A or B)****J*I**** CIC A6	(IIB)	
CMFHC4(A or B)****J*7****	(IIC)	
CMFHC4(A or B)****J*7**** CIC A6	(IIC)	



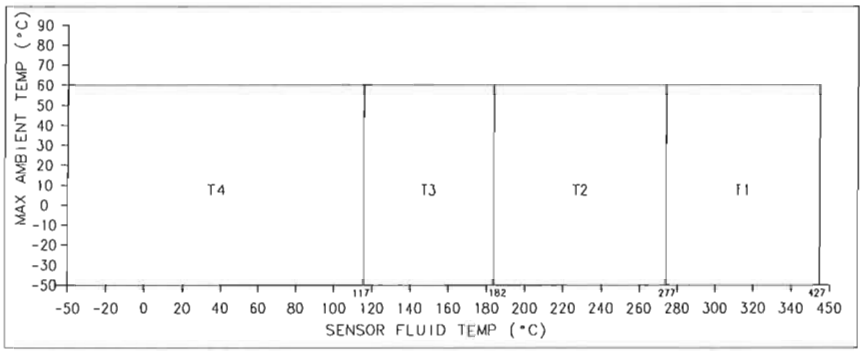
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

7.2.2

Sensor type		
CMF200(C or E)****J*I****	(IIB)	With integral 2200S
CMF200(C or E)****J*I**** CIC A4	(IIC)	
CMF200(C or E)****J*I**** CIC A5	(IIB)	
CMF200(C or E)****J*7****	(IIC)	
CMF300(C or E)****J*I****	(IIB)	
CMF300(C or E)****J*I**** CIC A4	(IIC)	
CMF300(C or E)****J*I**** CIC A5	(IIB)	
CMF300(C or E)****J*7****	(IIC)	
CMF400(C or E)****J*I****	(IIB)	
CMF400(C or E)****J*I**** CIC A4	(IIC)	
CMF400(C or E)****J*I**** CIC A5	(IIB)	
CMF400(C or E)****J*7****	(IIC)	
CMFHC2(C or E)****J*I****	(IIB)	
CMFHC2(C or E)****J*I**** CIC A4	(IIC)	
CMFHC2(C or E)****J*I**** CIC A6	(IIB)	
CMFHC2(C or E)****J*7****	(IIC)	
CMFHC2(C or E)****J*7**** CIC A6	(IIC)	
CMFHC3(C or E)****J*I****	(IIB)	
CMFHC3(C or E)****J*I**** CIC A4	(IIC)	
CMFHC3(C or E)****J*I**** CIC A6	(IIB)	
CMFHC3(C or E)****J*7****	(IIC)	
CMFHC3(C or E)****J*7**** CIC A6	(IIC)	
CMFHC4(C or E)****J*I****	(IIB)	
CMFHC4(C or E)****J*I**** CIC A4	(IIC)	
CMFHC4(C or E)****J*I**** CIC A6	(IIB)	
CMFHC4(C or E)****J*7****	(IIC)	
CMFHC4(C or E)****J*7**** CIC A6	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

for sensors with junction box connected to MVD transmitter

Type	Type of protection	Min. ambient/fluid temperature
CMF010*****[1]*|****	Ex ib IIC T1-T6 Gb	-240°C
CMF025*****[1]*|****	Ex ib IIC T1-T6 Gb	-240°C
CMF050*****[1]*|****	Ex ib IIC T1-T6 Gb	-240°C
CMF100*****[1]*|****	Ex ib IIC T1-T6 Gb	-60°C
CMF100*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMF100*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C
CMF200*****[1]*|**** CIC A3	Ex ib IIB T1-T6 Gb	-55°C
CMF200*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMF200*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C
CMF200[4]*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMF200[4]*****[1]*|**** CIC A5	Ex ib IIB T1-T6 Gb	-50°C
CMF200[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-50°C
CMF200[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50°C
CMF300*****[1]*|**** CIC A3	Ex ib IIB T1-T6 Gb	-55°C
CMF300*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMF300*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C
CMF300[4]*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMF300[4]*****[1]*|**** CIC A5	Ex ib IIB T1-T6 Gb	-50°C
CMF300[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-50°C
CMF300[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50°C
CMF400*****[1]*|**** CIC A3	Ex ib IIB T1-T6 Gb	-68°C
CMF400*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMF400*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C
CMF400[4]*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMF400[4]*****[1]*|**** CIC A5	Ex ib IIB T1-T6 Gb	-50°C
CMF400[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-50°C
CMF400[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50°C
CMFHC*Y*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C / -29°C
CMFHC*Y*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C / -29°C
CMFHC*Y*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C / -29°C
CMFHC2*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC2*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMFHC2*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C
CMFHC2[4]*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC2[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-50°C
CMFHC2[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50°C
CMFHC2[4]*****[1]*|**** CIC A6	Ex ib IIB T1-T6 Gb	-50°C
CMFHC2[4]*****[1]*7**** CIC A6	Ex ib IIC T1-T6 Gb	-50°C
CMFHC3*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC3*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMFHC3*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C
CMFHC3[4]*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC3[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-50°C
CMFHC3[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50°C
CMFHC3[4]*****[1]*|**** CIC A6	Ex ib IIB T1-T6 Gb	-50°C
CMFHC3[4]*****[1]*7**** CIC A6	Ex ib IIC T1-T6 Gb	-50°C

Type	Type of protection	Min. ambient/fluid temperature
CMFHC4*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC4*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMFHC4*****[1]*7****	Ex ib IIC T1-T6 Gb	-240°C
CMFHC4[4]*****[1]*|****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC4[4]*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-50°C
CMFHC4[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50°C
CMFHC4[4]*****[1]*|**** CIC A6	Ex ib IIB T1-T6 Gb	-50°C
CMFHC4[4]*****[1]*7**** CIC A6	Ex ib IIC T1-T6 Gb	-50°C

[1] At this place the letter R, H, S or T will be inserted.

[4] At this place the letter A, B, C or E will be inserted.

for sensor with integral 700 or 800 core processor

Type	Type of protection	Min. ambient/fluid temperature
CMF010*****[2]*|****	Ex ib IIC T1-T5 Gb	-40°C
CMF025*****[2]*|****	Ex ib IIC T1-T5 Gb	-40°C
CMF050*****[2]*|****	Ex ib IIC T1-T5 Gb	-40°C
CMF100*****[2]*|****	Ex ib IIC T1-T5 Gb	-40°C
CMF100*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMF100*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C
CMF200*****[2]*|**** CIC A3	Ex ib IIB T1-T5 Gb	-40°C
CMF200*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMF200*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C
CMF200[4]*****[2]*|****	Ex ib IIB T1-T5 Gb	-50°C
CMF200[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5 Gb	-50°C
CMF200[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50°C
CMF200[4]*****[2]*7****	Ex ib IIC T1-T5 Gb	-50°C
CMF300*****[2]*|**** CIC A3	Ex ib IIB T1-T5 Gb	-40°C
CMF300*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMF300*****[2]*|**** CIC A4 and ETO 17151	Ex ib IIC T1-T5 Gb	-240°C
CMF300*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C
CMF300*****[2]*7**** and ETO 17151	Ex ib IIC T1-T5 Gb	-240°C
CMF300[4]*****[2]*|****	Ex ib IIB T1-T5 Gb	-50°C
CMF300[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5 Gb	-50°C
CMF300[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50°C
CMF300[4]*****[2]*7****	Ex ib IIC T1-T5 Gb	-50°C
CMF400*****[2]*|**** CIC A3	Ex ib IIB T1-T5 Gb	-40°C
CMF400*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMF400*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C
CMF400[4]*****[2]*|****	Ex ib IIB T1-T5 Gb	-50°C
CMF400[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5 Gb	-50°C
CMF400[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50°C
CMF400[4]*****[2]*7****	Ex ib IIC T1-T5 Gb	-50°C
CMFHC*Y*****[2]*|****	Ex ib IIB T1-T5 Gb	-40°C / -29°C
CMFHC*Y*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C / -29°C
CMFHC*Y*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C / -29°C

Type	Type of protection	Min. ambient/fluid temperature
CMFHC2*****[2]*|****	Ex ib IIB T1-T5 Gb	-40°C
CMFHC2*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMFHC2*****[2]*|**** CIC A4 and ETO 17076	Ex ib IIC T1-T5 Gb	-240°C
CMFHC2*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C
CMFHC2*****[2]*7**** and ETO 17076	Ex ib IIC T1-T5 Gb	-240°C
CMFHC2[4]****[2]*|****	Ex ib IIB T1-T5 Gb	-50°C
CMFHC2[4]****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50°C
CMFHC2[4]****[2]*7****	Ex ib IIC T1-T5 Gb	-50°C
CMFHC2[4]****[2]*|**** CIC A6	Ex ib IIB T1-T5 Gb	-50°C
CMFHC2[4]****[2]*7**** CIC A6	Ex ib IIC T1-T5 Gb	-50°C
CMFHC3*****[2]*|****	Ex ib IIB T1-T5 Gb	-40°C
CMFHC3*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMFHC3*****[2]*|**** CIC A4 and ETO 16995	Ex ib IIC T1-T5 Gb	-240°C
CMFHC3*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C
CMFHC3*****[2]*7**** and ETO 16995	Ex ib IIC T1-T5 Gb	-240°C
CMFHC3[4]****[2]*|****	Ex ib IIB T1-T5 Gb	-50°C
CMFHC3[4]****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50°C
CMFHC3[4]****[2]*7****	Ex ib IIC T1-T5 Gb	-50°C
CMFHC3[4]****[2]*|**** CIC A6	Ex ib IIB T1-T5 Gb	-50°C
CMFHC3[4]****[2]*7**** CIC A6	Ex ib IIC T1-T5 Gb	-50°C
CMFHC4*****[2]*|****	Ex ib IIB T1-T5 Gb	-40°C
CMFHC4*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMFHC4*****[2]*|**** CIC A4 and ETO 17192	Ex ib IIC T1-T5 Gb	-240°C
CMFHC4*****[2]*7****	Ex ib IIC T1-T5 Gb	-40°C
CMFHC4*****[2]*7**** and ETO 17192	Ex ib IIC T1-T5 Gb	-240°C
CMFHC4[4]****[2]*|****	Ex ib IIB T1-T5 Gb	-50°C
CMFHC4[4]****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50°C
CMFHC4[4]****[2]*7****	Ex ib IIC T1-T5 Gb	-50°C
CMFHC4[4]****[2]*|**** CIC A6	Ex ib IIB T1-T5 Gb	-50°C
CMFHC4[4]****[2]*7**** CIC A6	Ex ib IIC T1-T5 Gb	-50°C

[2] at this place the number 2, 3 ,4, 5, 6, 7, 8 or 9 or the letter A, B, D, E, Q, V, W or Y may be inserted
[4] at this place the letter A, B, C or E may be inserted

Special conditions for safe use

By mounting the sensor type CMF********(J,U)****** directly to the transmitter 22**S********** the use of the unit will be modified according to the following:

	Sensor type	
	CMF010*****(J,U)*I**** CMF025*****(J,U)*I**** CMF050*****(J,U)*I**** CMF100*****(J,U)*I**** CMF200*****(J,U)*I**** CIC A4 CMF200*****(J,U)*7**** CMF300*****(J,U)*I**** CIC A4 CMF300*****(J,U)*7**** CMF400*****(J,U)*I*** CIC A4 CMF400*****(J,U)*7**** CMFHC2*****(J,U)*I**** CIC A4 CMFHC2*****(J,U)*7**** CMFHC3*****(J,U)*I**** CIC A4 CMFHC3*****(J,U)*7**** CMF200(A,B,C,E)****J*I**** CIC A4 CMF200(A,B,C,E)****J*7**** CMF300(A,B,C,E)****J*I**** CIC A4 CMF300(A,B,C,E)****J*7**** CMF400(A,B,C,E)****J*I**** CIC A4 CMF400(A,B,C,E)****J*7**** CMFHC2(A,B,C,E)****J*I**** CIC A4 CMFHC2(A,B,C,E)****J*7**** CMFHC2(A,B,C,E)****J*I**** CIC A6 CMFHC3(A,B,C,E)****J*7**** CIC A4 CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*7**** CIC A6 CMFHC4(A,B,C,E)****J*7**** CIC A4 CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*7**** CIC A6	CMF200*****(J,U)*I**** CIC A3 CMF300*****(J,U)*I**** CIC A3 CMF400*****(J,U)*I**** CIC A3 CMFHC2*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMFHC4*****(J,U)*I**** CMF200(A,B,C,E)****J*I**** CMF200(A,B,C,E)****J*I**** CIC A5 CMF300(A,B,C,E)****J*I**** CMF300(A,B,C,E)****J*I**** CIC A5 CMF400(A,B,C,E)****J*I**** CMF400(A,B,C,E)****J*I**** CIC A5 CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CIC A6 CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*I**** CIC A6 CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CIC A6
Transmitter type 2200S***1*I****	Ex ib IIC T1-T4	Ex ib IIB T1-T4

By mounting the sensor type CMF********C****** directly to the transmitter *700********** the use of the unit will be modified according to the following:

Transmitter type	Sensor type	
	CMF200(A,B,C,E)****C*I**** CIC A4 CMF200(A,B,C,E)****C*7**** CMF300(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*7**** CMF400(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*7**** CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*7**** CMFHC2(A,B,C,E)****C*7**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*7**** CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC4(A,B,C,E)****C*I**** CIC A4 CMFHC4(A,B,C,E)****C*7**** CMFHC4(A,B,C,E)****C*I**** CIC A6	CMF200(A,B,C,E)****C*I**** CMF200(A,B,C,E)****C*I**** CIC A5 CMF300(A,B,C,E)****C*I**** CMF300(A,B,C,E)****C*I**** CIC A5 CMF400(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CIC A5 CMFHC2(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CIC A6
*700*1[1)]*******	Ex ib IIB+H_2 T1-T5	Ex ib IIB T1-T5
*700*1[2)]*******	Ex ib IIC T1-T5	Ex ib IIB T1-T5
*700*1[1)]4******	Ex ib IIB+H_2 T1-T4	Ex ib IIB T1-T4
*700*1[2)]4******	Ex ib IIC T1-T4	Ex ib IIB T1-T4

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3, 4 or 5 will be inserted.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X	issue No.:8
Status:	**Current**	
Date of Issue:	**2011-05-17**	Page 1 of 4

Certificate history:
Issue No. 8 (2011-5-17)
Issue No. 7 (2010-2-16)
Issue No. 6 (2009-8-12)
Issue No. 5 (2008-11-3)
Issue No. 4 (2007-10-31)
Issue No. 3 (2007-8-1)
Issue No. 2 (2006-6-2)

Applicant: **Micro Motion, Inc.**
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Electrical Apparatus: **Sensor type Type CMF*** **********
Optional accessory:

Type of Protection: **Intrinsic Safety 'i'**

Marking: **Ex ib IIB/IIC T4/T5/T6 Gb**

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 17/5/2011

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DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2011-05-17** Issue No.: **8**

Manufacturer:

Micro Motion, Inc.
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Manufacturing location(s):

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Flow B.V.
Neonstraat 1
6718 WX Ede
The Netherlands

Micro Motion, Inc.
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Emerson Process Management Flow Technologies Co., Ltd.
111, Xing Min South Road,
Jiangning, Nanjing,
Jiangsu Province
211100
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/08

File Reference:
DE/BVS/04/2024/N8

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Subject and type:

See Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use

See Annex

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The sensor type CMF***(A,B,C,E)******7**** can be manufactured with modified drive and pick-off coils and modified series resistors; therefore it is marked additionally with "CIC A7".

The sensor type CMF***(A,B,C,E)****(2,3,6,7,A,D,Q,W)*(I,7)**** can be used in an ambient temperature range from -50 °C to +60 °C.

Annexe: BVS_04_0007X_Micro Motion_Annex_issue8.pdf

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Annex

Subject and Type

Sensor type CMF*** ********I****

Instead of the *** letters and numerals will be inserted which characterize the following modifications:

C M F * * * * * * * * * * I * * * *

- Marking without influence to the type of protection
- Approval
  I = IECEx Zone 1
  7 = IECEx Zone 1 – CMF100/200/300/400/HC2/HC3/HC4 for gas group IIC
- Letter for conduit connections
- Letter for electronic interface
  2 = aluminum enhanced core processor
  3 = stainless enhanced core processor
  4 = aluminum enhanced core processor with extender
  5 = stainless enhanced core processor with extender
  6 = aluminum enhanced core processor for direct host
  7 = stainless enhanced core processor for direct host
  8 = aluminum enhanced core processor with extender for direct host
  9 = stainless enhanced core processor with extender for direct host
  A = local core processor
  B = local core processor with extender
  C = integral 1700/2700
  D = local core processor for direct host
  E = local core processor with extender for direct host
  R = with junction box for 9-wire
  H = 9 wire junction box with extender
  Q = aluminum core processor
  V = aluminum core processor with extender
  W = aluminum core processor for direct host
  Y = aluminum core processor with extender for direct host
  S = 9-wire stainless junction box
  T = 9-wire stainless junction box with extender
  J = integral 2200S
  U = integral 2200S with extender
- Marking without influence to the type of protection
- A = High Temp. Stainless Steel Tube 350 °C
  B = High Temp. HY Tube 350 °C
  C = High Temp. Stainless Steel Tube 427 °C
  E = High Temp. HY Tube 427 °C
  Y = Standard Version Duplex Tube
  Other marking without influence to the type of protection
- 3 numerals for type of sensor

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007 X issue 8**
Annex

Parameters

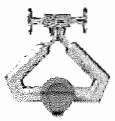
1 Type CMF********(R,H,S,T)****** with J-box, inclusive Construction Identification Code (CIC) A3 and A4 and no marking, except type CMF***(A,B,C,E)****(R,H,S,T)******

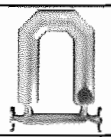
1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W

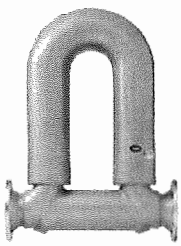
Internal capacitance negligible

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	945.1	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF100*****(R,H,S,T)*I****		(IIC)	6.70	58.4	89.0	-40
CMF100*****(R,H,S,T)*I****		(IIC)	6.70	52.4	89.0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	6.70	0	177.0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	6.70	0	177.0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF200*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240

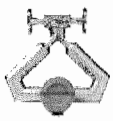
Sensor type		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF400*****(R,H,S,T)*I**** CIC A3	(IIB)	11.75	71.4	19.8	-68
CMF400*****(R,H,S,T)*I**** CIC A4	(IIC)	11.75	0	187.1	-240
CMF400*****(R,H,S,T)*7****	(IIC)	11.75	0	187.1	-240

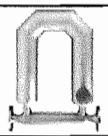
Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC4*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC4*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC4*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50/-29
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240/-29
CMFHC*Y****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240/-29

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

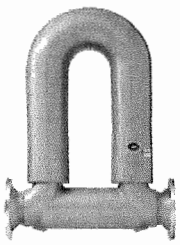
Voltage	Ui	DC	21.13	V
Current	Ii		18.05	mA
Power	Pi		45	mW

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF100*****(R,H,S,T)*I****		(IIC)	0.441	11.1	0	-40
CMF100*****(R,H,S,T)*I****		(IIC)	0.441	9.9	0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	0.441	0	0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	0.441	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF200*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF400*****(R,H,S,T)*I**** CIC A3		(IIB)	12.4	109.8	0 to 566.4	-68
CMF400*****(R,H,S,T)*I**** CIC A4		(IIC)	12.4	0	0 to 566.4	-240
CMF400*****(R,H,S,T)*7****		(IIC)	12.4	0	0 to 566.4	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC4*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC4*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC4*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50/-29
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240/-29
CMFHC*Y****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240/-29

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

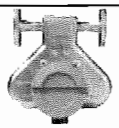
Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

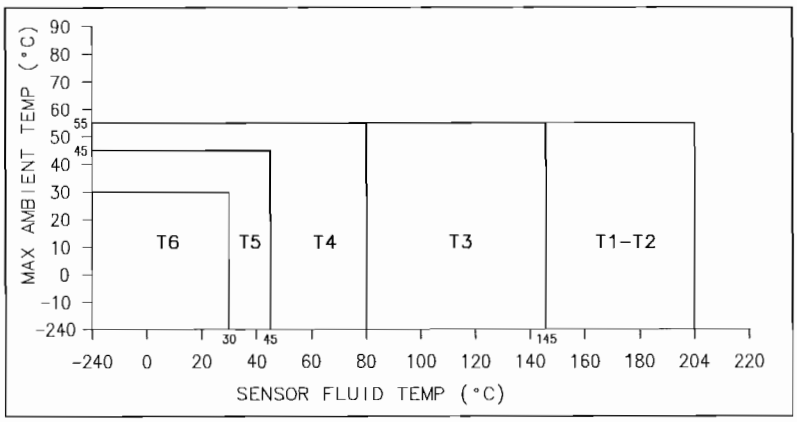
Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

sensor type	inductance [mH]	coil resistance [Ω]	serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF400*****(R,H,S,T)*I****	N/A	N/A	39.7 to 42.2	-68
CMF400*****(R,H,S,T)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-240
CMF400*****(R,H,S,T)*7****	N/A	N/A	39.7 to 42.2	-240

1.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1

Sensor type				
	CMF010*****(R,H,S,T)*I****	(IIC)	CMF025*****(R,H,S,T)*I****	(IIC)
			CMF050*****(R,H,S,T)*I****	(IIC)

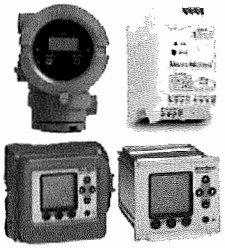


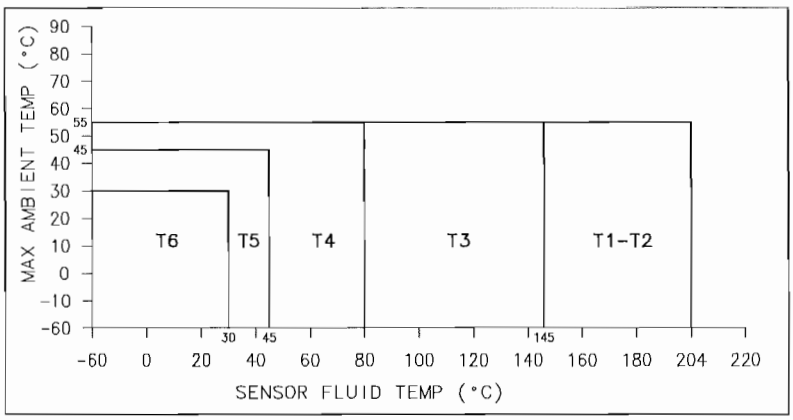
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.2

Sensor type		
CMF100*****(R,H,S,T)*I****	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series

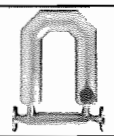


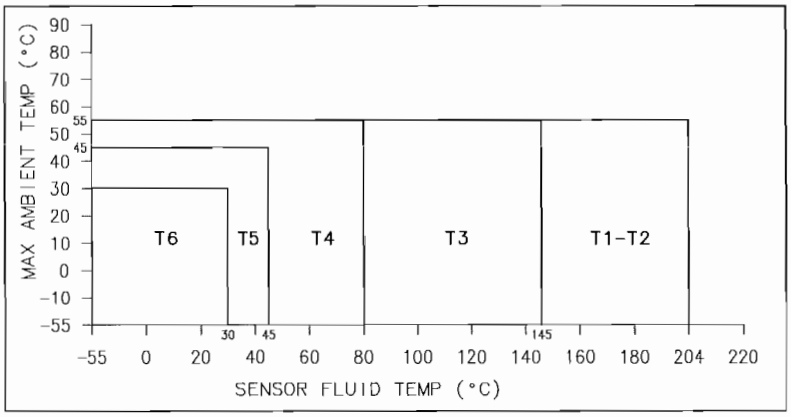
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.3

Sensor type	
CMF200*****(R,H,S,T)*I**** CIC A3	(IIB)
CMF300*****(R,H,S,T)*I**** CIC A3	(IIB)

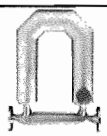


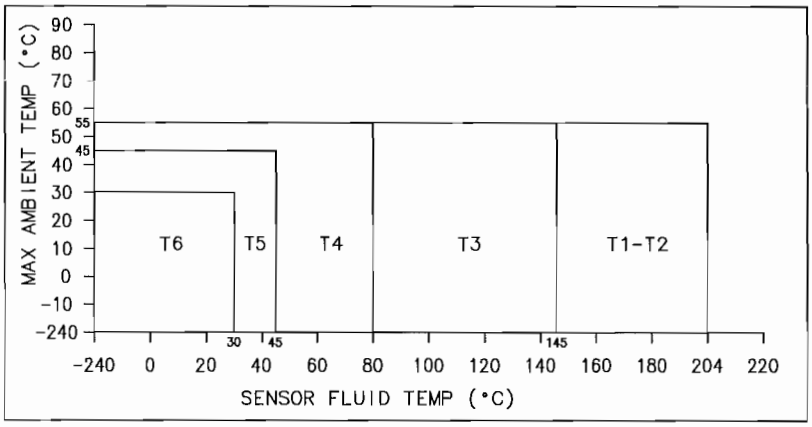
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.4

Sensor type				
	CMF100*****(R,H,S,T)*I**** CIC A4	(IIC)	CMF200*****(R,H,S,T)*I**** CIC A4	(IIC)
	CMF100*****(R,H,S,T)*7****	(IIC)	CMF200*****(R,H,S,T)*7****	(IIC)
			CMF300*****(R,H,S,T)*I**** CIC A4	(IIC)
			CMF300*****(R,H,S,T)*7****	(IIC)

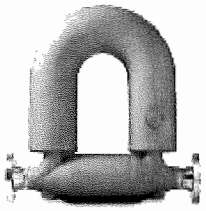
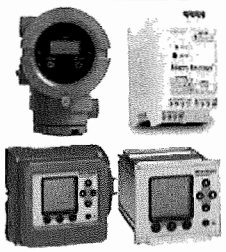


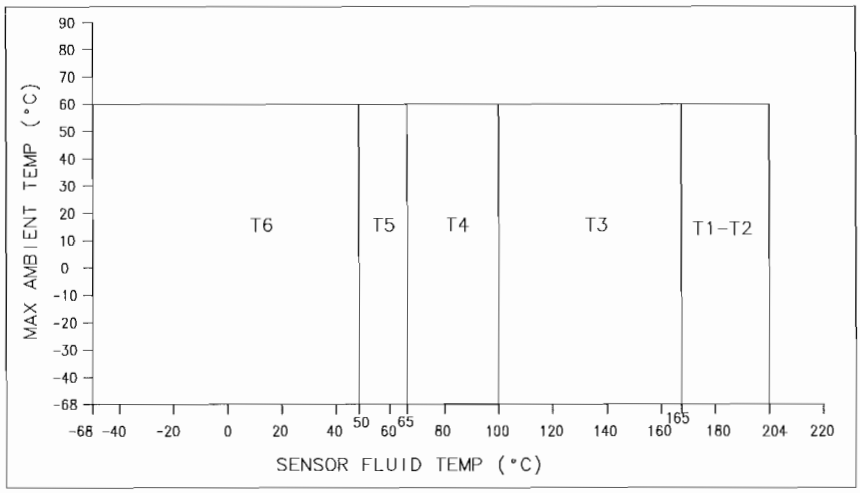
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.5

Sensor type		
CMF400*****(R,H,S,T)*I**** CIC A3	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series

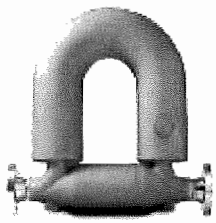
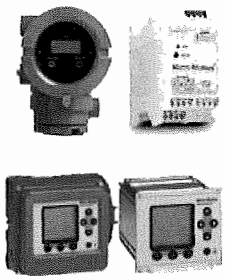


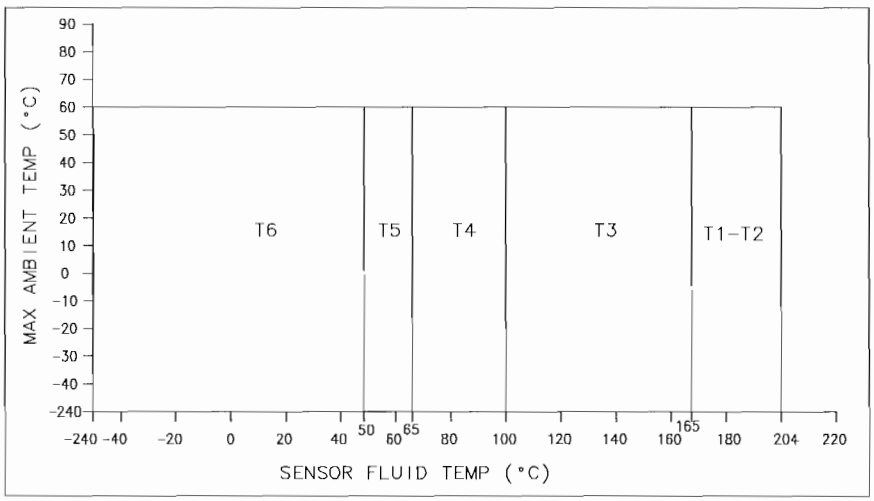
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6

Sensor type		
CMF400*****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF400*****(R,H,S,T)*7****	(IIC)	

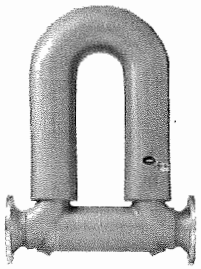
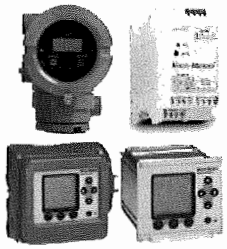


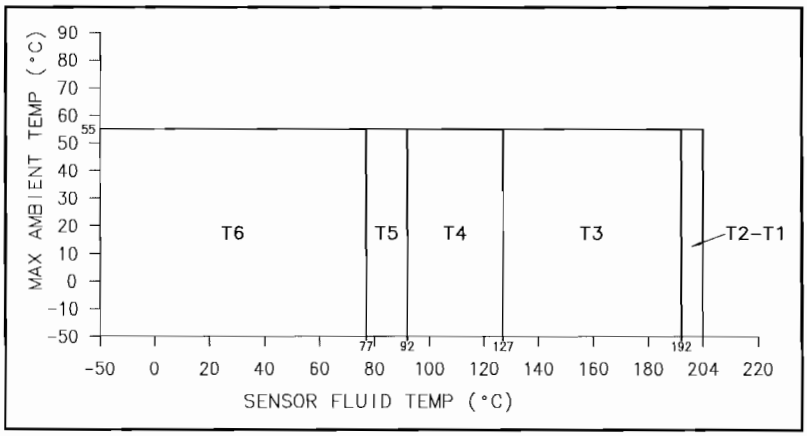
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C to +60 °C

The use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.7

Sensor type		
CMFHC2*****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC3*****(R,H,S,T)*I****	(IIB)	
CMFHC4*****(R,H,S,T)*I****	(IIB)	

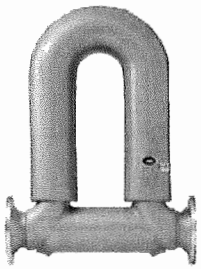
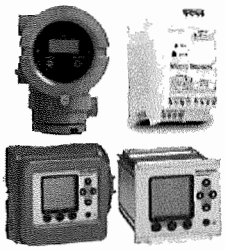


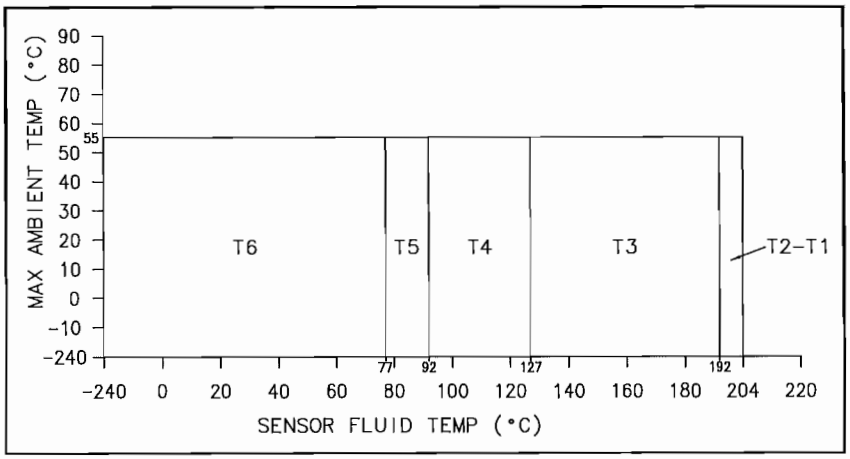
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.8

Sensor type		
CMFHC2*****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC2*****(R,H,S,T)*7****	(IIC)	
CMFHC3*****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC3*****(R,H,S,T)*7****	(IIC)	
CMFHC4*****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC4*****(R,H,S,T)*7****	(IIC)	

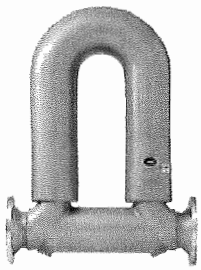
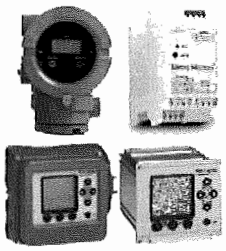


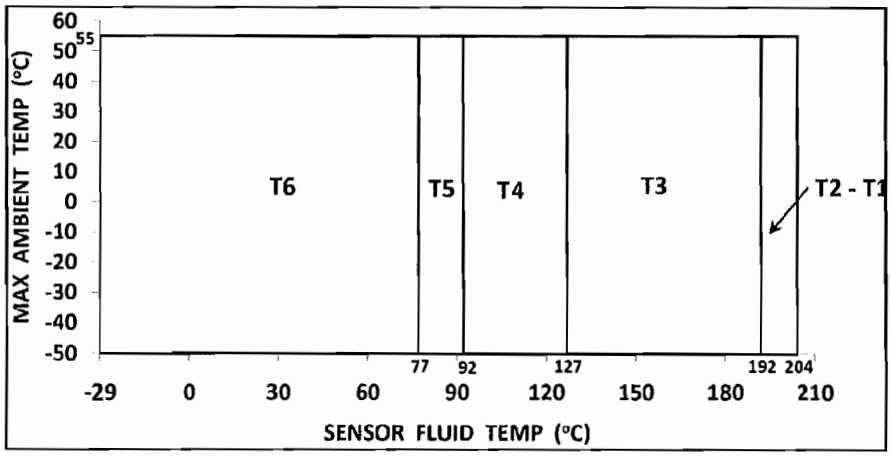
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.9

Sensor type		
CMFHC*Y****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series

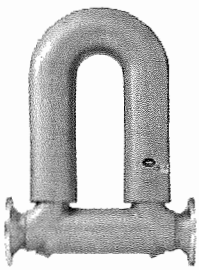
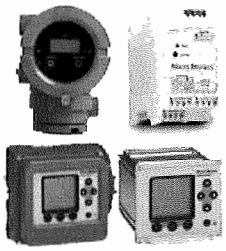


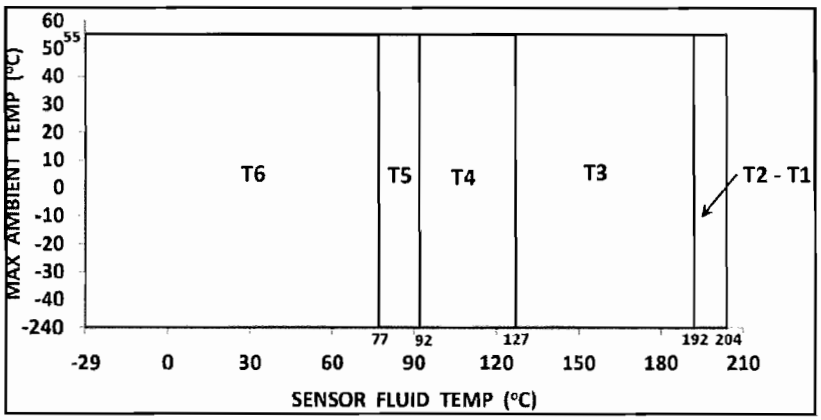
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -50 °C to +55 °C

The use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.10

Sensor type		
CMFHC*Y****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC*Y****(R,H,S,T)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.5 All sensors listed in cl. 1 can also be executed with the alternate junction box type 800/2400 Splined J-Box covered in IECEx BVS 09.0022U.

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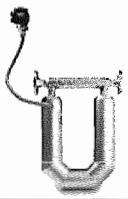
2 Type CMF***(A,B,C,E)****(R,S)****** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W
Internal capacitance	Ci	negligible		

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200(A, B, C, E)****(R,S)*I****		(IIB)	4.00	32.3	19.8	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A5		(IIB)	1.10	15.4	9.6	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	1.10	15.4	41	-50
CMF200(A, B, C, E)****(R,S)*7****		(IIC)	1.10	15.4	41	-50
CMF200(A, B, C, E)****(R,S)*7**** CIC A7		(IIC)	4.00	32.3	88.9	-50
CMF300(A, B, C, E)****(R,S)*I****		(IIB)	4.00	32.3	19.8	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A5		(IIB)	1.10	15.4	9.6	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	1.10	15.4	41	-50
CMF300(A, B, C, E)****(R,S)*7****		(IIC)	1.10	15.4	41	-50
CMF300(A, B, C, E)****(R,S)*7**** CIC A7		(IIC)	4.00	32.3	88.9	-50
CMF400(A, B, C, E)****(R,S)*I****		(IIB)	7.75	54.3	19.8	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A5		(IIB)	3.40	35.2	12.8	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	3.40	35.2	63.2	-50
CMF400(A, B, C, E)****(R,S)*7****		(IIC)	3.40	35.2	63.2	-50
CMF400(A, B, C, E)****(R,S)*7**** CIC A7		(IIC)	7.75	54.3	106.7	-50
CMFHC2(A, B, C, E)****(R,S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, B, C, E)****(R,S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC2(A, B, C, E)****(R,S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50
CMFHC3(A, B, C, E)****(R,S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, B, C, E)****(R,S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC3(A, B, C, E)****(R,S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50
CMFHC4(A, B, C, E)****(R,S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC4(A, B, C, E)****(R,S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC4(A, B, C, E)****(R,S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	21.13	V
Current	Ii		18.05	mA
Power	Pi		45	mW
Internal capacitance	Ci	negligible		

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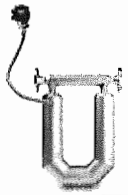
Sensor type: 		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/ Fluid Temp (°C)
CMF200(A, B, C, E)****(R,S)*I****	(IIB)	1.25	15.4	569.2	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A5	(IIB)	0.50	8.0	569.2	-50
CMF200(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.50	8.0	569.2	-50
CMF200(A, B, C, E)****(R,S)*7****	(IIC)	0.50	8.0	569.2	-50
CMF200(A, B, C, E)****(R,S)*7**** CIC A7	(IIC)	1.25	15.4	569.2	-50
CMF300(A, B, C, E)****(R,S)*I****	(IIB)	1.25	15.4	569.2	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A5	(IIB)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,S)*7****	(IIC)	0.50	8.0	569.2	-50
CMF300(A, B, C, E)****(R,S)*7**** CIC A7	(IIC)	1.25	15.4	569.2	-50
CMF400(A, B, C, E)****(R,S)*I****	(IIB)	6.50	41.1	569.2	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A5	(IIB)	1.10	15.4	569.2	-50
CMF400(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	1.10	15.4	569.2	-50
CMF400(A, B, C, E)****(R,S)*7****	(IIC)	1.10	15.4	569.2	-50
CMF400(A, B, C, E)****(R,S)*7**** CIC A7	(IIC)	6.50	41.1	569.2	-50
CMFHC2(A, B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC4(A, B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50

2.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

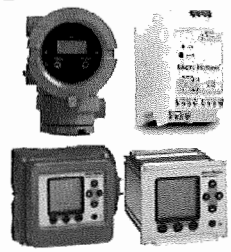
Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

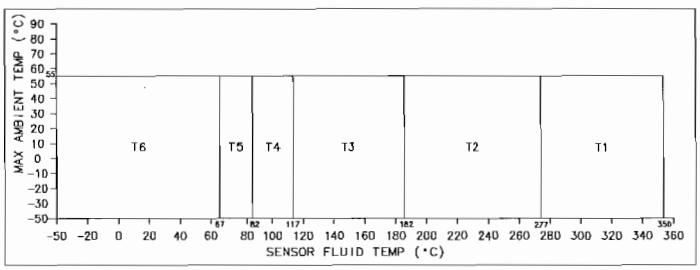
Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF400(A,B,C,E)****(R,S)*I****	N/A	N/A	39.7 to 42.2	-50
CMF400(A,B,C,E)****(R,S)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-50
CMF400(A,B,C,E)****(R,S)*7****	N/A	N/A	39.7 to 42.2	-50

2.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.4.1

Sensor type			
CMF200(A or B)****(R,S)*I****		(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF200(A or B)****(R,S)*I**** CIC A4		(IIC)	
CMF200(A or B)****(R,S)*I**** CIC A5		(IIB)	
CMF200(A or B)****(R,S)*7****		(IIC)	
CMF200(A or B)****(R,S)*7**** CIC A7		(IIC)	
CMF300(A or B)****(R,S)*I****		(IIB)	
CMF300(A or B)****(R,S)*I**** CIC A4		(IIC)	
CMF300(A or B)****(R,S)*I**** CIC A5		(IIB)	
CMF300(A or B)****(R,S)*7****		(IIC)	
CMF300(A or B)****(R,S)*7**** CIC A7		(IIC)	
CMF400(A or B)****(R,S)*I****		(IIB)	
CMF400(A or B)****(R,S)*I**** CIC A4		(IIC)	
CMF400(A or B)****(R,S)*I**** CIC A5		(IIB)	
CMF400(A or B)****(R,S)*7****		(IIC)	
CMF400(A or B)****(R,S)*7**** CIC A7		(IIC)	
CMFHC2(A or B)****(R,S)*I****		(IIB)	
CMFHC2(A or B)****(R,S)*I**** CIC A4		(IIC)	
CMFHC2(A or B)****(R,S)*I**** CIC A6		(IIB)	
CMFHC2(A or B)****(R,S)*7****		(IIC)	
CMFHC2(A or B)****(R,S)*7**** CIC A6		(IIC)	
CMFHC3(A or B)****(R,S)*I****		(IIB)	
CMFHC3(A or B)****(R,S)*I**** CIC A4		(IIC)	
CMFHC3(A or B)****(R,S)*I**** CIC A6		(IIB)	
CMFHC3(A or B)****(R,S)*7****		(IIC)	
CMFHC3(A or B)****(R,S)*7**** CIC A6		(IIC)	
CMFHC4(A or B)****(R,S)*I****		(IIB)	
CMFHC4(A or B)****(R,S)*I**** CIC A4		(IIC)	
CMFHC4(A or B)****(R,S)*I**** CIC A6		(IIB)	
CMFHC4(A or B)****(R,S)*7****		(IIC)	
CMFHC4(A or B)****(R,S)*7**** CIC A6		(IIC)	

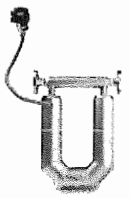
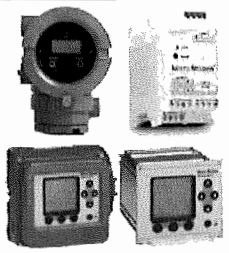


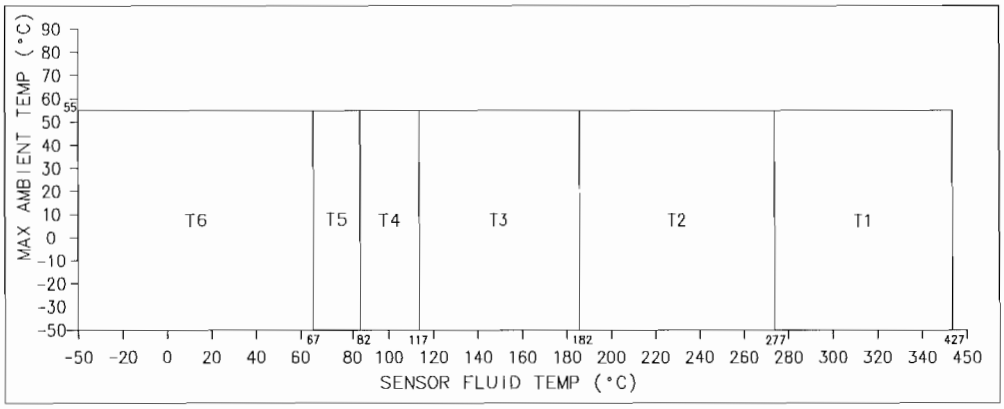
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.4.2

Sensor type			
CMF200(C or E)****(R,S)*I****		(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF200(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMF200(C or E)****(R,S)*I**** CIC A5		(IIB)	
CMF200(C or E)****(R,S)*7****		(IIC)	
CMF200(C or E)****(R,S)*7**** CIC A7		(IIC)	
CMF300(C or E)****(R,S)*I****		(IIB)	
CMF300(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMF300(C or E)****(R,S)*I**** CIC A5		(IIB)	
CMF300(C or E)****(R,S)*7****		(IIC)	
CMF300(C or E)****(R,S)*7**** CIC A7		(IIC)	
CMF400(C or E)****(R,S)*I****		(IIB)	
CMF400(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMF400(C or E)****(R,S)*I**** CIC A5		(IIB)	
CMF400(C or E)****(R,S)*7****		(IIC)	
CMF400(C or E)****(R,S)*7**** CIC A7		(IIC)	
CMFHC2(C or E)****(R,S)*I****		(IIB)	
CMFHC2(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMFHC2(C or E)****(R,S)*I**** CIC A6		(IIB)	
CMFHC2(C or E)****(R,S)*7****		(IIC)	
CMFHC2(C or E)****(R,S)*7**** CIC A6		(IIC)	
CMFHC3(C or E)****(R,S)*I****		(IIB)	
CMFHC3(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMFHC3(C or E)****(R,S)*I**** CIC A6		(IIB)	
CMFHC3(C or E)****(R,S)*7****		(IIC)	
CMFHC3(C or E)****(R,S)*7**** CIC A6		(IIC)	
CMFHC4(C or E)****(R,S)*I****		(IIB)	
CMFHC4(C or E)****(R,S)*I**** CIC A4		(IIC)	
CMFHC4(C or E)****(R,S)*I**** CIC A6		(IIB)	
CMFHC4(C or E)****(R,S)*7****		(IIC)	
CMFHC4(C or E)****(R,S)*7**** CIC A6		(IIC)	

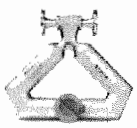


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3 Type CMF********(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with integral Core Processor inclusive Construction Identification Code CIC A3 and A4 except type CMF***(A,B,C,E)****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****

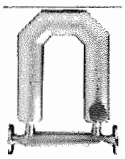
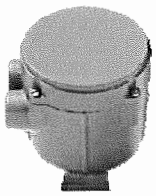


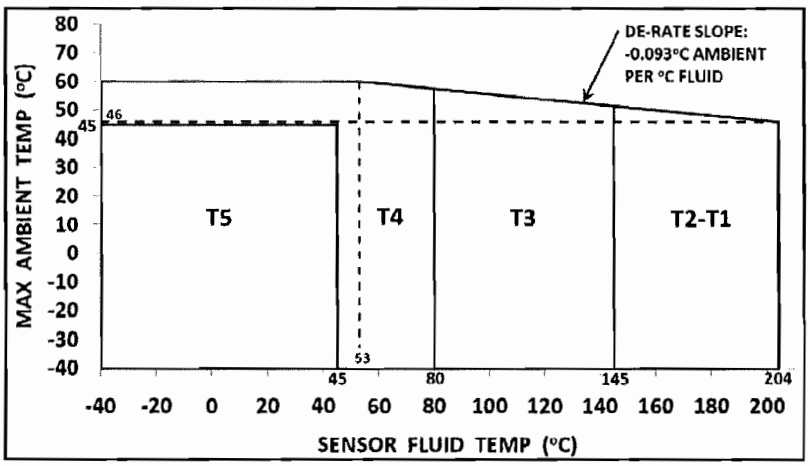
3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

3.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

3.2.1

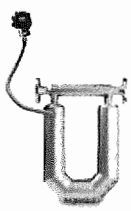
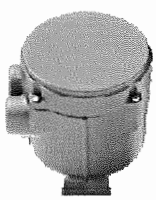
Sensor type	 CMF010	 CMF100	 CMF200/300	
CMF010*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	With integral core processor
CMF025*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	
CMF050*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	
CMF100*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****			(IIC)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3			(IIB)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4			(IIC)	
CMF200*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****			(IIC)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3			(IIB)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4			(IIC)	
CMF300*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****			(IIC)	

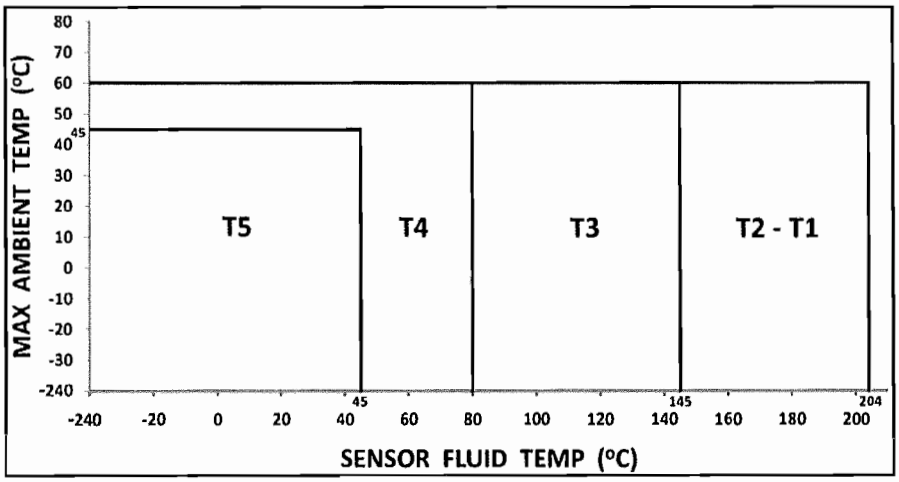


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.2

Sensor type		
CMF300*****(2,3,6,7,A,D,Q,W)*I**** CIC A4 and ETO 17151	(IIC)	With integral core processor
CMF300*****(2,3,6,7,A,D,Q,W)*7**** and ETO 17151	(IIC)	



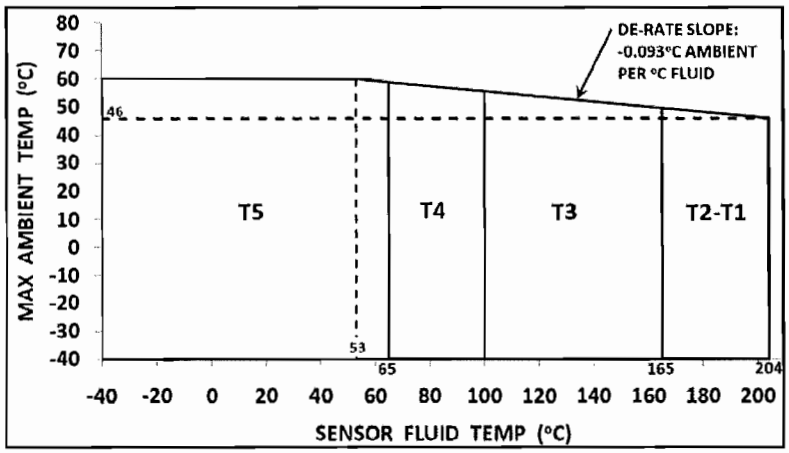
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted minimum 1 meter away from the sensor by means of a flexible stainless steel hose, and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.3

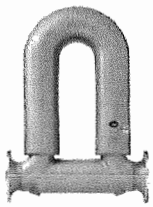
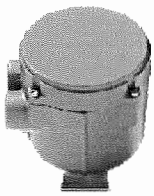
Sensor type		
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A3	(IIB)	With integral core processor
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMF400*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	

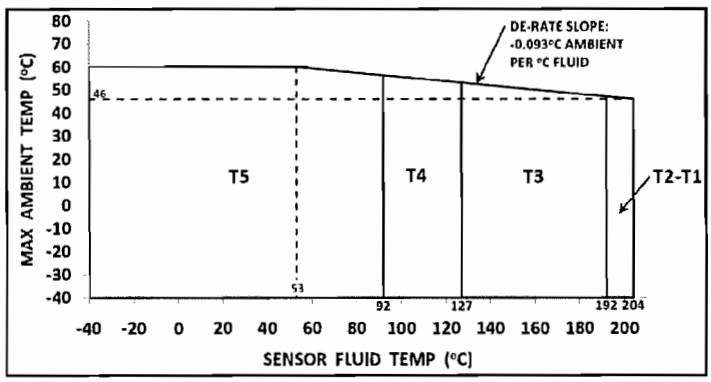


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.4

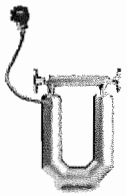
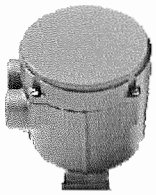
Sensor type			
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	With integral core processor
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMFHC2*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	
CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****		(IIB)	
CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4		(IIC)	
CMFHC4*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****		(IIC)	

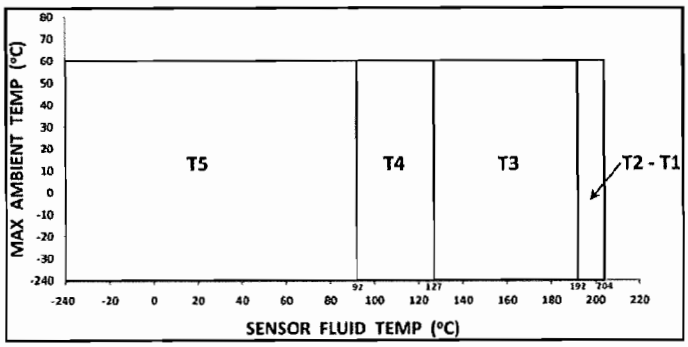


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.5

Sensor type		
CMFHC2*****(2,3,6,7,A,D,Q,W)*I**** CIC A4 and ETO 17076	(IIC)	With integral core processor
CMFHC2*****(2,3,6,7,A,D,Q,W)*7**** and ETO 17076	(IIC)	
CMFHC3*****(2,3,6,7,A,D,Q,W)*I**** CIC A4 and ETO 16995	(IIC)	
CMFHC3*****(2,3,6,7,A,D,Q,W)*7**** and ETO 16995	(IIC)	
CMFHC4*****(2,3,6,7,A,D,Q,W)*I**** CIC A4 and ETO 17192	(IIC)	
CMFHC4*****(2,3,6,7,A,D,Q,W)*7**** and ETO 17192	(IIC)	

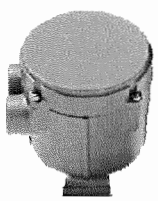


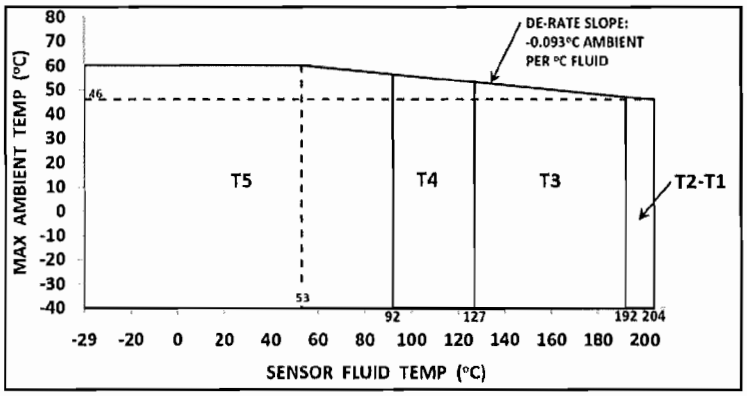
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted minimum 1 meter away from the sensor by means of a flexible stainless steel hose, and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.6

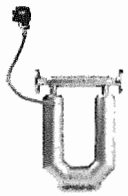
Sensor type		
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral core processor
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

4 Type CMF***(A, B, C or E)****(2,3,6,7,A,D,Q,V,W)****** with integral core processor.

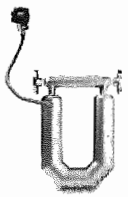
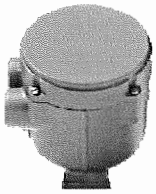


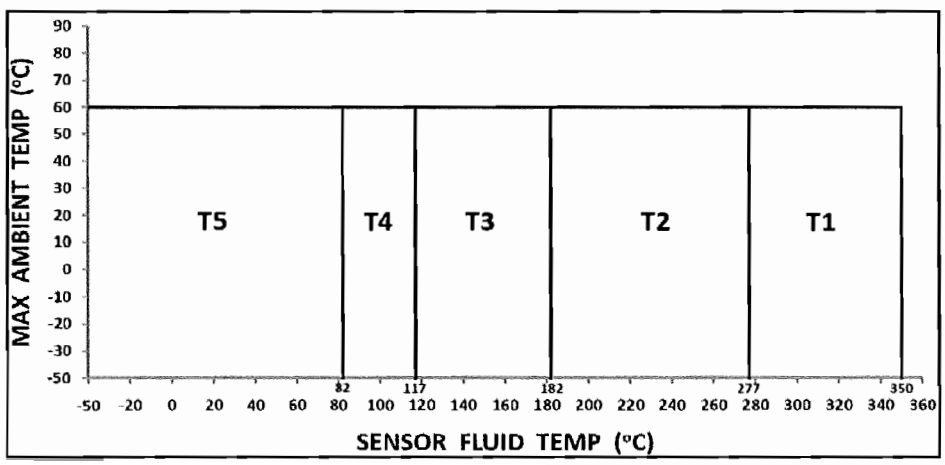
4.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		30	µH

4.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

4.2.1

Sensor type		
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	With integral core processor
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A5	(IIB)	
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMF200(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A7	(IIC)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A5	(IIB)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMF300(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A7	(IIC)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A5	(IIB)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMF400(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A7	(IIC)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A6	(IIB)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMFHC2(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A6	(IIC)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A6	(IIB)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMFHC3(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A6	(IIC)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*I****	(IIB)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A4	(IIC)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*I**** CIC A6	(IIB)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*7****	(IIC)	
CMFHC4(A or B)****(2,3,6,7,A,D,Q,W)*7**** CIC A6	(IIC)	

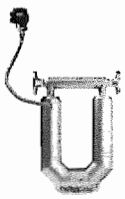
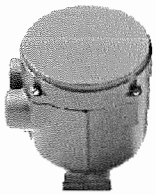


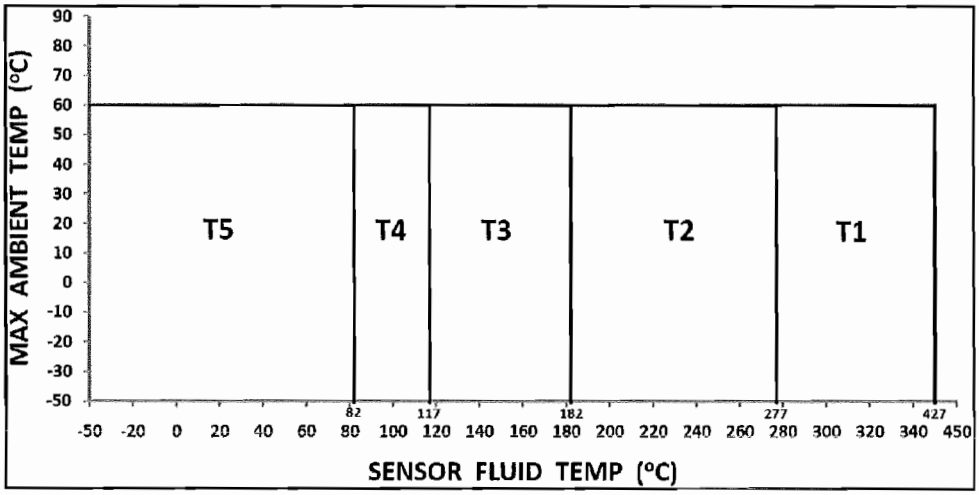
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

4.2.2

Sensor type			
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	With integral core processor
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A5		(IIB)	
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMF200(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A7		(IIC)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A5		(IIB)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMF300(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A7		(IIC)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A5		(IIB)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMF400(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A7		(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A6		(IIB)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A6		(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A6		(IIB)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A6		(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*I****		(IIB)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A4		(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*I**** CIC A6		(IIB)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*7****		(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,D,Q,W)*7**** CIC A6		(IIC)	

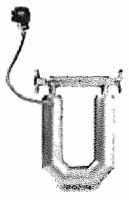


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

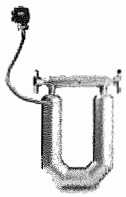
5 Type CMF***(A, B, C or E)****C*I**** High-temperature sensor with integral 1700/2700 transmitter

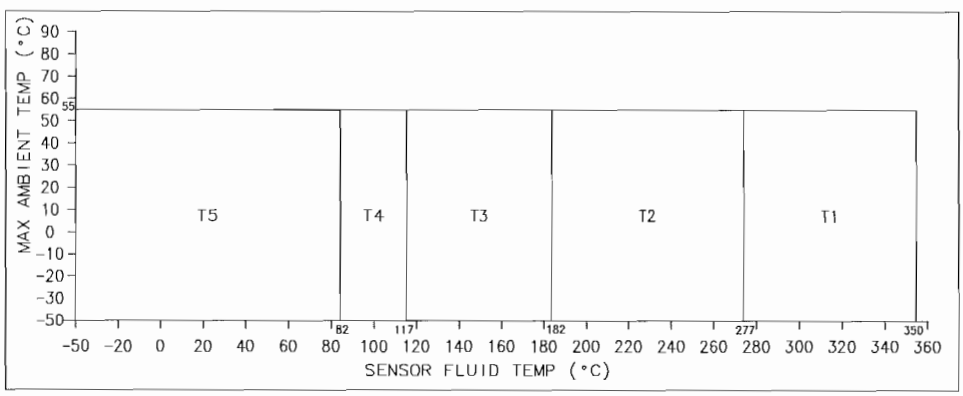


5.1 Electrical parameters see IECEx BVS 04.0006X for the transmitter type *700**********

5.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

5.2.1

Sensor type			
CMF200(A or B)****C*I****		(IIB)	With Integral 1700/2700 Transmitter
CMF200(A or B)****C*I**** CIC A5		(IIB)	
CMF200(A or B)****C*I**** CIC A4		(IIC)	
CMF200(A or B)****C*7****		(IIC)	
CMF200(A or B)****C*7**** CIC A7		(IIC)	
CMF300(A or B)****C*I****		(IIB)	
CMF300(A or B)****C*I**** CIC A5		(IIB)	
CMF300(A or B)****C*I**** CIC A4		(IIC)	
CMF300(A or B)****C*7****		(IIC)	
CMF300(A or B)****C*7**** CIC A7		(IIC)	
CMF400(A or B)****C*I****		(IIB)	
CMF400(A or B)****C*I**** CIC A5		(IIB)	
CMF400(A or B)****C*I**** CIC A4		(IIC)	
CMF400(A or B)****C*7****		(IIC)	
CMF400(A or B)****C*7**** CIC A7		(IIC)	
CMFHC2(A or B)****C*I****		(IIB)	
CMFHC2(A or B)****C*I**** CIC A6		(IIB)	
CMFHC2(A or B)****C*I**** CIC A4		(IIC)	
CMFHC2(A or B)****C*7****		(IIC)	
CMFHC2(A or B)****C*7**** CIC A6		(IIC)	
CMFHC3(A or B)****C*I****		(IIB)	
CMFHC3(A or B)****C*I**** CIC A6		(IIB)	
CMFHC3(A or B)****C*I**** CIC A4		(IIC)	
CMFHC3(A or B)****C*7****		(IIC)	
CMFHC3(A or B)****C*7**** CIC A6		(IIC)	
CMFHC4(A or B)****C*I****		(IIB)	
CMFHC4(A or B)****C*I**** CIC A6		(IIB)	
CMFHC4(A or B)****C*I**** CIC A4		(IIC)	
CMFHC4(A or B)****C*7****		(IIC)	
CMFHC4(A or B)****C*7**** CIC A6		(IIC)	

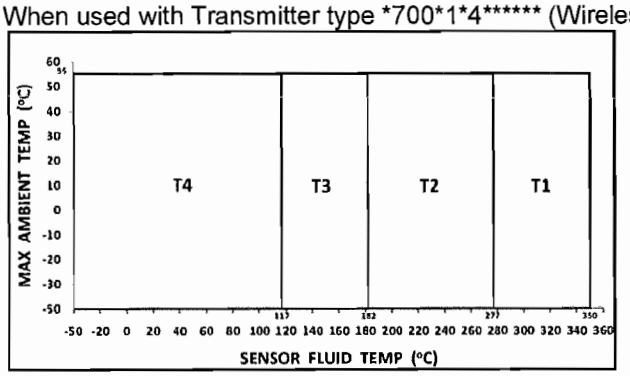


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

When used with Transmitter type *700*1*4****** (Wireless HART Output Option Code "4"):



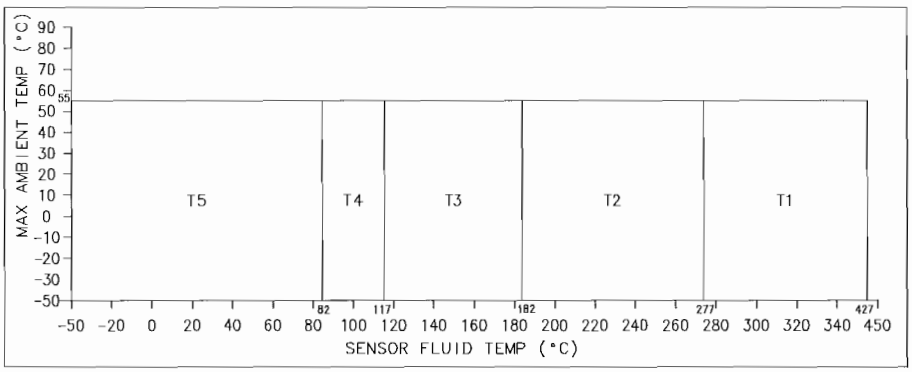
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5.2.2

Sensor type		
CMF200(C or E)****C*I****	(IIB)	With Integral 1700/2700 Transmitter
CMF200(C or E)****C*I**** CIC A5	(IIB)	
CMF200(C or E)****C*I**** CIC A4	(IIC)	
CMF200(C or E)****C*7****	(IIC)	
CMF200(C or E)****C*7**** CIC A7	(IIC)	
CMF300(C or E)****C*I****	(IIB)	
CMF300(C or E)****C*I**** CIC A5	(IIB)	
CMF300(C or E)****C*I**** CIC A4	(IIC)	
CMF300(C or E)****C*7****	(IIC)	
CMF300(C or E)****C*7**** CIC A7	(IIC)	
CMF400(C or E)****C*I****	(IIB)	
CMF400(C or E)****C*I**** CIC A5	(IIB)	
CMF400(C or E)****C*I**** CIC A4	(IIC)	
CMF400(C or E)****C*7****	(IIC)	
CMF400(C or E)****C*7**** CIC A7	(IIC)	
CMFHC2(C or E)****C*I****	(IIB)	
CMFHC2(C or E)****C*I**** CIC A6	(IIB)	
CMFHC2(C or E)****C*I**** CIC A4	(IIC)	
CMFHC2(C or E)****C*7****	(IIC)	
CMFHC2(C or E)****C*7**** CIC A6	(IIC)	
CMFHC3(C or E)****C*I****	(IIB)	
CMFHC3(C or E)****C*I**** CIC A6	(IIB)	
CMFHC3(C or E)****C*I**** CIC A4	(IIC)	
CMFHC3(C or E)****C*7****	(IIC)	
CMFHC3(C or E)****C*7**** CIC A6	(IIC)	
CMFHC4(C or E)****C*I****	(IIB)	
CMFHC4(C or E)****C*I**** CIC A6	(IIB)	
CMFHC4(C or E)****C*I**** CIC A4	(IIC)	
CMFHC4(C or E)****C*7****	(IIC)	
CMFHC4(C or E)****C*7**** CIC A6	(IIC)	

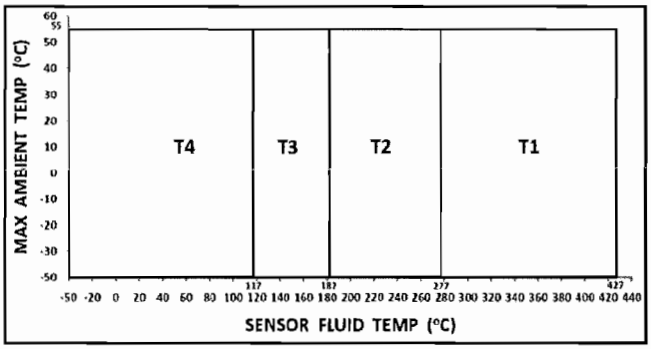


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

When used with Transmitter type *700*1*4****** (Wireless HART Output Option Code "4"):



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

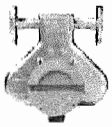
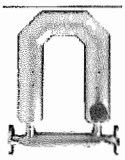
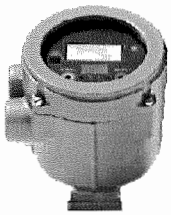
6 Types CMF********(J,U)*I**** incl. CIC A4 with 2200S transmitter, except type CMF***(A,B,C,E)****J,U)*I****

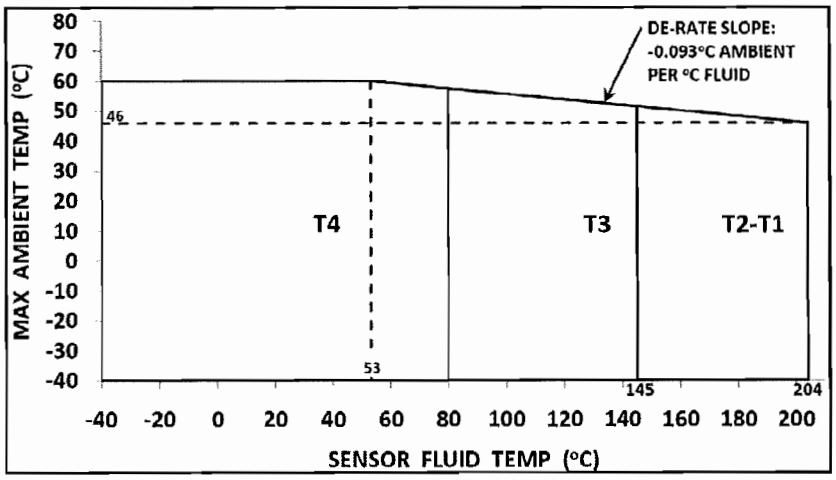
6.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

6.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

6.2.1

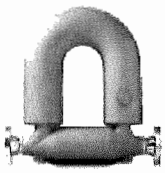
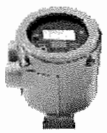
Sensor type	 CMF010	 CMF100	 CMF200/300	
CMF010*****(J or U)*I****			(IIC)	With integral 2200S
CMF025*****(J or U)*I****			(IIC)	
CMF050*****(J or U)*I****			(IIC)	
CMF100*****(J or U)*I****			(IIC)	
CMF200*****(J or U)*I**** CIC A3			(IIB)	
CMF200*****(J or U)*I**** CIC A4			(IIC)	
CMF200*****(J or U)*7****			(IIC)	
CMF300*****(J or U)*I**** CIC A3			(IIB)	
CMF300*****(J or U)*I**** CIC A4			(IIC)	
CMF300*****(J or U)*7****			(IIC)	

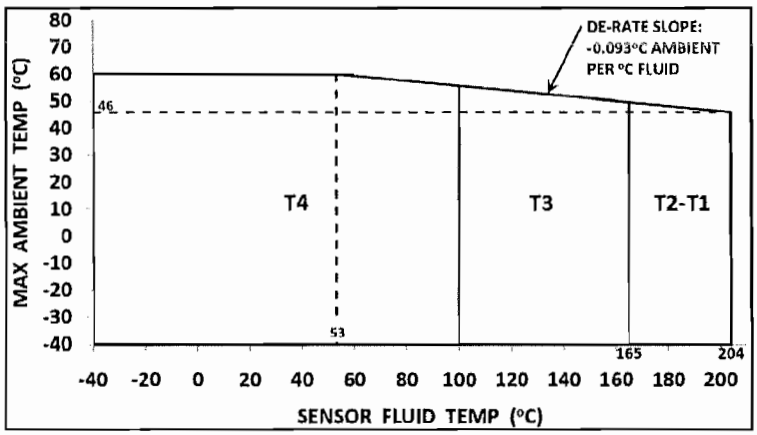


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.2

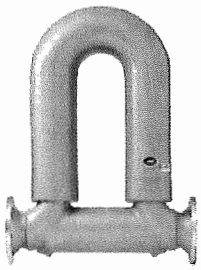
Sensor type		
CMF400*****(J or U)*I**** CIC A3	(IIB)	With integral 2200S
CMF400*****(J or U)*I**** CIC A4	(IIC)	
CMF400*****(J or U)*7****	(IIC)	

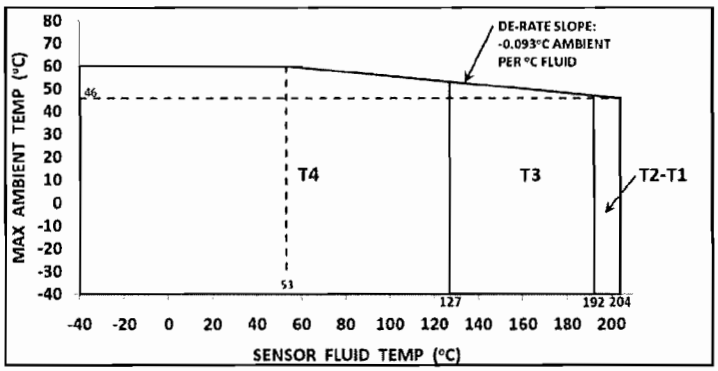


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.3

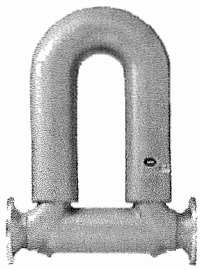
Sensor type		
CMFHC2*****(J or U)*I****	(IIB)	With integral 2200S
CMFHC2*****(J or U)*I**** CIC A4	(IIC)	
CMFHC2*****(J or U)*7****	(IIC)	
CMFHC3*****(J or U)*I****	(IIB)	
CMFHC3*****(J or U)*I**** CIC A4	(IIC)	
CMFHC3*****(J or U)*7****	(IIC)	
CMFHC4*****(J or U)*I****	(IIB)	
CMFHC4*****(J or U)*I**** CIC A4	(IIC)	
CMFHC4*****(J or U)*7****	(IIC)	



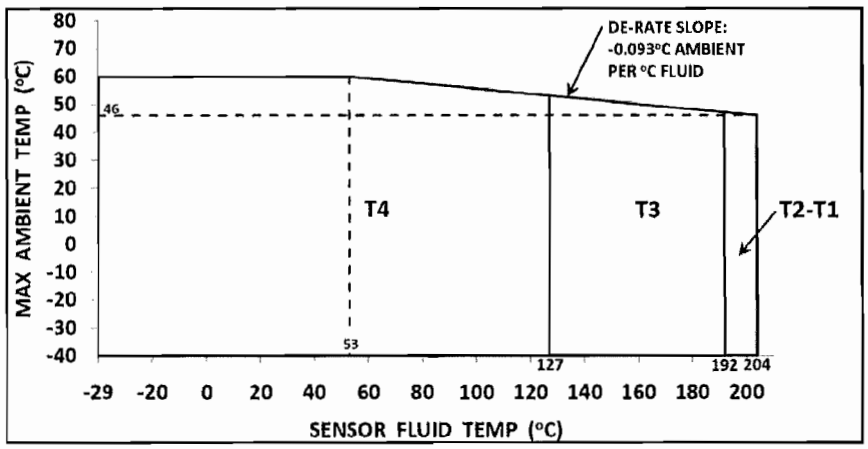
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.4

Sensor type		

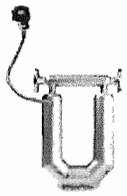
CMFHC*Y****(J or U)*I****	(IIB)	With integral 2200S
CMFHC*Y****(J or U)*I**** CIC A4	(IIC)	
CMFHC*Y****(J or U)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

7 Type CMF***(A, B, C or E)****J****** with integral 2200S transmitter.

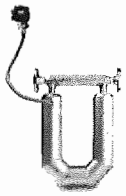


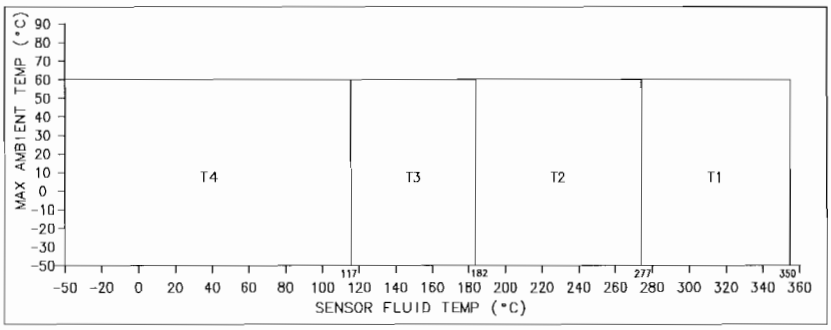
7.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

7.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

7.2.1

Sensor type		
CMF200(A or B)****J*I****	(IIB)	With integral 2200S
CMF200(A or B)****J*I**** CIC A4	(IIC)	
CMF200(A or B)****J*I**** CIC A5	(IIB)	
CMF200(A or B)****J*7****	(IIC)	
CMF200(A or B)****J*7**** CIC A7	(IIC)	
CMF300(A or B)****J*I****	(IIB)	
CMF300(A or B)****J)*I**** CIC A4	(IIC)	
CMF300(A or B)****J*I**** CIC A5	(IIB)	
CMF300(A or B)****J*7****	(IIC)	
CMF300(A or B)****J*7**** CIC A7	(IIC)	
CMF400(A or B)****J*I****	(IIB)	
CMF400(A or B)****J*I**** CIC A4	(IIC)	
CMF400(A or B)****J*I**** CIC A5	(IIB)	
CMF400(A or B)****J*7****	(IIC)	
CMF400(A or B)****J*7**** CIC A7	(IIC)	
CMFHC2(A or B)****J*I****	(IIB)	
CMFHC2(A or B)****J*I**** CIC A4	(IIC)	
CMFHC2(A or B)****J*I**** CIC A6	(IIB)	
CMFHC2(A or B)****J*7****	(IIC)	
CMFHC2(A or B)****J*7**** CIC A6	(IIC)	
CMFHC3(A or B)****J*I****	(IIB)	
CMFHC3(A or B)****J*I**** CIC A4	(IIC)	
CMFHC3(A or B)****J*I**** CIC A6	(IIB)	
CMFHC3(A or B)****J*7****	(IIC)	
CMFHC3(A or B)****J*7**** CIC A6	(IIC)	
CMFHC4(A or B)****J*I****	(IIB)	
CMFHC4(A or B)****J*I**** CIC A4	(IIC)	
CMFHC4(A or B)****J*I**** CIC A6	(IIB)	
CMFHC4(A or B)****J*7****	(IIC)	
CMFHC4(A or B)****J*7**** CIC A6	(IIC)	

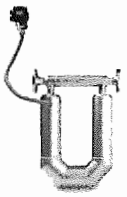


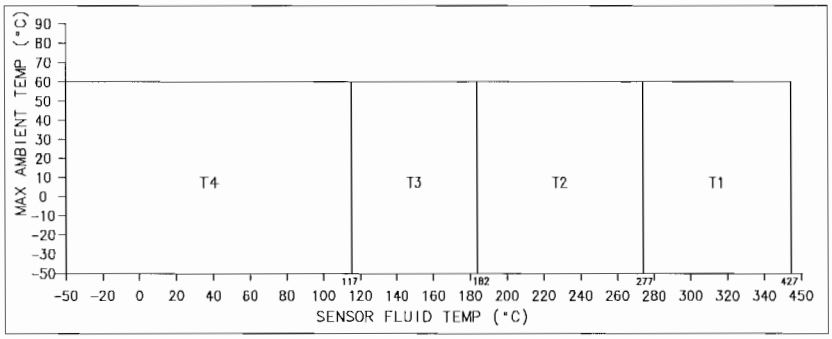
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

7.2.2

Sensor type			
CMF200(C or E)****J*I****		(IIB)	With integral 2200S
CMF200(C or E)****J*I**** CIC A4		(IIC)	
CMF200(C or E)****J*I**** CIC A5		(IIB)	
CMF200(C or E)****J*7****		(IIC)	
CMF200(C or E)****J*7**** CIC A7		(IIC)	
CMF300(C or E)****J*I****		(IIB)	
CMF300(C or E)****J*I**** CIC A4		(IIC)	
CMF300(C or E)****J*I**** CIC A5		(IIB)	
CMF300(C or E)****J*7****		(IIC)	
CMF300(C or E)****J*7**** CIC A7		(IIC)	
CMF400(C or E)****J*I****		(IIB)	
CMF400(C or E)****J*I**** CIC A4		(IIC)	
CMF400(C or E)****J*I**** CIC A5		(IIB)	
CMF400(C or E)****J*7****		(IIC)	
CMF400(C or E)****J*7**** CIC A7		(IIC)	
CMFHC2(C or E)****J*I****		(IIB)	
CMFHC2(C or E)****J*I**** CIC A4		(IIC)	
CMFHC2(C or E)****J*I**** CIC A6		(IIB)	
CMFHC2(C or E)****J*7****		(IIC)	
CMFHC2(C or E)****J*7**** CIC A6		(IIC)	
CMFHC3(C or E)****J*I****		(IIB)	
CMFHC3(C or E)****J*I**** CIC A4		(IIC)	
CMFHC3(C or E)****J*I**** CIC A6		(IIB)	
CMFHC3(C or E)****J*7****		(IIC)	
CMFHC3(C or E)****J*7**** CIC A6		(IIC)	
CMFHC4(C or E)****J*I****		(IIB)	
CMFHC4(C or E)****J*I**** CIC A4		(IIC)	
CMFHC4(C or E)****J*I**** CIC A6		(IIB)	
CMFHC4(C or E)****J*7****		(IIC)	
CMFHC4(C or E)****J*7**** CIC A6		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

Marking

The name of the manufacturer or his trademark
Serial number
Certificate number

for sensors with junction box connected to MVD transmitter

Type	Type of protection	Min. ambient/fluid temperature
CMF010*****[1]*I****	Ex ib IIC T1-T6 Gb	-240 °C
CMF025*****[1]*I****	Ex ib IIC T1-T6 Gb	-240 °C
CMF050*****[1]*I****	Ex ib IIC T1-T6 Gb	-240 °C
CMF100*****[1]*I****	Ex ib IIC T1-T6 Gb	-60 °C
CMF100*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMF100*****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C
CMF200*****[1]*I**** CIC A3	Ex ib IIB T1-T6 Gb	-55 °C
CMF200*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMF200*****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C
CMF200[4]*****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C
CMF200[4]*****[1]*I**** CIC A5	Ex ib IIB T1-T6 Gb	-50 °C
CMF200[4]*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-50 °C
CMF200[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50 °C
CMF200[4]*****[1]*7**** CIC A7	Ex ib IIC T1-T6 Gb	-50 °C
CMF300*****[1]*I**** CIC A3	Ex ib IIB T1-T6 Gb	-55 °C
CMF300*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMF300*****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C
CMF300[4]*****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C
CMF300[4]*****[1]*I**** CIC A5	Ex ib IIB T1-T6 Gb	-50 °C
CMF300[4]*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-50 °C
CMF300[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50 °C
CMF300[4]*****[1]*7**** CIC A7	Ex ib IIC T1-T6 Gb	-50 °C
CMF400*****[1]*I**** CIC A3	Ex ib IIB T1-T6 Gb	-68 °C
CMF400*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMF400*****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C
CMF400[4]*****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C
CMF400[4]*****[1]*I**** CIC A5	Ex ib IIB T1-T6 Gb	-50 °C
CMF400[4]*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-50 °C
CMF400[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50 °C
CMF400[4]*****[1]*7**** CIC A7	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC*Y****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C / -29 °C
CMFHC*Y****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C / -29 °C
CMFHC*Y****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C / -29 °C
CMFHC2*****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC2*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC2*****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC2[4]*****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC2[4]*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC2[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC2[4]*****[1]*I**** CIC A6	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC2[4]*****[1]*7**** CIC A6	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC3*****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC3*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC3*****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC3[4]*****[1]*I****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC3[4]*****[1]*I**** CIC A4	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC3[4]*****[1]*7****	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC3[4]*****[1]*I**** CIC A6	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC3[4]*****[1]*7**** CIC A6	Ex ib IIC T1-T6 Gb	-50 °C

Type	Type of protection	Min. ambient/fluid temperature
CMFHC4*****[1]*|****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC4*****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC4*****[1]*7****	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC4[4]****[1]*|****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC4[4]****[1]*|**** CIC A4	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC4[4]****[1]*7****	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC4[4]****[1]*|**** CIC A6	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC4[4]****[1]*7**** CIC A6	Ex ib IIC T1-T6 Gb	-50 °C

[1] At this place the letter R, H, S or T will be inserted.

[4] At this place the letter A, B, C or E will be inserted.

for sensor with integral 700 or 800 core processor

Type	Type of protection	Min. ambient/fluid temperature
CMF010*****[2]*|****	Ex ib IIC T1-T5 Gb	-40 °C
CMF025*****[2]*|****	Ex ib IIC T1-T5 Gb	-40 °C
CMF050*****[2]*|****	Ex ib IIC T1-T5 Gb	-40 °C
CMF100*****[2]*|****	Ex ib IIC T1-T5 Gb	-40 °C
CMF100*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF100*****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C
CMF200*****[2]*|**** CIC A3	Ex ib IIB T1-T5 Gb	-40 °C
CMF200*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF200*****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C
CMF200[4]*****[2]*|****	Ex ib IIB T1-T5 Gb	-50 °C
CMF200[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5 Gb	-50 °C
CMF200[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50 °C
CMF200[4]*****[2]*7****	Ex ib IIC T1-T5 Gb	-50 °C
CMF200[4]*****[2]*7**** CIC A7	Ex ib IIC T1-T5 Gb	-50 °C
CMF300*****[2]*|**** CIC A3	Ex ib IIB T1-T5 Gb	-40 °C
CMF300*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF300*****[2]*|**** CIC A4 and ETO 17151	Ex ib IIC T1-T5 Gb	-240 °C
CMF300*****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C
CMF300*****[2]*7**** and ETO 17151	Ex ib IIC T1-T5 Gb	-240 °C
CMF300[4]*****[2]*|****	Ex ib IIB T1-T5 Gb	-50 °C
CMF300[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5 Gb	-50 °C
CMF300[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50 °C
CMF300[4]*****[2]*7****	Ex ib IIC T1-T5 Gb	-50 °C
CMF300[4]*****[2]*7**** CIC A7	Ex ib IIC T1-T5 Gb	-50 °C
CMF400*****[2]*|**** CIC A3	Ex ib IIB T1-T5 Gb	-40 °C
CMF400*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF400*****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C
CMF400[4]*****[2]*|****	Ex ib IIB T1-T5 Gb	-50 °C
CMF400[4]*****[2]*|**** CIC A5	Ex ib IIB T1-T5 Gb	-50 °C
CMF400[4]*****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-50 °C
CMF400[4]*****[2]*7****	Ex ib IIC T1-T5 Gb	-50 °C
CMF400[4]*****[2]*7**** CIC A7	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC*Y****[2]*|****	Ex ib IIB T1-T5 Gb	-40 °C / -29 °C
CMFHC*Y****[2]*|**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C / -29 °C
CMFHC*Y****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C / -29 °C

Type	Type of protection	Min. ambient/fluid temperature
CMFHC2*****[2]*I****	Ex ib IIB T1-T5 Gb	-40 °C
CMFHC2*****[2]*I**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMFHC2*****[2]*I**** CIC A4 and ETO 17076	Ex ib IIC T1-T5 Gb	-240 °C
CMFHC2*****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C
CMFHC2*****[2]*7**** and ETO 17076	Ex ib IIC T1-T5 Gb	-240 °C
CMFHC2[4]****[2]*I****	Ex ib IIB T1-T5 Gb	-50 °C
CMFHC2[4]****[2]*I**** CIC A4	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC2[4]****[2]*7****	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC2[4]****[2]*I**** CIC A6	Ex ib IIB T1-T5 Gb	-50 °C
CMFHC2[4]****[2]*7**** CIC A6	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC3*****[2]*I****	Ex ib IIB T1-T5 Gb	-40 °C
CMFHC3*****[2]*I**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMFHC3*****[2]*I**** CIC A4 and ETO 16995	Ex ib IIC T1-T5 Gb	-240 °C
CMFHC3*****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C
CMFHC3*****[2]*7**** and ETO 16995	Ex ib IIC T1-T5 Gb	-240 °C
CMFHC3[4]****[2]*I****	Ex ib IIB T1-T5 Gb	-50 °C
CMFHC3[4]****[2]*I**** CIC A4	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC3[4]****[2]*7****	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC3[4]****[2]*I**** CIC A6	Ex ib IIB T1-T5 Gb	-50 °C
CMFHC3[4]****[2]*7**** CIC A6	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC4*****[2]*I****	Ex ib IIB T1-T5 Gb	-40 °C
CMFHC4*****[2]*I**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMFHC4*****[2]*I**** CIC A4 and ETO 17192	Ex ib IIC T1-T5 Gb	-240 °C
CMFHC4*****[2]*7****	Ex ib IIC T1-T5 Gb	-40 °C
CMFHC4*****[2]*7**** and ETO 17192	Ex ib IIC T1-T5 Gb	-240 °C
CMFHC4[4]****[2]*I****	Ex ib IIB T1-T5 Gb	-50 °C
CMFHC4[4]****[2]*I**** CIC A4	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC4[4]****[2]*7****	Ex ib IIC T1-T5 Gb	-50 °C
CMFHC4[4]****[2]*I**** CIC A6	Ex ib IIB T1-T5 Gb	-50 °C
CMFHC4[4]****[2]*7**** CIC A6	Ex ib IIC T1-T5 Gb	-50 °C

[2] at this place the number 2, 3 ,4, 5, 6, 7, 8 or 9 or the letter A, B, D, E, Q, V, W or Y may be inserted
[4] at this place the letter A, B, C or E may be inserted

IECEx Certificate of Conformity

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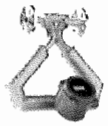
Certificate No.: **IECEx BVS 04.0007 X issue 8**
Annex

Special conditions for safe use

By mounting the sensor type CMF********(J,U)****** directly to the transmitter 22**S********** the use of the unit will be modified according to the following:



	Sensor type	
	CMF010*****(J,U)*I**** CMF025*****(J,U)*I**** CMF050*****(J,U)*I**** CMF100*****(J,U)*I**** CMF200*****(J,U)*I**** CIC A4 CMF200*****(J,U)*7**** CMF300*****(J,U)*I**** CIC A4 CMF300*****(J,U)*7**** CMF400*****(J,U)*I*** CIC A4 CMF400*****(J,U)*7**** CMFHC2*****(J,U)*I**** CIC A4 CMFHC2*****(J,U)*7**** CMFHC3*****(J,U)*I**** CIC A4 CMFHC3*****(J,U)*7**** CMF200(A,B,C,E)****J*I**** CIC A4 CMF200(A,B,C,E)****J*7**** CMF200(A,B,C,E)****J*7**** CIC A7 CMF300(A,B,C,E)****J*I**** CIC A4 CMF300(A,B,C,E)****J*7**** CMF300(A,B,C,E)****J*7**** CIC A7 CMF400(A,B,C,E)****J*I**** CIC A4 CMF400(A,B,C,E)****J*7**** CMF400(A,B,C,E)****J*7**** CIC A7 CMFHC2(A,B,C,E)****J*I**** CIC A4 CMFHC2(A,B,C,E)****J*7**** CMFHC2(A,B,C,E)****J*I**** CIC A6 CMFHC3(A,B,C,E)****J*7**** CIC A4 CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*7**** CIC A6 CMFHC4(A,B,C,E)****J*7**** CIC A4 CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*7**** CIC A6	CMF200*****(J,U)*I**** CIC A3 CMF300*****(J,U)*I**** CIC A3 CMF400*****(J,U)*I**** CIC A3 CMFHC2*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMFHC4*****(J,U)*I**** CMF200(A,B,C,E)****J*I**** CMF200(A,B,C,E)****J*I**** CIC A5 CMF300(A,B,C,E)****J*I**** CMF300(A,B,C,E)****J*I**** CIC A5 CMF400(A,B,C,E)****J*I**** CMF400(A,B,C,E)****J*I**** CIC A5 CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CIC A6 CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*I**** CIC A6 CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CIC A6
Transmitter type 2200S***1*I****	Ex ib IIC T1-T4	Ex ib IIB T1-T4

IECEx Certificate of Conformity

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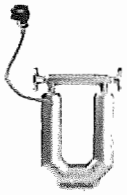
Certificate No.: **IECEx BVS 04.0007 X issue 8**
Annex

By mounting the sensor type CMF********C****** directly to the transmitter *700********** the use of the unit will be modified according to the following:



Transmitter type	Sensor type	
	CMF200(A,B,C,E)****C*I**** CIC A4 CMF200(A,B,C,E)****C*7**** CMF200(A,B,C,E)****C*7**** CIC A7 CMF300(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*7**** CMF300(A,B,C,E)****C*7**** CIC A7 CMF400(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*7**** CMF400(A,B,C,E)****C*7**** CIC A7 CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*7**** CMFHC2(A,B,C,E)****C*7**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*7**** CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC4(A,B,C,E)****C*I**** CIC A4 CMFHC4(A,B,C,E)****C*7**** CMFHC4(A,B,C,E)****C*I**** CIC A6	CMF200(A,B,C,E)****C*I**** CMF200(A,B,C,E)****C*I**** CIC A5 CMF300(A,B,C,E)****C*I**** CMF300(A,B,C,E)****C*I**** CIC A5 CMF400(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CIC A5 CMFHC2(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CIC A6
*700*1[1)]*******	Ex ib IIB+H_2 T1-T5	Ex ib IIB T1-T5
*700*1[2)]*******	Ex ib IIC T1-T5	Ex ib IIB T1-T5
*700*1[1)]4******	Ex ib IIB+H_2 T1-T4	Ex ib IIB T1-T4
*700*1[2)]4******	Ex ib IIC T1-T4	Ex ib IIB T1-T4

1) At this place the numeral 1 or 2 will be inserted.
2) At this place the numeral 3, 4 or 5 will be inserted.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 04.0007X	issue No.:9
Status:	**Current**	
Date of Issue:	**2013-08-01**	Page 1 of 4
Applicant:	**Micro Motion, Inc.** 7070 Winchester Circle, Boulder, Co. 80301 **United States of America**	

Certificate history:
Issue No. 9 (2013-8-1)
Issue No. 8 (2011-5-17)
Issue No. 7 (2010-2-16)
Issue No. 6 (2009-8-12)
Issue No. 5 (2008-11-3)
Issue No. 4 (2007-10-31)
Issue No. 3 (2007-8-1)
Issue No. 2 (2006-6-2)

Electrical Apparatus: *Optional accessory:*	**Sensor type Type CMF*****************
Type of Protection:	**Equipment protection by intrinsic safety "i"**
Marking:	Ex ib IIB/IIC T4/T5/T6 Gb
Approved for issue on behalf of the IECEx Certification Body:	Dr. F. Eickhoff
Position:	Deputy Head of Certification Body
Signature: *(for printed version)*	Eickhoff
Date:	2013-08-01

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2013-08-01** Issue No.: **9**

Manufacturer:

Micro Motion, Inc.
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Additional Manufacturing location (s):

Micro Motion, Inc.
7070 Winchester Circle,
Boulder, Co. 80301
United States of America

Emerson Process Management Flow B.V.
Neonstraat 1
6718 WX Ede
The Netherlands

Micro Motion Inc.
AVE. Miguel de Cervantes
Complejo Industrial
Chihuahua
Chihuahua 31109
Mexico

Emerson Process Management Flow Technologies Co., Ltd.
111, Xing Min South Road,
Jiangning, Nanjing,
Jiangsu Province
211100
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:
DE/BVS/ExTR06.0009/09

File Reference:
DE/BVS/04/2024/N9

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: 2013-08-01 Issue No.: 9

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Subject and type:

See Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use

See Annex

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 04.0007X

Date of Issue: **2013-08-01** Issue No.: **9**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The sensor can be modified:
A new version type CMF350********** is possible.
For type CMFHC*Y********** the minimum fluid temperature has been changed (from -29 °C) to -40 °C.
A modified junction box can be used.
Also the sensor has been assessed in acc. with the actual standard versions.

Annex: BVS_04_0007X_Micro Motion_Annex_issue9.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0007 X issue 9**
Annex

Subject and Type

Sensor type CMF*** ********|****

Instead of the *** letters and numerals will be inserted which characterize the following modifications:

C M F * * * * * * * * * * * * * * *

- Marking without influence to the type of protection
- Approval
  I = IECEx Zone 1
  7 = IECEx Zone 1 – CMF100/200/300/350/400/HC2/HC3/HC4 for gas group IIC
- Letter for conduit connections
- Letter for electronic interface
  2 = aluminum enhanced core processor
  3 = stainless enhanced core processor
  4 = aluminum enhanced core processor with extender
  5 = stainless enhanced core processor with extender
  6 = aluminum enhanced core processor for direct host
  7 = stainless enhanced core processor for direct host
  8 = aluminum enhanced core processor with extender for direct host
  9 = stainless enhanced core processor with extender for direct host
  A = local core processor
  B = local core processor with extender
  C = integral 1700/2700
  D = local core processor for direct host
  E = local core processor with extender for direct host
  R = with junction box for 9-wire
  H = 9 wire junction box with extender
  Q = aluminum core processor
  V = aluminum core processor with extender
  W = aluminum core processor for direct host
  Y = aluminum core processor with extender for direct host
  S = 9-wire Stainless junction box
  T = 9-wire Stainless junction box with extender
  J = integral 2200S
  U = integral 2200S with extender
- Marking without influence to the type of protection
- A = High Temp. Stainless Steel Tube 350 °C
  B = High Temp. HY Tube 350°C
  C = High Temp. Stainless Steel Tube 427 °C
  E = High Temp. HY Tube 427°C
  Y = Standard Version Duplex Tube
  Other marking without influence to the type of protection
- 3 numerals for type of sensor

Parameters

1 Type CMF********(R,H,S,T)****** with J-box, inclusive Construction Identification Code (CIC) A3 and A4 and no marking, except type CMF***(A,B,C,E)****(R,H,S,T)******

1.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W
Internal capacitance			negligible	

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	945.1	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	170.1	-240
CMF100*****(R,H,S,T)*I****		(IIC)	6.7	58.4	89.0	-40
CMF100*****(R,H,S,T)*I****		(IIC)	6.7	52.4	89.0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	6.7	0	177.0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	6.7	0	177.0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF200*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	9.5	85.8	0	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*7****		(IIC)	9.5	0	177.0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF350*****(R,H,S,T)*I**** CIC A3		(IIB)	11.75	71.4	19.8	-68
CMF350*****(R,H,S,T)*I**** CIC A4		(IIC)	11.75	0	187.1	-240
CMF350*****(R,H,S,T)*7****		(IIC)	11.75	0	187.1	-240
CMF400*****(R,H,S,T)*I**** CIC A3		(IIB)	11.75	71.4	19.8	-68
CMF400*****(R,H,S,T)*I**** CIC A4		(IIC)	11.75	0	187.1	-240
CMF400*****(R,H,S,T)*7****		(IIC)	11.75	0	187.1	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC4*****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50
CMFHC4*****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240
CMFHC4*****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	5.0	19.5	38.5	-50/-40
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	5.0	0	126.0	-240/-40
CMFHC*Y****(R,H,S,T)*7****		(IIC)	5.0	0	126.0	-240/-40

1.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	21.13	V
Current	Ii		18.05	mA
Power	Pi		45	mW

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF050*****(R,H,S,T)*I****		(IIC)	2.51	0	0	-240
CMF100*****(R,H,S,T)*I****		(IIC)	0.441	11.1	0	-40
CMF100*****(R,H,S,T)*I****		(IIC)	0.441	9.9	0	-60
CMF100*****(R,H,S,T)*I**** CIC A4		(IIC)	0.441	0	0	-240
CMF100*****(R,H,S,T)*7****		(IIC)	0.441	0	0	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF200*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF200*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*I**** CIC A3		(IIB)	2.0	38.7	0 to 567.9	-55
CMF300*****(R,H,S,T)*I**** CIC A4		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)*7****		(IIC)	2.0	0	0 to 567.9	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF350*****(R,H,S,T)*I**** CIC A3		(IIB)	12.4	109.8	0 to 566.4	-68
CMF350*****(R,H,S,T)*I**** CIC A4		(IIC)	12.4	0	0 to 566.4	-240
CMF350*****(R,H,S,T)*7****		(IIC)	12.4	0	0 to 566.4	-240
CMF400*****(R,H,S,T)*I**** CIC A3		(IIB)	12.4	109.8	0 to 566.4	-68
CMF400*****(R,H,S,T)*I**** CIC A4		(IIC)	12.4	0	0 to 566.4	-240
CMF400*****(R,H,S,T)*7****		(IIC)	12.4	0	0 to 566.4	-240

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFHC2*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC2*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC3*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC4*****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50
CMFHC4*****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC4*****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240
CMFHC*Y****(R,H,S,T)*I****		(IIB)	2.8	49.2	42.6 to 566.4	-50/-40
CMFHC*Y****(R,H,S,T)*I**** CIC A4		(IIC)	2.8	0	198.4 to 566.4	-240/-40
CMFHC*Y****(R,H,S,T)*7****		(IIC)	2.8	0	198.4 to 566.4	-240/-40

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)

Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

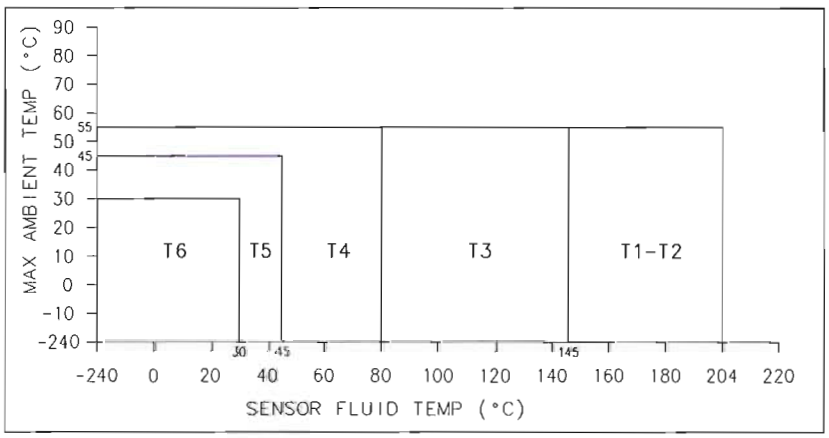
sensor type	inductance [mH]	coil resistance [Ω]	serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF350*****(R,H,S,T)*I****	N/A	N/A	39.7 to 42.2	-68
CMF350*****(R,H,S,T)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-240
CMF350*****(R,H,S,T)*7****	N/A	N/A	39.7 to 42.2	-240
CMF400*****(R,H,S,T)*I****	N/A	N/A	39.7 to 42.2	-68
CMF400*****(R,H,S,T)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-240
CMF400*****(R,H,S,T)*7****	N/A	N/A	39.7 to 42.2	-240

1.4 Temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

1.4.1

Sensor type				
	CMF010*****(R,H,S,T)*I****	(IIC)	CMF025*****(R,H,S,T)*I****	(IIC)
			CMF050*****(R,H,S,T)*I****	(IIC)



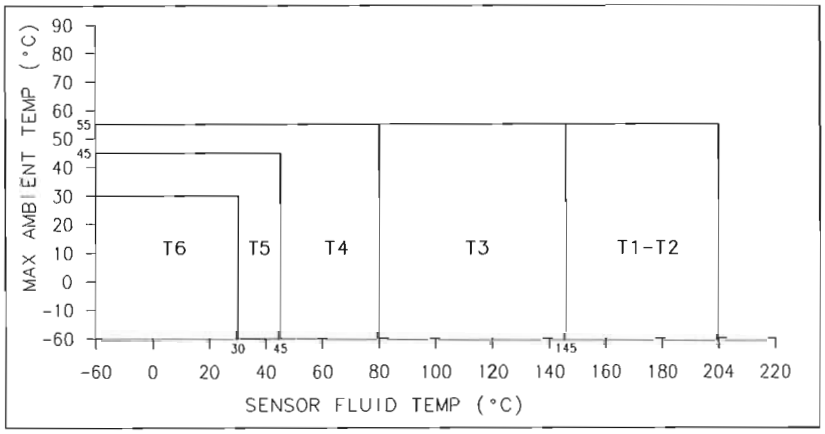
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.2

Sensor type		
CMF100*****(R,H,S,T)*I****	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



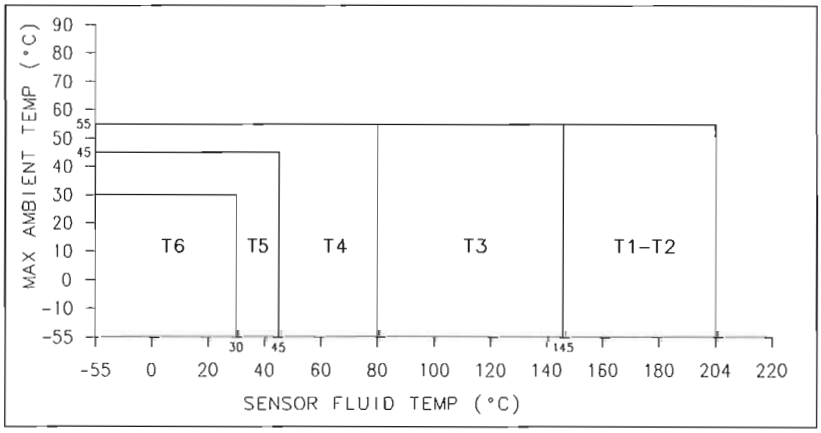
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -60 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.3

Sensor type	
CMF200*****(R,H,S,T)*I**** CIC A3	(IIB)
CMF300*****(R,H,S,T)*I**** CIC A3	(IIB)



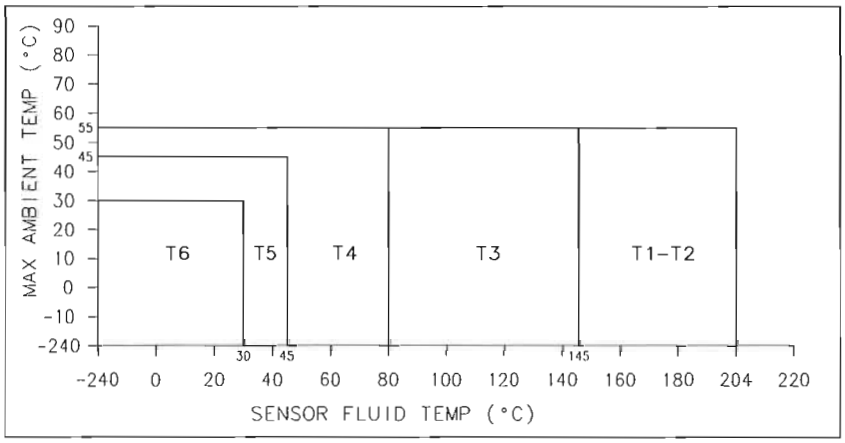
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -55 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.4

Sensor type				
	CMF100*****(R,H,S,T)*I**** CIC A4	(IIC)	CMF200*****(R,H,S,T)*I**** CIC A4	(II
	CMF100*****(R,H,S,T)*7****	(IIC)	CMF200*****(R,H,S,T)*7****	(II
			CMF300*****(R,H,S,T)*I**** CIC A4	(II
			CMF300*****(R,H,S,T)*7****	(II



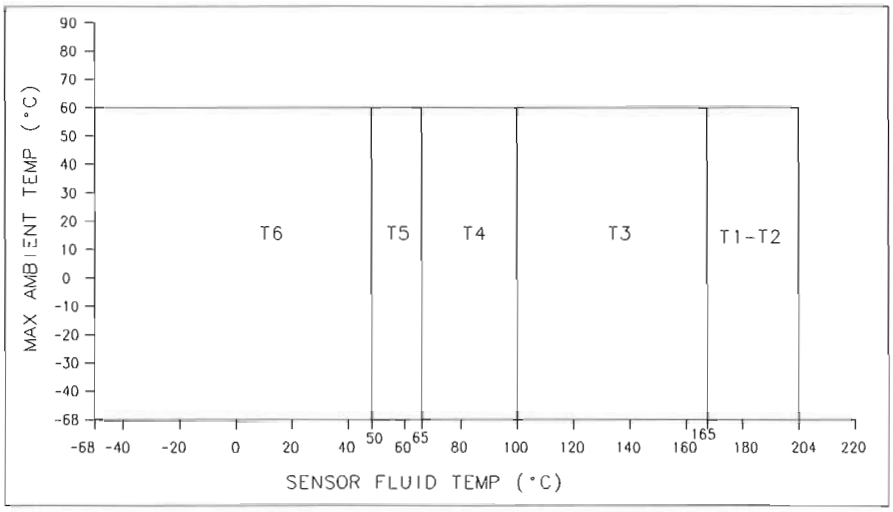
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.5

Sensor type		
CMF350*****(R,H,S,T)*I**** CIC A3	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF400*****(R,H,S,T)*I**** CIC A3	(IIB)	



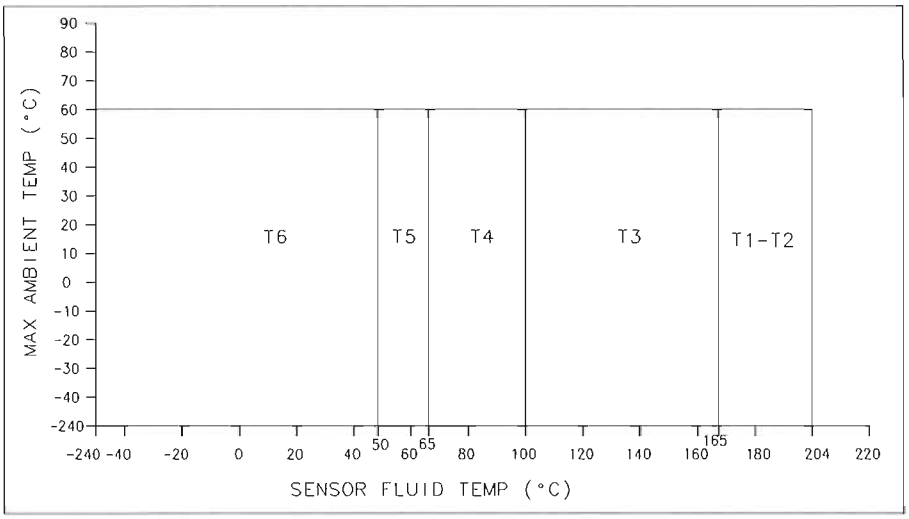
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -68 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.6

Sensor type		
CMF350*****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMF350*****(R,H,S,T)*7****	(IIC)	
CMF400*****(R,H,S,T)*I**** CIC A4	(IIC)	
CMF400*****(R,H,S,T)*7****	(IIC)	



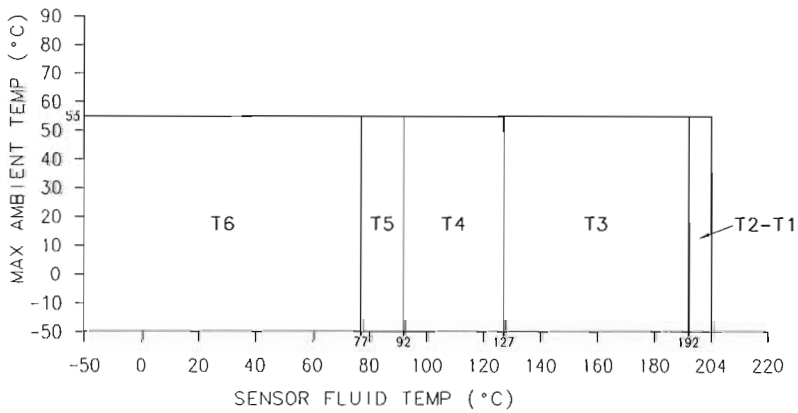
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240 °C to +60 °C

The use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.7

Sensor type		
CMFHC2*****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC3*****(R,H,S,T)*I****	(IIB)	
CMFHC4*****(R,H,S,T)*I****	(IIB)	



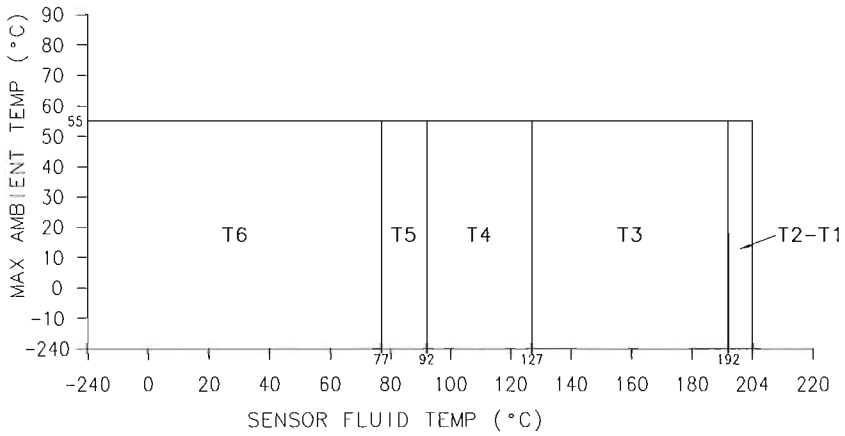
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.8

Sensor type		
CMFHC2*****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC2*****(R,H,S,T)*7****	(IIC)	
CMFHC3*****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC3*****(R,H,S,T)*7****	(IIC)	
CMFHC4*****(R,H,S,T)*I**** CIC A4	(IIC)	
CMFHC4*****(R,H,S,T)*7****	(IIC)	



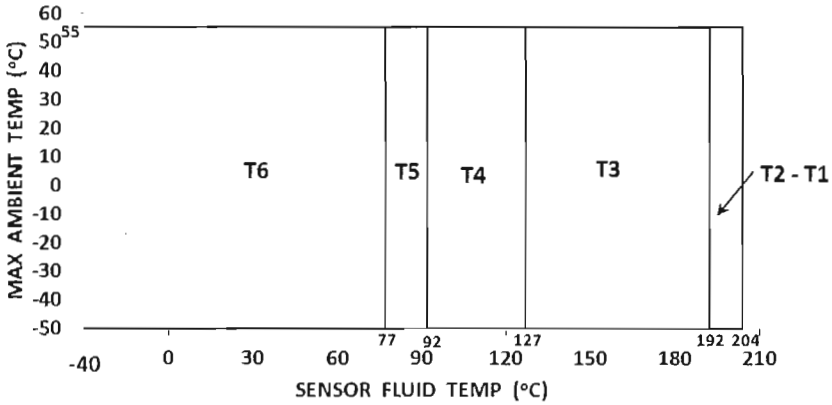
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240 °C to + 55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.9

Sensor type		
CMFHC*Y****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



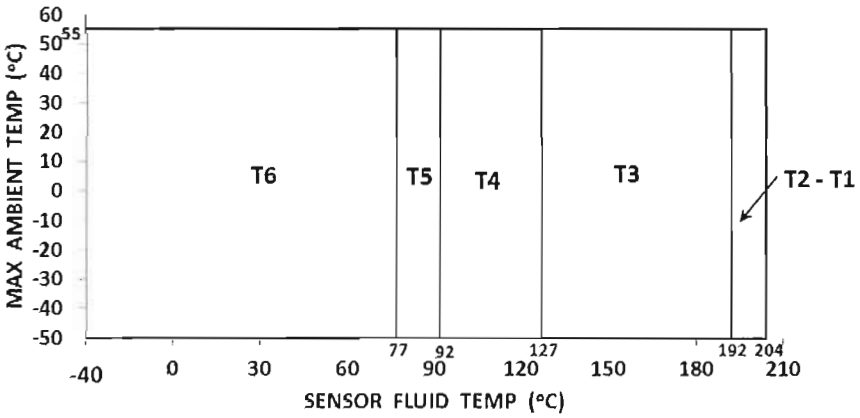
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –50 °C to + 55 °C

The use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.4.10

Sensor type		
CMFHC*Y****(R,H,S,T)*I**** CIC A4	(IIC)	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC*Y****(R,H,S,T)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta –240 °C to + 55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

1.5 All sensors listed in cl. 1 can also be executed with the alternate junction box assembly type 800/2400 Splined J-Box covered in IECEx BVS 09.0022U.

2 Type CMF***(A,B,C,E)****(R,S)****** with J-box

2.1 Drive circuit (connections 1 - 2 or red and brown)

Voltage	Ui	DC	11.4	V
Current	Ii		2.45	A
Power	Pi		2.54	W
Internal capacitance	Ci	negligible		

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200(A,B,C,E)****(R,S)*I****		(IIB)	4.0	32,3	19.8	-50
CMF200(A,B,C,E)****(R,S)*I**** CIC A5		(IIB)	1.1	15.4	9.6	-50
CMF200(A,B,C,E)****(R,S)*I**** CIC A4		(IIC)	1.1	15.4	41	-50
CMF200(A,B,C,E)****(R,S)*7****		(IIC)	1.1	15.4	41	-50
CMF200(A,B,C,E)****(R,S)*7**** CIC A7		(IIC)	4.0	32.3	88.9	-50
CMF300(A,B,C,E)****(R,S)*I****		(IIB)	4.0	32.3	19.8	-50
CMF300(A,B,C,E)****(R,S)*I**** CIC A5		(IIB)	1.1	15.4	9.6	-50
CMF300(A,B,C,E)****(R,S)*I**** CIC A4		(IIC)	1.1	15.4	41	-50
CMF300(A,B,C,E)****(R,S)*7****		(IIC)	1,1	15.4	41	-50
CMF300(A,B,C,E)****(R,S)*7**** CIC A7		(IIC)	4.0	32.3	88.9	-50
CMF350(A,B,C,E)****(R,S)*I****		(IIB)	7,75	54.3	19.8	-50
CMF350(A,B,C,E)****(R,S)*I**** CIC A5		(IIB)	3.4	35.2	12.8	-50
CMF350(A,B,C,E)****(R,S)*I**** CIC A4		(IIC)	3.4	35.2	63.2	-50
CMF350(A,B,C,E)****(R,S)*7****		(IIC)	3.4	35.2	63.2	-50
CMF350(A,B,C,E)****(R,S)*7**** CIC A7		(IIC)	7.75	54.3	106.7	-50
CMF400(A,B,C,E)****(R,S)*I****		(IIB)	7.75	54.3	19.8	-50
CMF400(A,B,C,E)****(R,S)*I**** CIC A5		(IIB)	3.4	35.2	12.8	-50
CMF400(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	3.4	35.2	63.2	-50
CMF400(A.B.C.E)****(R.S)*7****		(IIC)	3.4	35.2	63.2	-50
CMF400(A.B.C.E)****(R.S)*7**** CIC A7		(IIC)	7.75	54.3	106.7	-50
CMFHC2(A.B.C.E)****(R.S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC2(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A.B.C.E)****(R.S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC2(A.B.C.E)****(R.S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC2(A.B.C.E)****(R.S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50
CMFHC3(A.B.C.E)****(R.S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC3(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A.B.C.E)****(R.S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC3(A.B.C.E)****(R.S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC3(A.B.C.E)****(R.S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50
CMFHC4(A.B.C.E)****(R.S)*I****		(IIB)	5.95	51.3	12.8	-50
CMFHC4(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	5.95	51.3	88.9	-50
CMFHC4(A.B.C.E)****(R.S)*7****		(IIC)	5.95	51.3	88.9	-50
CMFHC4(A.B.C.E)****(R.S)*I**** CIC A6		(IIB)	7.75	54.3	24.7	-50
CMFHC4(A.B.C.E)****(R.S)*7**** CIC A6		(IIC)	7.75	54.3	106.7	-50

2.2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)

Voltage	Ui	DC	21.13	V
Current	Ii		18.05	mA
Power	Pi		45	mW
Internal capacitance	Ci	negligible		

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient Fluid Tem (°C)
CMF200(A.B.C.E)****(R.S)*I****		(IIB)	1.25	15.4	569.2	-50
CMF200(A.B.C.E)****(R.S)*I**** CIC A5		(IIB)	0.50	8.0	569.2	-50
CMF200(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	0.50	8.0	569.2	-50
CMF200(A.B.C.E)****(R.S)*7****		(IIC)	0.50	8.0	569.2	-50
CMF200(A.B.C.E)****(R.S)*7**** CIC A7		(IIC)	1.25	15.4	569.2	-50
CMF300(A.B.C.E)****(R.S)*I****		(IIB)	1.25	15.4	569.2	-50
CMF300(A.B.C.E)****(R.S)*I**** CIC A5		(IIB)	0.50	8.0	569.2	-50
CMF300(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	0.50	8.0	569.2	-50
CMF300(A.B.C.E)****(R.S)*7****		(IIC)	0.50	8.0	569.2	-50
CMF300(A.B.C.E)****(R.S)*7**** CIC A7		(IIC)	1.25	15.4	569.2	-50
CMF350(A.B.C.E)****(R.S)*I****		(IIB)	6.50	41.1	569.2	-50
CMF350(A.B.C.E)****(R.S)*I**** CIC A5		(IIB)	1.10	15.4	569.2	-50
CMF350(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	1.10	15.4	569.2	-50
CMF350(A.B.C.E)****(R.S)*7****		(IIC)	1.10	15.4	569.2	-50
CMF350(A.B.C.E)****(R.S)*7**** CIC A7		(IIC)	6.50	41.1	569.2	-50
CMF400(A.B.C.E)****(R.S)*I****		(IIB)	6.50	41.1	569.2	-50
CMF400(A.B.C.E)****(R.S)*I**** CIC A5		(IIB)	1.10	15.4	569.2	-50
CMF400(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	1.10	15.4	569.2	-50
CMF400(A.B.C.E)****(R.S)*7****		(IIC)	1.10	15.4	569.2	-50
CMF400(A.B.C.E)****(R.S)*7**** CIC A7		(IIC)	6.50	41.1	569.2	-50
CMFHC2(A.B.C.E)****(R.S)*I****		(IIB)	0.85	9.1	42.6	-50
CMFHC2(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	0.85	9.1	42.6	-50
CMFHC2(A.B.C.E)****(R.S)*7****		(IIC)	0.85	9.1	42.6	-50
CMFHC2(A.B.C.E)****(R.S)*I**** CIC A6		(IIB)	0.85	9.1	42.6	-50
CMFHC2(A.B.C.E)****(R.S)*7**** CIC A6		(IIC)	0.85	9.1	42.6	-50
CMFHC3(A.B.C.E)****(R.S)*I****		(IIB)	0.85	9.1	42.6	-50
CMFHC3(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	0.85	9.1	42.6	-50
CMFHC3(A.B.C.E)****(R.S)*7****		(IIC)	0.85	9.1	42.6	-50
CMFHC3(A.B.C.E)****(R.S)*I**** CIC A6		(IIB)	0.85	9.1	42.6	-50
CMFHC3(A.B.C.E)****(R.S)*7**** CIC A6		(IIC)	0.85	9.1	42.6	-50
CMFHC4(A.B.C.E)****(R.S)*I****		(IIB)	0.85	9.1	42.6	-50
CMFHC4(A.B.C.E)****(R.S)*I**** CIC A4		(IIC)	0.85	9.1	42.6	-50
CMFHC4(A.B.C.E)****(R.S)*7****		(IIC)	0.85	9.1	42.6	-50
CMFHC4(A.B.C.E)****(R.S)*I**** CIC A6		(IIB)	0.85	9.1	42.6	-50
CMFHC4(A.B.C.E)****(R.S)*7**** CIC A6		(IIC)	0.85	9.1	42.6	-50

2.3 Temperature circuits (terminals 3. 4 and 7 or wires orange. yellow and violet)

Voltage	Ui	DC	21.13	V
Current	Ii		26	mA
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

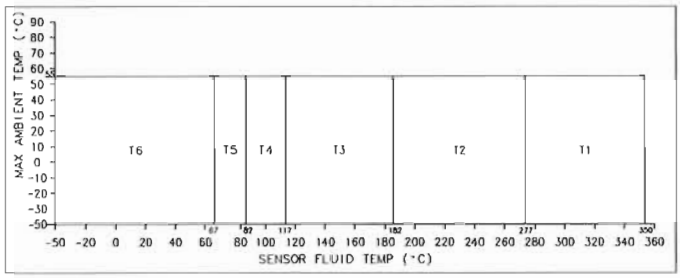
Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

Sensor type	Inductance [mH]	Coil resistance [Ω]	Serial resistor [Ω]	Minimum Ambient/Fluid Temperature [°C]
CMF350(A.B.C.E)****(R.S)*I****	N/A	N/A	39.7 to 42.2	-50
CMF350(A.B.C.E)****(R.S)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-50
CMF350(A.B.C.E)****(R.S)*7****	N/A	N/A	39.7 to 42.2	-50
CMF400(A.B.C.E)****(R.S)*I****	N/A	N/A	39.7 to 42.2	-50
CMF400(A.B.C.E)****(R.S)*I**** CIC A4	N/A	N/A	39.7 to 42.2	-50
CMF400(A.B.C.E)****(R.S)*7****	N/A	N/A	39.7 to 42.2	-50

2.4 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

2.4.1

Sensor type			
CMF200(A.B)****(R.S)*I****		(IIB)	Connected to MVD transmitters. e.g. 1000/2000/3000MVD series
CMF200(A.B)****(R.S)*I**** CIC A4		(IIC)	
CMF200(A.B)****(R.S)*I**** CIC A5		(IIB)	
CMF200(A.B)****(R.S)*7****		(IIC)	
CMF200(A.B)****(R.S)*7**** CIC A7		(IIC)	
CMF300(A.B)****(R.S)*I****		(IIB)	
CMF300(A.B)****(R.S)*I**** CIC A4		(IIC)	
CMF300(A.B)****(R.S)*I**** CIC A5		(IIB)	
CMF300(A.B)****(R.S)*7****		(IIC)	
CMF300(A.B)****(R.S)*7**** CIC A7		(IIC)	
CMF350(A.B)****(R.S)*I****		(IIB)	
CMF350(A.B)****(R.S)*I**** CIC A4		(IIC)	
CMF350(A.B)****(R.S)*I**** CIC A5		(IIB)	
CMF350(A.B)****(R.S)*7****		(IIC)	
CMF350(A.B)****(R.S)*7**** CIC A7		(IIC)	
CMF400(A.B)****(R.S)*I****		(IIB)	
CMF400(A.B)****(R.S)*I**** CIC A4		(IIC)	
CMF400(A.B)****(R.S)*I**** CIC A5		(IIB)	
CMF400(A.B)****(R.S)*7****		(IIC)	
CMF400(A.B)****(R.S)*7**** CIC A7		(IIC)	
CMFHC2(A.B)****(R.S)*I****		(IIB)	
CMFHC2(A.B)****(R.S)*I**** CIC A4		(IIC)	
CMFHC2(A.B)****(R.S)*I**** CIC A6		(IIB)	
CMFHC2(A.B)****(R.S)*7****		(IIC)	
CMFHC2(A.B)****(R.S)*7**** CIC A6		(IIC)	
CMFHC3(A.B)****(R.S)*I****		(IIB)	
CMFHC3(A.B)****(R.S)*I**** CIC A4		(IIC)	
CMFHC3(A.B)****(R.S)*I**** CIC A6		(IIB)	
CMFHC3(A.B)****(R.S)*7****		(IIC)	
CMFHC3(A.B)****(R.S)*7**** CIC A6		(IIC)	
CMFHC4(A.B)****(R.S)*I****		(IIB)	
CMFHC4(A.B)****(R.S)*I**** CIC A4		(IIC)	
CMFHC4(A.B)****(R.S)*I**** CIC A6		(IIB)	
CMFHC4(A.B)****(R.S)*7****		(IIC)	
CMFHC4(A.B)****(R.S)*7**** CIC A6		(IIC)	



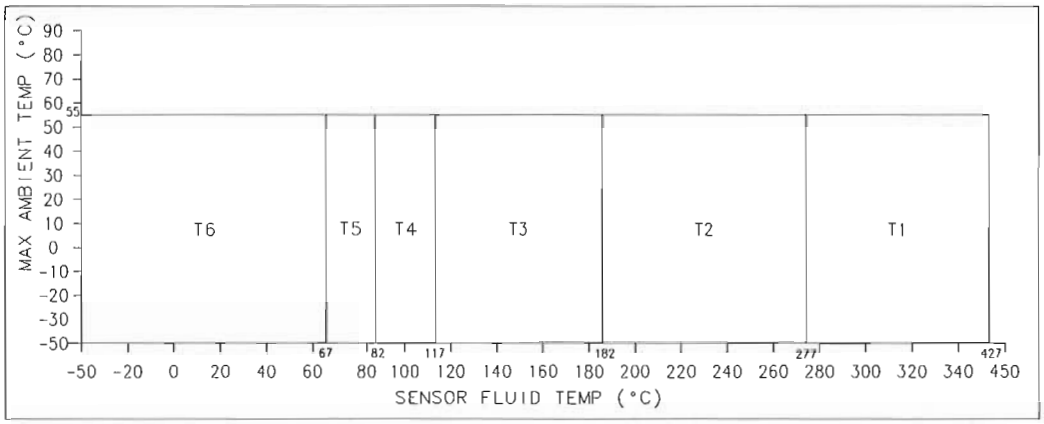
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.4.2

Sensor type			
CMF200(C.E)****(R.S)*I****		(IIB)	Connected to MVD transmitters. e.g. 1000/2000/3000MVD series
CMF200(C.E)****(R.S)*I**** CIC A4		(IIC)	
CMF200(C.E)****(R.S)*I**** CIC A5		(IIB)	
CMF200(C.E)****(R.S)*7****		(IIC)	
CMF200(C.E)****(R.S)*7**** CIC A7		(IIC)	
CMF300(C.E)****(R.S)*I****		(IIB)	
CMF300(C.E)****(R.S)*I**** CIC A4		(IIC)	
CMF300(C.E)****(R.S)*I**** CIC A5		(IIB)	
CMF300(C.E)****(R.S)*7****		(IIC)	
CMF300(C.E)****(R.S)*7**** CIC A7		(IIC)	
CMF350(C.E)****(R.S)*I****		(IIB)	
CMF350(C.E)****(R.S)*I**** CIC A4		(IIC)	
CMF350(C.E)****(R.S)*I**** CIC A5		(IIB)	
CMF350(C.E)****(R.S)*7****		(IIC)	
CMF350(C.E)****(R.S)*7**** CIC A7		(IIC)	
CMF400(C.E)****(R.S)*I****		(IIB)	
CMF400(C.E)****(R.S)*I**** CIC A4		(IIC)	
CMF400(C.E)****(R.S)*I**** CIC A5		(IIB)	
CMF400(C.E)****(R.S)*7****		(IIC)	
CMF400(C.E)****(R.S)*7**** CIC A7		(IIC)	
CMFHC2(C.E)****(R.S)*I****		(IIB)	
CMFHC2(C.E)****(R.S)*I**** CIC A4		(IIC)	
CMFHC2(C.E)****(R.S)*I**** CIC A6		(IIB)	
CMFHC2(C.E)****(R.S)*7****		(IIC)	
CMFHC2(C.E)****(R.S)*7**** CIC A6		(IIC)	
CMFHC3(C.E)****(R.S)*I****		(IIB)	
CMFHC3(C.E)****(R.S)*I**** CIC A4		(IIC)	
CMFHC3(C.E)****(R.S)*I**** CIC A6		(IIB)	
CMFHC3(C.E)****(R.S)*7****		(IIC)	
CMFHC3(C.E)****(R.S)*7**** CIC A6		(IIC)	
CMFHC4(C.E)****(R.S)*I****		(IIB)	
CMFHC4(C.E)****(R.S)*I**** CIC A4		(IIC)	
CMFHC4(C.E)****(R.S)*I**** CIC A6		(IIB)	
CMFHC4(C.E)****(R.S)*7****		(IIC)	
CMFHC4(C.E)****(R.S)*7**** CIC A6		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.5 All sensors listed in cl. 2 can also be executed with the alternate junction box assembly type 800/2400 Splined J-Box covered in IECEx BVS 09.0022U.

3 Type CMF********(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** with integral Core Processor inclusive Construction Identification Code CIC A3 and A4 except type CMF***(A.B.C.E)****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****

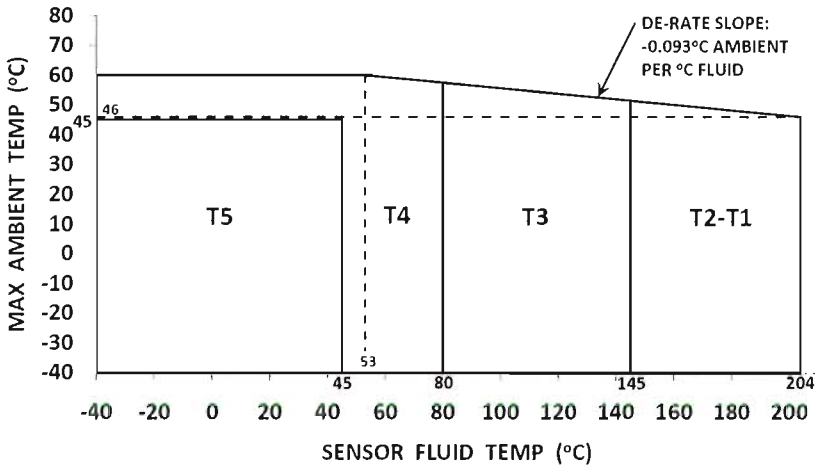
3.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Effective internal capacitance	Ci		2200	pF
Effective internal inductance	Li		30	µH

3.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

3.2.1

Sensor type	 CMF010	 CMF100	 CMF200/300	
CMF010*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****			(IIC)	With integral core processor
CMF025*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****			(IIC)	
CMF050*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****			(IIC)	
CMF100*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****			(IIC)	
CMF200*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A3			(IIB)	
CMF200*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4			(IIC)	
CMF200*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****			(IIC)	
CMF300*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A3			(IIB)	
CMF300*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4			(IIC)	
CMF300*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****			(IIC)	

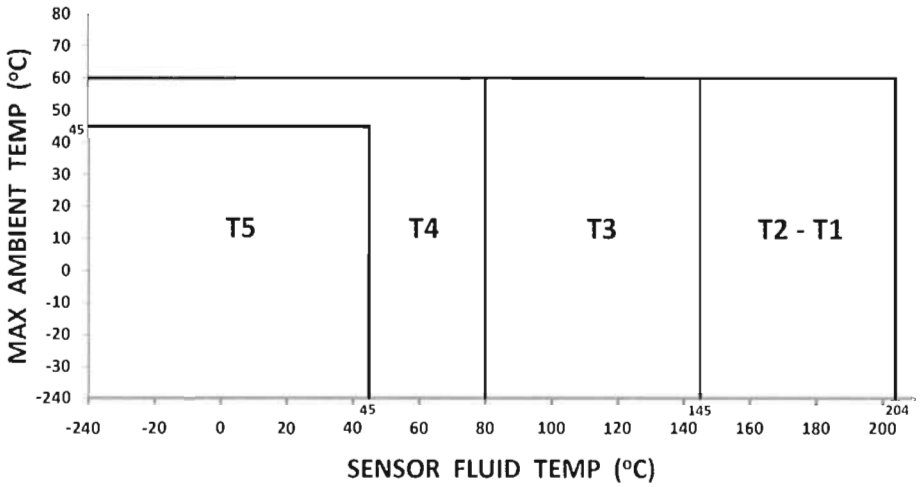


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.2

Sensor type			
CMF300*****(2.3.6.7.A.D.Q.W)*I**** CIC A4 and ETO 17151		(IIC)	With integral core processor
CMF300*****(2.3.6.7.A.D.Q.W)*7**** and ETO 17151		(IIC)	



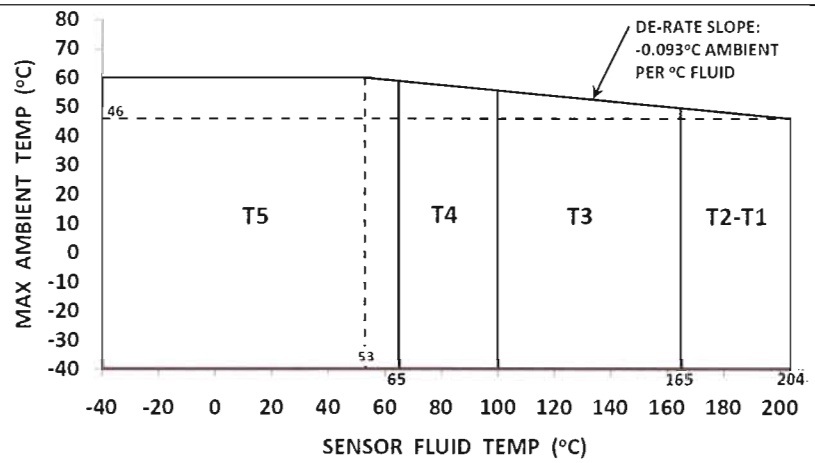
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range: Ta -240 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted minimum 1 meter away from the sensor by means of a flexible stainless steel hose, and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.3

Sensor type			
CMF350*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A3		(IIB)	With integral core processor
CMF350*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4		(IIC)	
CMF350*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****		(IIC)	
CMF400*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A3		(IIB)	
CMF400*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4		(IIC)	
CMF400*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****		(IIC)	

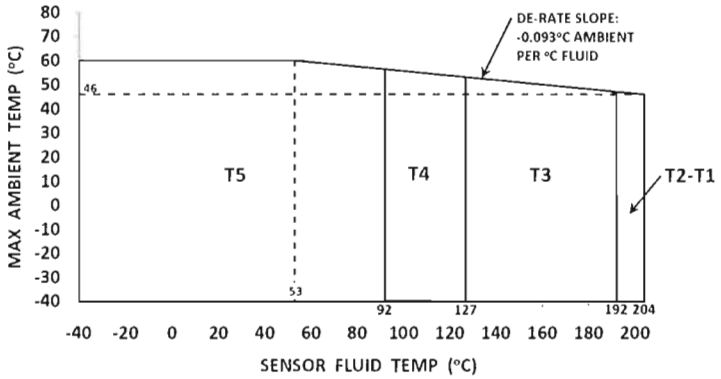


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.4

Sensor type			
CMFHC2*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****		(IIB)	With integral core processor
CMFHC2*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4		(IIC)	
CMFHC2*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****		(IIC)	
CMFHC3*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****		(IIB)	
CMFHC3*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4		(IIC)	
CMFHC3*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****		(IIC)	
CMFHC4*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****		(IIB)	
CMFHC4*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4		(IIC)	
CMFHC4*****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****		(IIC)	

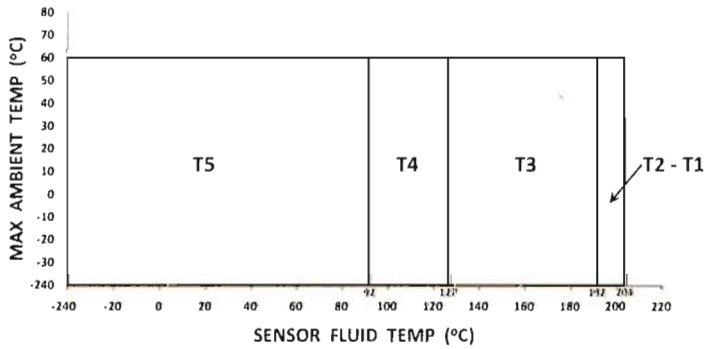


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

3.2.5

Sensor type			
CMFHC2*****(2.3.6.7.A.D.Q.W)*I**** CIC A4 and ETO 17076		(IIC)	With integral core processor
CMFHC2*****(2.3.6.7.A.D.Q.W)*7**** and ETO 17076		(IIC)	
CMFHC3*****(2.3.6.7.A.D.Q.W)*I**** CIC A4 and ETO 16995		(IIC)	
CMFHC3*****(2.3.6.7.A.D.Q.W)*7**** and ETO 16995		(IIC)	
CMFHC4*****(2.3.6.7.A.D.Q.W)*I**** CIC A4 and ETO 17192		(IIC)	
CMFHC4*****(2.3.6.7.A.D.Q.W)*7**** and ETO 17192		(IIC)	



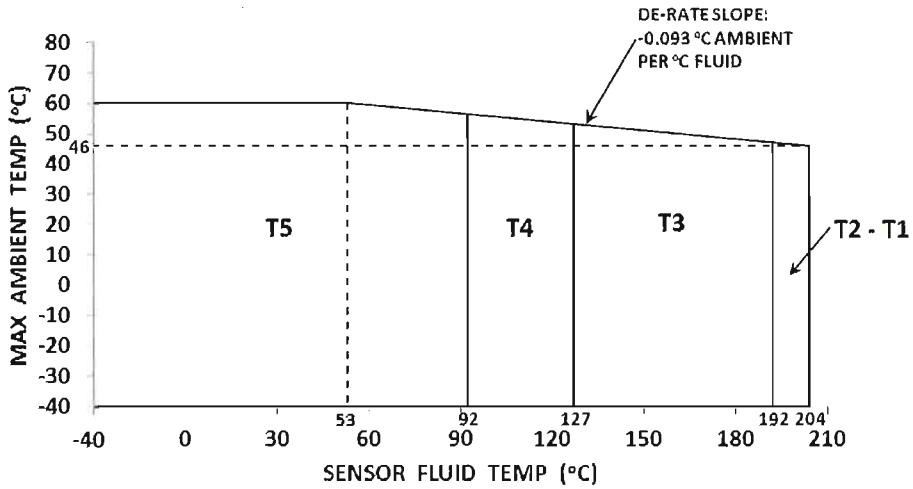
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -240 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted minimum 1 meter away from the sensor by means of a flexible stainless steel hose, and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

3.2.6

Sensor type			
CMFHC*Y****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I****		(IIB)	With integral core processor
CMFHC*Y****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*I**** CIC A4		(IIC)	
CMFHC*Y****(2.3.4.5.6.7.8.9.A.B.D.E.Q.V.W.Y)*7****		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

4 Type CMF***(A.B.C.E)****(2.3.6.7.A.D.Q.V.W)****** with integral core processor.

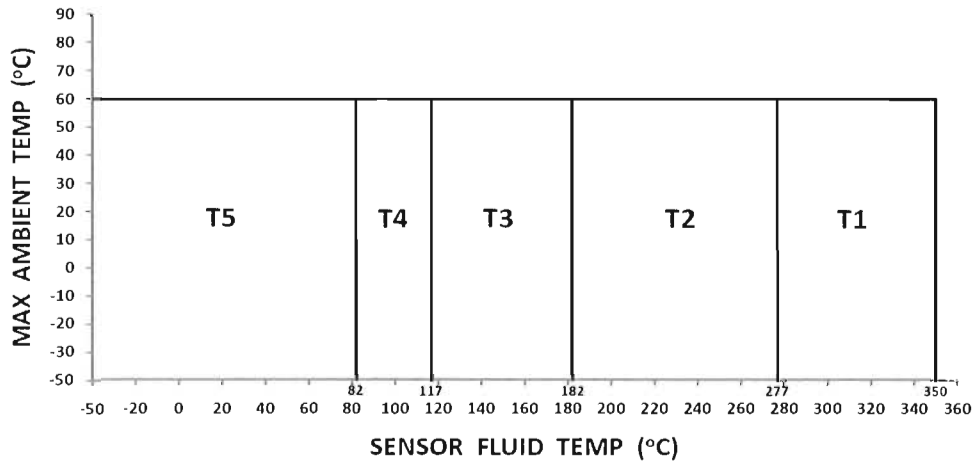
4.1 Input circuits (terminals 1 - 4)

Voltage	Ui	DC	17.3	V
Current	Ii		484	mA
Power	Pi		2.1	W
Iinternal capacitance	Ci		2200	pF
Internal inductance	Li		30	µH

4.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

4.2.1

Sensor type		
CMF200(A.B)****(2.3.6.7.A.D.Q.W)*I****	(IIB)	With integral core processor
CMF200(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A4	(IIC)	
CMF200(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A5	(IIB)	
CMF200(A.B)****(2.3.6.7.A.D.Q.W)*7****	(IIC)	
CMF200(A.B)****(2.3.6.7.A.D.Q.W)*7**** CIC A7	(IIC)	
CMF300(A.B)****(2.3.6.7.A.D.Q.W)*I****	(IIB)	
CMF300(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A4	(IIC)	
CMF300(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A5	(IIB)	
CMF300(A.B)****(2.3.6.7.A.D.Q.W)*7****	(IIC)	
CMF300(A.B)****(2.3.6.7.A.D.Q.W)*7**** CIC A7	(IIC)	
CMF350(A.B)****(2.3.6.7.A.D.Q.W)*I****	(IIB)	
CMF350(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A4	(IIC)	
CMF350(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A5	(IIB)	
CMF350(A.B)****(2.3.6.7.A.D.Q.W)*7****	(IIC)	
CMF350(A.B)****(2.3.6.7.A.D.Q.W)*7**** CIC A7	(IIC)	
CMF400(A.B)****(2.3.6.7.A.D.Q.W)*I****	(IIB)	
CMF400(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A4	(IIC)	
CMF400(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A5	(IIB)	
CMF400(A.B)****(2.3.6.7.A.D.Q.W)*7****	(IIC)	
CMF400(A.B)****(2.3.6.7.A.D.Q.W)*7**** CIC A7	(IIC)	
CMFHC2(A.B)****(2.3.6.7.A.D.Q.W)*I****	(IIB)	
CMFHC2(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A4	(IIC)	
CMFHC2(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A6	(IIB)	
CMFHC2(A.B)****(2.3.6.7.A.D.Q.W)*7****	(IIC)	
CMFHC2(A.B)****(2.3.6.7.A.D.Q.W)*7**** CIC A6	(IIC)	
CMFHC3(A.B)****(2.3.6.7.A.D.Q.W)*I****	(IIB)	
CMFHC3(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A4	(IIC)	
CMFHC3(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A6	(IIB)	
CMFHC3(A.B)****(2.3.6.7.A.D.Q.W)*7****	(IIC)	
CMFHC3(A.B)****(2.3.6.7.A.D.Q.W)*7**** CIC A6	(IIC)	
CMFHC4(A.B)****(2.3.6.7.A.D.Q.W)*I****	(IIB)	
CMFHC4(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A4	(IIC)	
CMFHC4(A.B)****(2.3.6.7.A.D.Q.W)*I**** CIC A6	(IIB)	
CMFHC4(A.B)****(2.3.6.7.A.D.Q.W)*7****	(IIC)	
CMFHC4(A.B)****(2.3.6.7.A.D.Q.W)*7**** CIC A6	(IIC)	



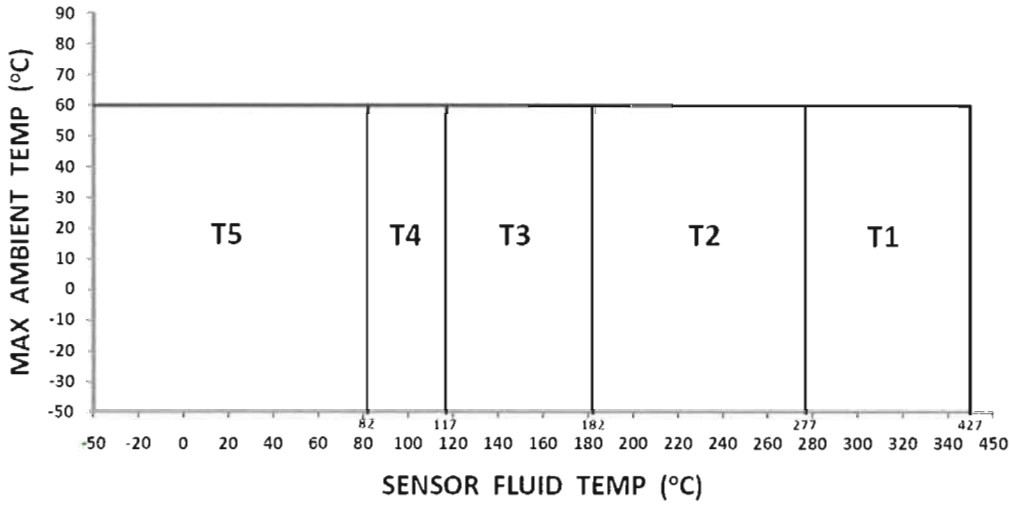
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

4.2.2

Sensor type			
CMF200(C.E)****(2.3.6.7.A.D.Q.W)*I****		(IIB)	With integral core processor
CMF200(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A4		(IIC)	
CMF200(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A5		(IIB)	
CMF200(C.E)****(2.3.6.7.A.D.Q.W)*7****		(IIC)	
CMF200(C.E)****(2.3.6.7.A.D.Q.W)*7**** CIC A7		(IIC)	
CMF300(C.E)****(2.3.6.7.A.D.Q.W)*I****		(IIB)	
CMF300(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A4		(IIC)	
CMF300(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A5		(IIB)	
CMF300(C.E)****(2.3.6.7.A.D.Q.W)*7****		(IIC)	
CMF300(C.E)****(2.3.6.7.A.D.Q.W)*7**** CIC A7		(IIC)	
CMF350(C.E)****(2.3.6.7.A.D.Q.W)*I****		(IIB)	
CMF350(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A4		(IIC)	
CMF350(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A5		(IIB)	
CMF350(C.E)****(2.3.6.7.A.D.Q.W)*7****		(IIC)	
CMF350(C.E)****(2.3.6.7.A.D.Q.W)*7**** CIC A7		(IIC)	
CMF400(C.E)****(2.3.6.7.A.D.Q.W)*I****		(IIB)	
CMF400(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A4		(IIC)	
CMF400(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A5		(IIB)	
CMF400(C.E)****(2.3.6.7.A.D.Q.W)*7****		(IIC)	
CMF400(C.E)****(2.3.6.7.A.D.Q.W)*7**** CIC A7		(IIC)	
CMFHC2(C.E)****(2.3.6.7.A.D.Q.W)*I****		(IIB)	
CMFHC2(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A4		(IIC)	
CMFHC2(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A6		(IIB)	
CMFHC2(C.E)****(2.3.6.7.A.D.Q.W)*7****		(IIC)	
CMFHC2(C.E)****(2.3.6.7.A.D.Q.W)*7**** CIC A6		(IIC)	
CMFHC3(C.E)****(2.3.6.7.A.D.Q.W)*I****		(IIB)	
CMFHC3(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A4		(IIC)	
CMFHC3(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A6		(IIB)	
CMFHC3(C.E)****(2.3.6.7.A.D.Q.W)*7****		(IIC)	
CMFHC3(C.E)****(2.3.6.7.A.D.Q.W)*7**** CIC A6		(IIC)	
CMFHC4(C.E)****(2.3.6.7.A.D.Q.W)*I****		(IIB)	
CMFHC4(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A4		(IIC)	
CMFHC4(C.E)****(2.3.6.7.A.D.Q.W)*I**** CIC A6		(IIB)	
CMFHC4(C.E)****(2.3.6.7.A.D.Q.W)*7****		(IIC)	
CMFHC4(C.E)****(2.3.6.7.A.D.Q.W)*7**** CIC A6		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

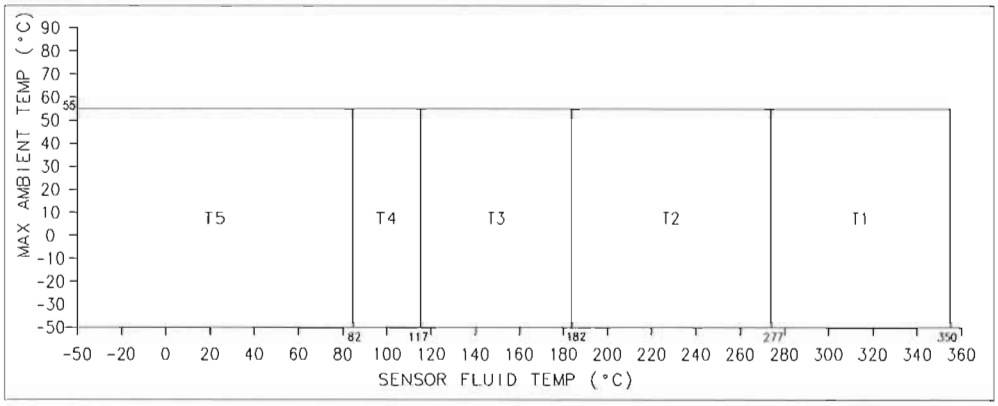
5 Type CMF***(A.B.C.E)****C*I**** High-temperature sensor with integral 1700/2700 transmitter

5.1 Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700**********

5.2 Temperature class
The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

5.2.1

Sensor type		
CMF200(A.B)****C*I****	(IIB)	With Integral 1700/2700 Transmitter
CMF200(A.B)****C*I**** CIC A5	(IIB)	
CMF200(A.B)****C*I**** CIC A4	(IIC)	
CMF200(A.B)****C*7****	(IIC)	
CMF200(A.B)****C*7**** CIC A7	(IIC)	
CMF300(A.B)****C*I****	(IIB)	
CMF300(A.B)****C*I**** CIC A5	(IIB)	
CMF300(A.B)****C*I**** CIC A4	(IIC)	
CMF300(A.B)****C*7****	(IIC)	
CMF300(A.B)****C*7**** CIC A7	(IIC)	
CMF350(A.B)****C*I****	(IIB)	
CMF350(A.B)****C*I**** CIC A5	(IIB)	
CMF350(A.B)****C*I**** CIC A4	(IIC)	
CMF350(A.B)****C*7****	(IIC)	
CMF350(A.B)****C*7**** CIC A7	(IIC)	
CMF400(A.B)****C*I****	(IIB)	
CMF400(A.B)****C*I**** CIC A5	(IIB)	
CMF400(A.B)****C*I**** CIC A4	(IIC)	
CMF400(A.B)****C*7****	(IIC)	
CMF400(A.B)****C*7**** CIC A7	(IIC)	
CMFHC2(A.B)****C*I****	(IIB)	
CMFHC2(A.B)****C*I**** CIC A6	(IIB)	
CMFHC2(A.B)****C*I**** CIC A4	(IIC)	
CMFHC2(A.B)****C*7****	(IIC)	
CMFHC2(A.B)****C*7**** CIC A6	(IIC)	
CMFHC3(A.B)****C*I****	(IIB)	
CMFHC3(A.B)****C*I**** CIC A6	(IIB)	
CMFHC3(A.B)****C*I**** CIC A4	(IIC)	
CMFHC3(A.B)****C*7****	(IIC)	
CMFHC3(A.B)****C*7**** CIC A6	(IIC)	
CMFHC4(A.B)****C*I****	(IIB)	
CMFHC4(A.B)****C*I**** CIC A6	(IIB)	
CMFHC4(A.B)****C*I**** CIC A4	(IIC)	
CMFHC4(A.B)****C*7****	(IIC)	
CMFHC4(A.B)****C*7**** CIC A6	(IIC)	

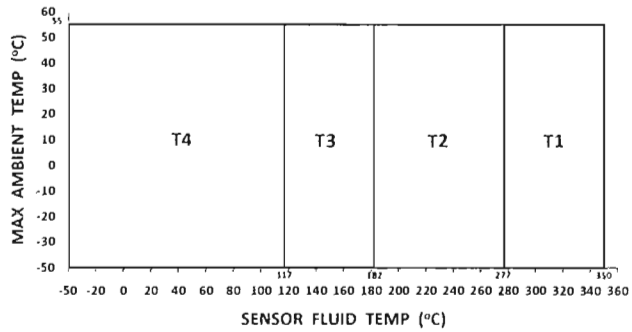


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

When used with Transmitter type *700*1*4****** (Wireless HART Output Option Code "4"):



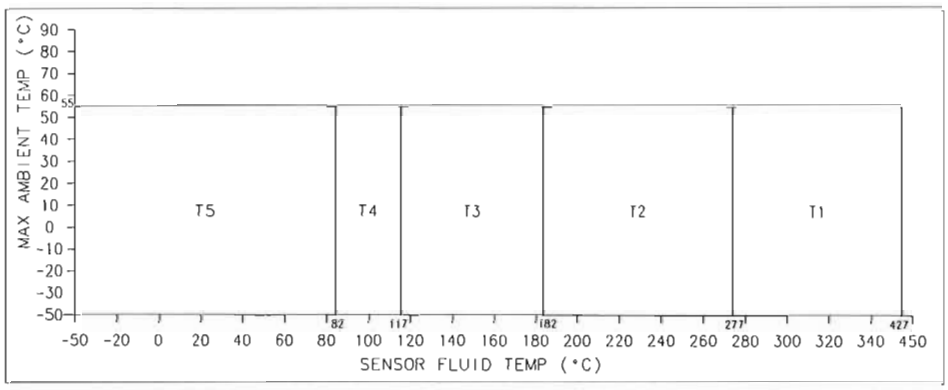
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5.2.2

Sensor type			
CMF200(C.E)****C*I****		(IIB)	With Integral 1700/2700 Transmitter
CMF200(C.E)****C*I**** CIC A5		(IIB)	
CMF200(C.E)****C*I**** CIC A4		(IIC)	
CMF200(C.E)****C*7****		(IIC)	
CMF200(C.E)****C*7**** CIC A7		(IIC)	
CMF300(C.E)****C*I****		(IIB)	
CMF300(C.E)****C*I**** CIC A5		(IIB)	
CMF300(C.E)****C*I**** CIC A4		(IIC)	
CMF300(C.E)****C*7****		(IIC)	
CMF300(C.E)****C*7**** CIC A7		(IIC)	
CMF350(C.E)****C*I****		(IIB)	
CMF350(C.E)****C*I**** CIC A5		(IIB)	
CMF350(C.E)****C*I**** CIC A4		(IIC)	
CMF350(C.E)****C*7****		(IIC)	
CMF350(C.E)****C*7**** CIC A7		(IIC)	
CMF400(C.E)****C*I****		(IIB)	
CMF400(C.E)****C*I**** CIC A5		(IIB)	
CMF400(C.E)****C*I**** CIC A4		(IIC)	
CMF400(C.E)****C*7****		(IIC)	
CMF400(C.E)****C*7**** CIC A7		(IIC)	
CMFHC2(C.E)****C*I****		(IIB)	
CMFHC2(C.E)****C*I**** CIC A6		(IIB)	
CMFHC2(C.E)****C*I**** CIC A4		(IIC)	
CMFHC2(C.E)****C*7****		(IIC)	
CMFHC2(C.E)****C*7**** CIC A6		(IIC)	
CMFHC3(C.E)****C*I****		(IIB)	
CMFHC3(C.E)****C*I**** CIC A6		(IIB)	
CMFHC3(C.E)****C*I**** CIC A4		(IIC)	
CMFHC3(C.E)****C*7****		(IIC)	
CMFHC3(C.E)****C*7**** CIC A6		(IIC)	
CMFHC4(C.E)****C*I****		(IIB)	
CMFHC4(C.E)****C*I**** CIC A6		(IIB)	
CMFHC4(C.E)****C*I**** CIC A4		(IIC)	
CMFHC4(C.E)****C*7****		(IIC)	
CMFHC4(C.E)****C*7**** CIC A6		(IIC)	

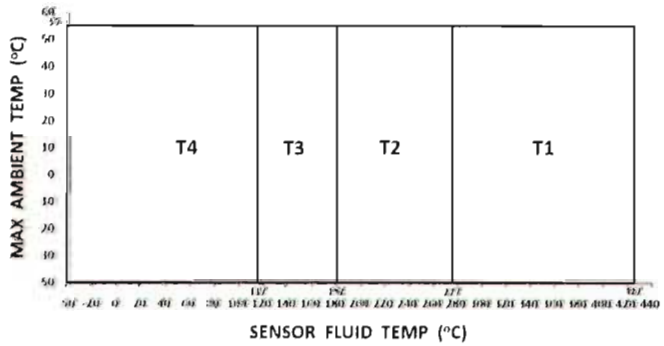


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

When used with Transmitter type *700*1***4**** (Wireless HART Output Option Code "4"):



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

6 Types CMF********(J.U)*I**** incl. CIC A4 with 2200S transmitter. except type CMF***(A.B.C.E)****J.U)*I****

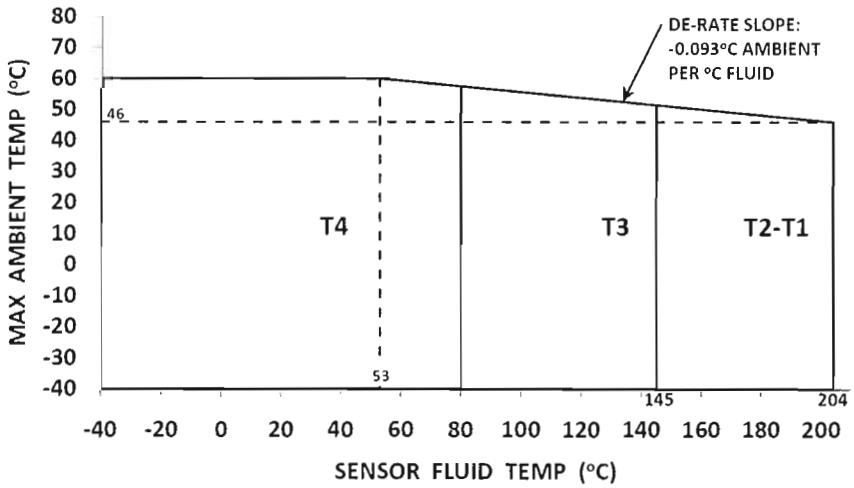
6.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

6.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

6.2.1

Sensor type	 CMF010	 CMF100	 CMF200/300	
CMF010*****(J.U)*I****			(IIC)	With integral 2200S
CMF025*****(J.U)*I****			(IIC)	
CMF050*****(J.U)*I****			(IIC)	
CMF100*****(J.U)*I****			(IIC)	
CMF200*****(J.U)*I**** CIC A3			(IIB)	
CMF200*****(J.U)*I**** CIC A4			(IIC)	
CMF200*****(J.U)*7****			(IIC)	
CMF300*****(J.U)*I**** CIC A3			(IIB)	
CMF300*****(J.U)*I**** CIC A4			(IIC)	
CMF300*****(J.U)*7****			(IIC)	

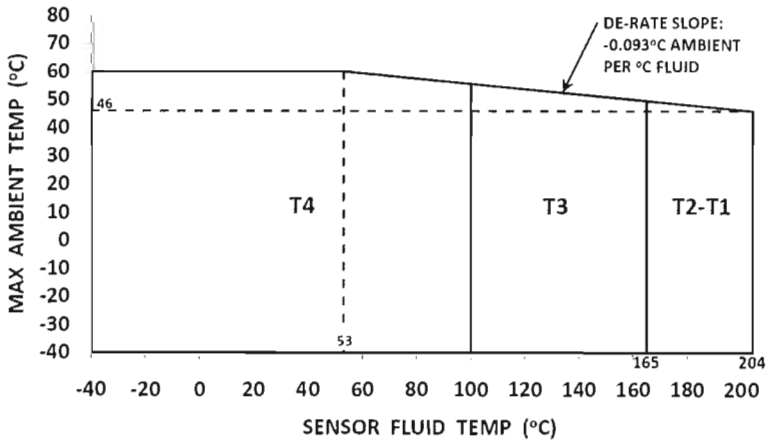


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.2

Sensor type		
CMF350*****(J.U)*I**** CIC A3	(IIB)	With integral 2200S
CMF350*****(J.U)*I**** CIC A4	(IIC)	
CMF350*****(J.U)*7****	(IIC)	
CMF400*****(J.U)*I**** CIC A3	(IIB)	
CMF400*****(J.U)*I**** CIC A4	(IIC)	
CMF400*****(J.U)*7****	(IIC)	

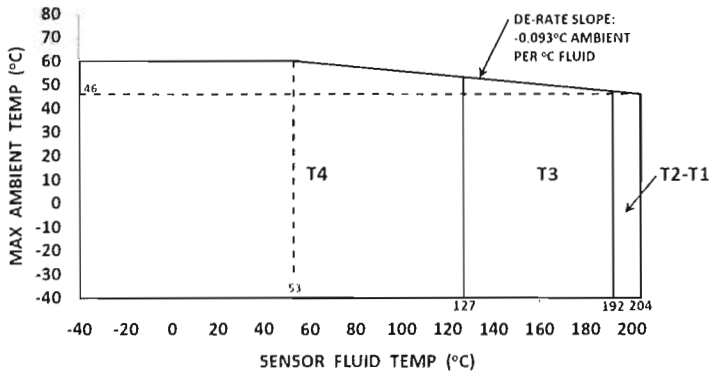


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.3

Sensor type		
CMFHC2*****(J.U)*I****	(IIB)	With integral 2200S
CMFHC2*****(J.U)*I**** CIC A4	(IIC)	
CMFHC2*****(J.U)*7****	(IIC)	
CMFHC3*****(J.U)*I****	(IIB)	
CMFHC3*****(J.U)*I**** CIC A4	(IIC)	
CMFHC3*****(J.U)*7****	(IIC)	
CMFHC4*****(J.U)*I****	(IIB)	
CMFHC4*****(J.U)*I**** CIC A4	(IIC)	
CMFHC4*****(J.U)*7****	(IIC)	

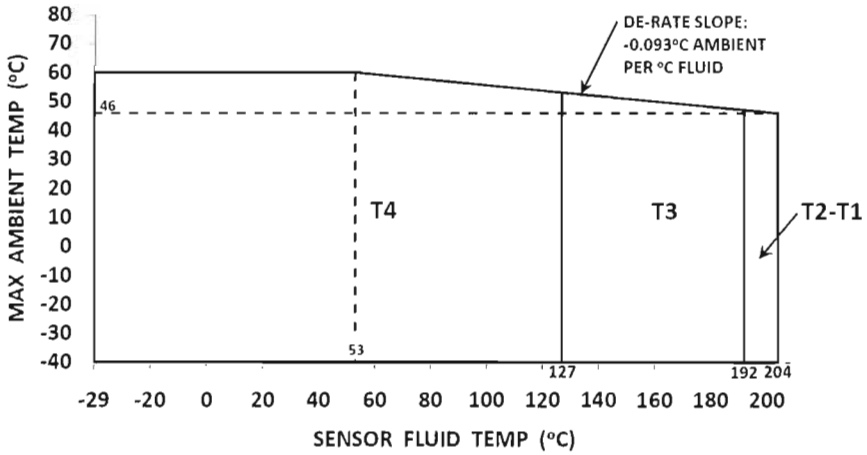


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -40 °C up to +60 °C

6.2.4

Sensor type		
CMFHC*Y****(J.U)*I****	(IIB)	With integral 2200S
CMFHC*Y****(J.U)*I**** CIC A4	(IIC)	
CMFHC*Y****(J.U)*7****	(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range	Ta	-40 °C up to +60 °C

7 Type CMF***(A.B.C.E)****J****** with integral 2200S transmitter.

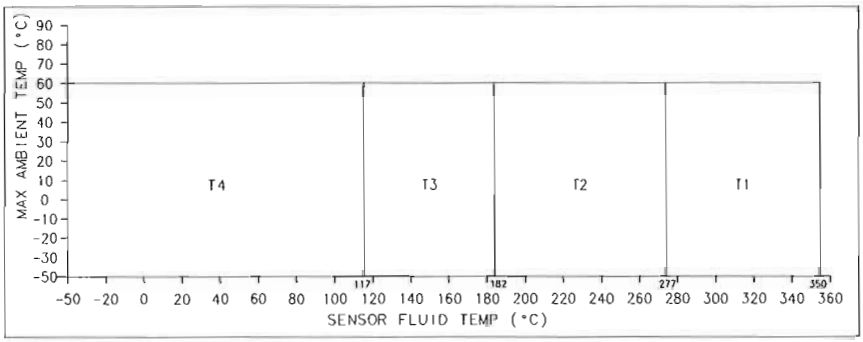
7.1 Input circuits (terminals 1 - 2)

Voltage	Ui	DC	28	V
Current	Ii		120	mA
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	µH

7.2 The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graph:

7.2.1

Sensor type		
CMF200(A.B)****J*I****	(IIB)	With integral 2200S
CMF200(A.B)****J*I**** CIC A4	(IIC)	
CMF200(A.B)****J*I**** CIC A5	(IIB)	
CMF200(A.B)****J*7****	(IIC)	
CMF200(A.B)****J*7**** CIC A7	(IIC)	
CMF300(A.B)****J*I****	(IIB)	
CMF300(A.B)****J)*I**** CIC A4	(IIC)	
CMF300(A.B)****J*I**** CIC A5	(IIB)	
CMF300(A.B)****J*7****	(IIC)	
CMF300(A.B)****J*7**** CIC A7	(IIC)	
CMF350(A.B)****J*I****	(IIB)	
CMF350(A.B)****J*I**** CIC A4	(IIC)	
CMF350(A.B)****J*I**** CIC A5	(IIB)	
CMF350(A.B)****J*7****	(IIC)	
CMF350(A.B)****J*7**** CIC A7	(IIC)	
CMF400(A.B)****J*I****	(IIB)	
CMF400(A.B)****J*I**** CIC A4	(IIC)	
CMF400(A.B)****J*I**** CIC A5	(IIB)	
CMF400(A.B)****J*7****	(IIC)	
CMF400(A.B)****J*7**** CIC A7	(IIC)	
CMFHC2(A.B)****J*I****	(IIB)	
CMFHC2(A.B)****J*I**** CIC A4	(IIC)	
CMFHC2(A.B)****J*I**** CIC A6	(IIB)	
CMFHC2(A.B)****J*7****	(IIC)	
CMFHC2(A.B)****J*7**** CIC A6	(IIC)	
CMFHC3(A.B)****J*I****	(IIB)	
CMFHC3(A.B)****J*I**** CIC A4	(IIC)	
CMFHC3(A.B)****J*I**** CIC A6	(IIB)	
CMFHC3(A.B)****J*7****	(IIC)	
CMFHC3(A.B)****J*7**** CIC A6	(IIC)	
CMFHC4(A.B)****J*I****	(IIB)	
CMFHC4(A.B)****J*I**** CIC A4	(IIC)	
CMFHC4(A.B)****J*I**** CIC A6	(IIB)	
CMFHC4(A.B)****J*7****	(IIC)	
CMFHC4(A.B)****J*7**** CIC A6	(IIC)	



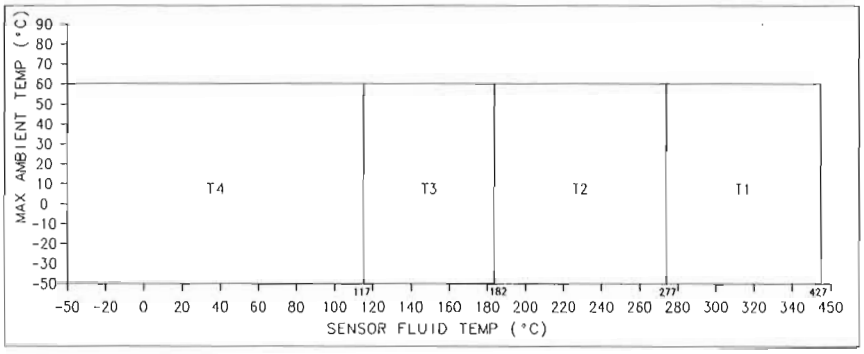
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

7.2.2

Sensor type			
CMF200(C.E)****J*I****		(IIB)	With integral 2200S
CMF200(C.E)****J*I**** CIC A4		(IIC)	
CMF200(C.E)****J*I**** CIC A5		(IIB)	
CMF200(C.E)****J*7****		(IIC)	
CMF200(C.E)****J*7**** CIC A7		(IIC)	
CMF300(C.E)****J*I****		(IIB)	
CMF300(C.E)****J*I**** CIC A4		(IIC)	
CMF300(C.E)****J*I**** CIC A5		(IIB)	
CMF300(C.E)****J*7****		(IIC)	
CMF300(C.E)****J*7**** CIC A7		(IIC)	
CMF350(C.E)****J*I****		(IIB)	
CMF350(C.E)****J*I**** CIC A4		(IIC)	
CMF350(C.E)****J*I**** CIC A5		(IIB)	
CMF350(C.E)****J*7****		(IIC)	
CMF350(C.E)****J*7**** CIC A7		(IIC)	
CMF400(C.E)****J*I****		(IIB)	
CMF400(C.E)****J*I**** CIC A4		(IIC)	
CMF400(C.E)****J*I**** CIC A5		(IIB)	
CMF400(C.E)****J*7****		(IIC)	
CMF400(C.E)****J*7**** CIC A7		(IIC)	
CMFHC2(C.E)****J*I****		(IIB)	
CMFHC2(C.E)****J*I**** CIC A4		(IIC)	
CMFHC2(C.E)****J*I**** CIC A6		(IIB)	
CMFHC2(C.E)****J*7****		(IIC)	
CMFHC2(C.E)****J*7**** CIC A6		(IIC)	
CMFHC3(C.E)****J*I****		(IIB)	
CMFHC3(C.E)****J*I**** CIC A4		(IIC)	
CMFHC3(C.E)****J*I**** CIC A6		(IIB)	
CMFHC3(C.E)****J*7****		(IIC)	
CMFHC3(C.E)****J*7**** CIC A6		(IIC)	
CMFHC4(C.E)****J*I****		(IIB)	
CMFHC4(C.E)****J*I**** CIC A4		(IIC)	
CMFHC4(C.E)****J*I**** CIC A6		(IIB)	
CMFHC4(C.E)****J*7****		(IIC)	
CMFHC4(C.E)****J*7**** CIC A6		(IIC)	



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Ambient temperature range Ta -50 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, since the electronics are mounted min.
1 meter away from the sensor by means of a flexible stainless steel hose and provided that the ambient temperature does not exceed the maximum temperature of the medium taking into accounts the temperature classification and the maximum operating temperature of the sensor.

Special conditions for safe use

By mounting the sensor type CMF********(J.U)****** directly to the transmitter 22**S********** the use of the unit will be modified according to the following:

Sensor type	
CMF010*****(J.U)*I****	CMF200*****(J.U)*I**** CIC A3
CMF025*****(J.U)*I****	CMF300*****(J.U)*I**** CIC A3
CMF050*****(J.U)*I****	CMF350*****(J.U)*I**** CIC A3
CMF100*****(J.U)*I****	CMF400*****(J.U)*I**** CIC A3
CMF200*****(J.U)*I**** CIC A4	CMFHC2*****(J.U)*I****
CMF200*****(J.U)*7****	CMFHC3*****(J.U)*I****
CMF300*****(J.U)*I**** CIC A4	CMFHC4*****(J.U)*I****
CMF300*****(J.U)*7****	CMFHC*Y****(J.U)*I****
CMF350*****(J.U)*I*** CIC A4	CMF200(A.B.C.E)****J*I****
CMF350*****(J.U)*7****	CMF200(A.B.C.E)****J*I**** CIC A5
CMF400*****(J.U)*I*** CIC A4	CMF300(A.B.C.E)****J*I****
CMF400*****(J.U)*7****	CMF300(A.B.C.E)****J*I**** CIC A5
CMFHC2*****(J.U)*I**** CIC A4	CMF350(A.B.C.E)****J*I****
CMFHC2*****(J.U)*7****	CMF350(A.B.C.E)****J*I**** CIC A5
CMFHC3*****(J.U)*I**** CIC A4	CMF400(A.B.C.E)****J*I****

	CMFHC3*****(J.U)*7**** CMFHC4*****(J.U)*I**** CIC A4 CMFHC4*****(J.U)*7**** CMFHC*Y****(J.U)*I**** CIC A4 CMFHC*Y****(J.U)*7**** CMF200(A.B.C.E)****J*I**** CIC A4 CMF200(A.B.C.E)****J*7**** CMF200(A.B.C.E)****J*7**** CIC A7 CMF300(A.B.C.E)****J*I**** CIC A4 CMF300(A.B.C.E)****J*7**** CMF300(A.B.C.E)****J*7**** CIC A7 CMF350(A.B.C.E)****J*I**** CIC A4 CMF350(A.B.C.E)****J*7**** CMF350(A.B.C.E)****J*7**** CIC A7 CMF400(A.B.C.E)****J*I**** CIC A4 CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CIC A7 CMFHC2(A.B.C.E)****J*I**** CIC A4 CMFHC2(A.B.C.E)****J*7**** CMFHC2(A.B.C.E)****J*I**** CIC A6 CMFHC3(A.B.C.E)****J*7**** CIC A4 CMFHC3(A.B.C.E)****J*I**** CMFHC3(A.B.C.E)****J*7**** CIC A6 CMFHC4(A.B.C.E)****J*7**** CIC A4 CMFHC4(A.B.C.E)****J*I**** CMFHC4(A.B.C.E)****J*7**** CIC A6	CMF400(A.B.C.E)****J*I**** CIC A5 CMFHC2(A.B.C.E)****J*I**** CMFHC2(A.B.C.E)****J*I**** CIC A6 CMFHC3(A.B.C.E)****J*I**** CMFHC3(A.B.C.E)****J*I**** CIC A6 CMFHC4(A.B.C.E)****J*I**** CMFHC4(A.B.C.E)****J*I**** CIC A6
Transmitter type 2200S***1*I****	Ex ib IIC T1-T4	Ex ib IIB T1-T4

By mounting the sensor type CMF********C****** directly to the transmitter *700********** the use of the unit will be modified according to the following:

	Sensor type	
Transmitter type	CMF200(A.B.C.E)****C*I**** CIC A4 CMF200(A.B.C.E)****C*7**** CMF200(A.B.C.E)****C*7**** CIC A7 CMF300(A.B.C.E)****C*I**** CIC A4 CMF300(A.B.C.E)****C*7**** CMF300(A.B.C.E)****C*7**** CIC A7 CMF350(A.B.C.E)****C*I**** CIC A4 CMF350(A.B.C.E)****C*7**** CMF350(A.B.C.E)****C*7**** CIC A7 CMF400(A.B.C.E)****C*I**** CIC A4 CMF400(A.B.C.E)****C*7**** CMF400(A.B.C.E)****C*7**** CIC A7 CMFHC2(A.B.C.E)****C*I**** CIC A4 CMFHC2(A.B.C.E)****C*7**** CMFHC2(A.B.C.E)****C*7**** CIC A6 CMFHC3(A.B.C.E)****C*I**** CIC A4	CMF200(A.B.C.E)****C*I**** CMF200(A.B.C.E)****C*I**** CIC A5 CMF300(A.B.C.E)****C*I**** CMF300(A.B.C.E)****C*I**** CIC A5 CMF350(A.B.C.E)****C*I**** CMF350(A.B.C.E)****C*I**** CIC A5 CMF400(A.B.C.E)****C*I**** CMF400(A.B.C.E)****C*I**** CIC A5 CMFHC2(A.B.C.E)****C*I**** CMFHC2(A.B.C.E)****C*I**** CIC A6 CMFHC3(A.B.C.E)****C*I**** CMFHC3(A.B.C.E)****C*I**** CIC A6 CMFHC4(A.B.C.E)****C*I**** CMFHC4(A.B.C.E)****C*I**** CIC A6

	CMFHC3(A.B.C.E)****C*7**** CMFHC3(A.B.C.E)****C*I**** CIC A6 CMFHC4(A.B.C.E)****C*I**** CIC A4 CMFHC4(A.B.C.E)****C*7**** CMFHC4(A.B.C.E)****C*I**** CIC A6	
*700*1(1.2)*******	Ex ib IIB+H_2 T1-T5	Ex ib IIB T1-T5
*700*1(3.4.5)*******	Ex ib IIC T1-T5	Ex ib IIB T1-T5
*700*1(1.2)4******	Ex ib IIB+H_2 T1-T4	Ex ib IIB T1-T4
*700*1(3.4.5)4******	Ex ib IIC T1-T4	Ex ib IIB T1-T4