

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: Optional accessory:	Sensor type CMF*** *******I****	
Type of Protection:	Intrinsic Safety	
Marking:	Ex ib IIB/IIC T1 - T5/T6	
Approved for issue of Certification Body:	n behalf of the IECEx	DrIng. Michael Wittler
Position:		Head of Testing Laboratory
Signature: (for printed version)		W: tols
Date:		02.04.2004
 This certificate and This certificate is no The Status and aut 	schedule may only be reproduced in fu ot transferable and remains the property thenticity of this certificate may be verified	ill. y of the issuing body. ed by visiting the Official IECEx Website.
Certificate issued by:		
EXAM BE	3G Prüf- und Zert	ifizier
	GmbH	
Fachstelle für Si	icherheit elektrischer Betriebsmitt Dinnendahlstrasse 9 44809 Bochum Germany	el – BVS BBG Prüf- und Zertifizier GmbH

	IECEx Certificate of Conformity			
Certificate No.:	IECEx BVS 04.0007X			
Date of Issue:	2004-04-02	Issue No.: 0		
		Page 2 of 4		
Manufacturer:	Micro Motion, inc. Boulder, Co. 80301 United States of America			
Manufacturing location(s):				
Micro Motion, I 7070 Winchester Boulder, CO 8030 United States of A	nc. Circle 01 America	Micro Motion Inc. Ave. Miguel de Cervantes 111 Complejo Industrial Chihuahua Chihuahua 31109 Mexico		
This certificate is issued as w found to comply with the IEC covered by this certificate, w certificate is granted subject as amended.	verification that a sample(s), repre Standard list below and that the as assessed and found to comply to the conditions as set out in IEC	sentative of production, was assessed and tested and manufacture'rs quality system, relating to the Ex products with the IECEx Quality system requirements. This Ex Scheme Rules, IECEx 02 and Operational Documents		
STANDARDS: The electrical apparatus and documents, was found to con	any acceptable variations to it sp nply with the following standards:	ecified in the schedule of this certificate and the identified		
IEC 60079-0 : 2000 Edition: 3.1	Electrical apparatus for explosi	ve gas atmospheres - Part 0: General requirements		
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosi	ve gas atmospheres - Part 11: Intrinsic safety 'i'		
This Certificate does not	indicate compliance with electrica expressly included in the S	al safety and performance requirements other than those Standards listed above.		
TEST & ASSESSMENT R A sample(s) of the equipmen	EPORTS: t listed has successfully met the e	examination and test requirements as recorded in		
IECEx ATR:		File Reference:		
DE/BVS/04/2024		A 20020547		



	IECEx Certificate of Conformity		
Certificate No.:	IECEx BVS 04.0007X		
Date of Issue:	2004-04-02	Issue No.: 0	
		Page 4 of 4	
ditional information:			
bject and type nsor type CMF*** ***** stead of the *** in the co lich characterize the foll	** **** mplete denomination letters and numeral owing variations:	s will be inserted	
e CMFaaa bbbbbcdlbb	ррр		
ere type of sensor			
marking without i	nfluence to the type of protection		
electronic interfac	06: Les steal integral signal processor for rom	otely mounted transmitter	
B = 4-wire stainle	ess steel integral signal processor with ext	ended mount for remotely mounted transmitter	
C = with transmit	ter type *700****		
F = with transmits R = 9-wire epoxy	er type */00**** with extender		
H = 9-wire epoxy	painted aluminum junction box with exter	nded mount	
Q = 4-wire epoxy	painted aluminum integral signal process	or for remotely mounted transmitter	
V = 4-wire epoxy mounted tra	painted aluminum integral signal process nsmitter	or with extended mount for remotely	
conduit connectio	n		





Certificate No.:

IECEX BVS 04.0007X Annex Page 1 of 8

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*1**** CMF025 *****C*1**** CMF050 *****C*1**** CMF100 *****F*1**** CMF010 *****F*1**** CMF025 *****F*1**** CMF050 *****F*1**** CMF100 *****F*1****	CMF200 *****C*1**** CMF300 *****C*1**** CMF200 *****F*1**** CMF300 *****F*1**** CMF400 *****C*1**** CMF400 *****F*1****
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 ЦВ T1-5
.Transmitter type *700*14******	Ex ib IIC T1-5	Ex ib IIB T1-5





Certificate No.: IECEx Annex

IECEx BVS 04.0007X Annex

Page 2 of 8

Parameters

1	Type CMF*** *****R*I**** and type CMF***	*****H*l****			
1.1	Drive circuit (connections 1 - 2 or red and brown))			
	Voltage	Ui	DC	11,4	V
	Current	li		2,45	Α
	Power	Pi		2,54	W

Effective internal capacitance

negligible

v

mA

шW

sensor type	inductance	coil resistance	serial resistor
	[mH]	at -20 °C [Ω]	at-20 °C [Ω]
CMF010 *****R*I****	2,51	86,8	946,6
CMF010 *****H*I****			
CMF025 *****R*1****	2,51	86,8	170,4
CMF025 *****H*l****			
CMF050 *****R*1****	2,51	86,8	170,4
CMF050 *****H*I****			
CMF100 *****R*1****	6,7	64,5	89
CMF100 *****H*I****			
CMF200 *****R*1****	10,4	65,7	24,7
CMF200 *****H*1****			
CMF300 *****R*1****	9	74,8	5,9
CMF300 *****H*1****			
CMF300A ****R*I****	8,5	63,2	31,3
CMF300A ****H*J****			

for type CMF400 *****R*l**** and type CMF400 *****H*l****

Effective inte	rnal capacitance			negligible
Sensor typ	e	Inductance	Coil resistance	Serial resistor
		[mH]	at -50 °C [Ω]	at-50 °C [Ω]
CMF400	*****R*I****	4,4	15,72	38,56
CMF400	*****H*]****			

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

 Voltage
 Ui
 DC
 30

 Current
 Ii
 101

 Power
 Pi
 750





Certificate No.:

IECEx BVS 04.0007X Annex Page 3 of 8

Effective internal capacitance

negligible

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

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

Effective internal capacitance

negligible

Sensor type	Inductanee	Coil resistance	Serial resistor
	[mH]	at -50 °C [Ω]	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	li	101	mA		
	Power	Pi	750	mW		
	Effective internal capacitance	Ci	negligible			
	Effective internal inductance	Li	negligible			





Certificate No.:

IECEx BVS 04.0007X Annex Page 4 of 8

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*I**** and type CMF300A ****H*I**** 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 -20°C.





Certificate No.:

IECEx BVS 04.0007X Annex Page 5 of 8

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.

1.5for all types CMF*** *****(R or H)*1**** except CMF400 *****(R or H)*1****
Ambient temperature rangeTa-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)*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	Li		484	mA
	Power	Pi		2,1	W
	Effective internal capacitance	Ci		2200	pF
	Effective internal inductance	Li		30	μH





Certificate No.: IECEx BVS 04.0007X Annex Page 6 of 8

- 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)*J****

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

Та

-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 Annex Page 7 of 8

- 3.2 Regulation of temperature class
- 3.2.1 for all types CMF*** *****(C or F)*1**** except CMF400 *****(C or F)*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

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 Page 8 of 8

Marking

The name of the manufacturer or his trademark Serial number

Certificate number

Туре	Type of protection	Ambient temperature range
CMF010 ***** ¹)*1****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF025 ***** ¹)*1****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF050 ***** ¹⁾ *1****	Ex ib IIC T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF100 ***** ¹⁾ *I****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF200 ***** ¹⁾ *I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ¹⁾ *1****	Ex ib IIB T1-T6	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF300A **** ¹⁾ *I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 ***** ¹⁾ *J****	Ex ib IIB T1-T6	$-50^{\circ}C \le Ta \le +60^{\circ}C$
CMF010 ***** ²⁾ *1****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 **** ²⁾ *1****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF050 ***** ²⁾ *1****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF100 **** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF200 ***** ²⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55 \ ^{\circ}C$
CMF300 ***** ²⁾ *1****	Ex ib 11B T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF400 ***** ²⁾ *1****	Ex ib IIB T1-T5	$-40^{\circ}C \le Ta \le +60^{\circ}C$
CMF010 ***** ³⁾ *1****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF025 ***** ³⁾ *1****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF050 ***** ³⁾ *1****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55 \ ^{\circ}C$
CMF100 ***** ³⁾ *1****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF200 ***** ³⁾ *1****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF300 ***** ³⁾ *1****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF400 ***** ³⁾ *1****	Ex ib 11B T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$

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



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

Certificate No.:	IECEx BVS 04.0007X	Issue No.: 1
Status:	Current	
Date of Issue:	2005-03-01	Page 1 of 5
Applicant:	Micro Motion, Inc. Boulder. Co. 80301 United States Of America	
Electrical Apparatus: Optional accessory:	Sensor type CMF*** ****** ****	
Type of Protection:	Intrinsic Safety	
Marking:	Ex ib IIB/IIC T1 - T5/T6	
Approved for issue or Certification Body:	n behalf of the IECEx	Dr. R. Jockers
Position:		Head of Certification Body
Signature: (for printed version) Date:		Con. 03, 2005
 This certificate and This certificate is no The Status and aut 	schedule may only be reproduced in full. ot transferable and remains the property of henticity of this certificate may be verified	of the issuing body. by visiting the Official IECEx Website.
Certificate issued by:		
EXAM BE	G Prut- und Zertif	izier
Fachstelle für Si	GmbH cherheit elektrischer Betriebsmittel Dinnendahlstrasse 9 44809 Bochum Germany	- BVS BBG Prüf- und Zertifizier GmbH

	IEC	CEx Certificate f Conformity
Certificate No.:	IECEx BVS 04.0007	x
Date of Issue:	2005-03-01	Issue No.: 1
		Page 2 of 5
Manufacturer:	Micro Motion, inc. Boulder, Co. 80301 United States of Americ	ca
Manufacturing location(s):		
Micro Motion, 7070 Winchester Boulder, CO 803 United States of A	Inc. Circle 01 America	Micro Motion Inc. Ave. Miguel de Cervantes 111 Complejo Industrial Chihuahua Chihuahua 31109 Mexico
This certificate is issued as a found to comply with the IEC covered by this certificate. w certificate is granted subject as amended.	verification that a sample(s), re Standard list below and that as assessed and found to con to the conditions as set out in	presentative of production, was assessed and tested and the manufacture'rs quality system, relating to the Ex products nply with the IECEx Quality system requirements. This IECEx Scheme Rules, IECEx 02 and Operational Documents
STANDARDS: The electrical apparatus and documents, was found to co	any acceptable variations to i mply with the following standa	t specified in the schedule of this certificate and the identified rds:
IEC 60079-0 : 2000 Edition: 3.1	Electrical apparatus for exp	losive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for exp	losive gas atmospheres - Part 11: Intrinsic safety 'i'
This Certificate does not	indicate compliance with elec expressly included in t	trical safety and performance requirements other than those he Standards listed above.
TEST & ASSESSMENT R A sample(s) of the equipmer	EPORTS: t listed has successfully met t	he examination and test requirements as recorded in
IECEx ATR:		File Reference;
DE/BVS/04/2024		A 20020547
DE/BVS/04/2024/N1		A 20040753



Certificate No.:

IECEx BVS 04.0007X

Date of Issue:

2005-03-01

Issue No.: 1

Page 3 of 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. 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*1****	CMF200 *****C*I
	CMF025 *****C*I****	CMF300 *****C*I
	CMF050 *****C*I****	CMF200 ***** F*1/***
	CMF100 *****C*I****	CMF300 *****F*I****
	CMF010 *****F*I****	CMF400 *****F*I****
	CMF025 *****F*1****	CMF400 *****C*I****
	CMF050 *****F*1****	
	CMF100 *****F*1****	
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



Certificate No.:

IECEx BVS 04.0007X

Date of Issue:

2005-03-01

Issue No.: 1

Page 4 of 5

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

<u>Description</u>

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 ****** [****, CMF300 ****** and CMF400 ****** 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.

IEC IECE	IECE: of C	c Certificate conformity
Certificate No.:	IECEx BVS 04.0007X	
Date of Issue:	2005-03-01	Issue No.: 1
		Page 5 of 5
ditional informatior	n:	
ubject and type ensor type CMF*** **** istead of the *** in the c hich characterize the fo pe CMFaaa bbbbbcdIb	**** **** omplete denomination letters and numer illowing variations: obbbb	als will be inserted
nere		
type of sensor marking without	influence to the type of protection	
electronic interfa	ace:	
A = 4-wire stain	less steel integral signal processor for rea	notely mounted transmitter
B = 4-wire stain	less steel integral signal processor with e	xtended mount for remotely mounted transmitter
C = with transmi	itter type *700****	
F = with transmi	tter type *700**** with extender	
R = 9-wire epox	y painted aluminum junction box	
R = 9-wire epox	y painted aluminum junction box with ext	ended mount
U = 4-wire epox	y painted aluminum integral signal proce	ssor for remotely mounted transmitter
mounted tr	ansmitter	sor with extended modificion semolery
conduit connecti	ion	

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





Certificate No.:

IECEx BVS 04.0007X Issue 1 Annex

Page 1 of 7

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 CMFaaa bbbbbcdIbbbb

where

b

- а type of sensor
 - marking without influence to the type of protection
- electronic interface: с
 - 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*[****.

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 *****F*I**** CMF010 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I***	CMF200 *****C*1**** CMF300 *****C*1**** CMF200 *****F*1**** CMF300 *****F*1**** CMF400 *****C*1**** CMF400 *****F*1****
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)





Certificate No.: IECEx BVS 04.0007X Issue 1 Annex Page 2 of 7

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	Iì		2,45	Α
	Power	Pi		2,54	W
	effective internal capacitance			negli	gible

Sensor type	Inductance	Coil resistance	Serial resistor
	[ml+]	[Ω]	[Ω]
CMF200 ***** I**** CIC A3	9,5	102,6	0
CMF200 ***** ²)*]**** CIC A3 CMF200 ***** ³)*]**** CIC A3		at -20 °C	
CMF300 ***** ¹ * [**** CIC A3	9,5	102,6	0
CMF300 ***** ^{2]} *[**** CIC A3 CMF300 ***** ^{3]} *[**** CIC A3		at -20 °C [Ω]	
CMF400 ***** ¹¹ *1**** CIC A3	11,75	79.2	19,8
CM] ² 400 ***** ²)*1**** CIC A3 CMJ ² 400 ***** ³ 1*1**** CIC A3		at -50 °C [Ω]	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 wir	es green/white and blue/gre	y)		
	Voltage	Ui	DC	30	V
	Current	ſi		101	mA
	Power	Pi		750	mW
	effective internal capacitance	Ci		ne	gligible





Certificate No.:

IECEx BVS 04.0007X Issue 1 Annex

Page 3 of 7

Sensor type	Inductance [m11]	Coil resistance	Serial resistor
		[Ω]	[Ω]
CMF200 ***** ^D *I**** CIC A3	2.0	46,3	0 - 567,9
CMF200 ***** ²¹ 01**** CIC A3		at -20 °C	at -20 °C
CMF200 ***** CICA3			
CMF300 ***** Us leave CIC A3	2.0	46,3	0 - 567,9
CMF300 ***** ⁻ '*1**** CIC A3 CMF200 **** ³ *1**** CIC A3		at -20 °C	at -20 °C
CMF400 ****** CIC A3	12,4	121,8	0 - 566,4
CMF400 ***** ²⁾ *1**** CIC A3 CMF400 ***** ³⁾ *1**** CIC A3		at -50 °C	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*J**** 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





Certificate No.: IECEx BVS 04.0007X Issue 1 Annex Page 4 of 7

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

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

Ta

-50 °C up to +60 °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.





Certificate No.: IECEx BVS 04.0007X Issue 1 Annex Page 5 of 7

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)*1**** Construction Identification Code (CIC) A3



Minimum medium temperature is -40°C.

Ambient temperature range

Та

-40 °C up to +60 °C





Certificate No.:

IECEx BVS 04.0007X Issue 1 Annex Page 6 of 7

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







Certificate No.:

IECEx BVS 04.0007X Issue 1

Annex Page 7 of 7

Minimum medium temperature is -40°C.

Ambient temperature range

Та

-40 °C up to +55 °C

<u>Markinq</u>

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

Туре	Type of protection	Ambient temperature
		range
CMF010 ***** ¹⁾ *!****	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**** incl.	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ¹⁾ *I**** CIC A3		
CMF300 ***** ¹⁾ *J**** incl.	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ¹⁾ *I**** CIC A3		
CMF300A **** ¹⁾ *I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≲ +55 °C
CMF400 ***** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF400 ***** ¹⁾ *I**** CIC A3		
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⁾ *1**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ²⁾ *1**** CIC A3		
CMF300 ***** ²)*I**** incvl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ²)*I**** CIC A3		
CMF400 ***** ^{2}} *I**** incl.	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF400 ******21*1**** CIC A3		
CMF010 *****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF025 *****	Ex ib IIC T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF050 ***** ³⁾ *1****	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**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ³⁾ *I**** CIC A3		
CMF300 ***** ³)*I**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ³⁾ *I**** CIC A3		
CMF400 ***** ³⁾ *I**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 ***** ³⁾ *I**** CIC A3		

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

	<
--	---

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 Dr. R. Jockers Certification Body: Head of Certification Body Position: 8.6.02 Jakus Signature: (for printed version) Date: 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 BBG Prüf- und Zertifizier GmbH** 44809 Bochum

Germany

	IEC of	Ex Certificat Conformity	e
Certificate No .:	IECEx BVS 04.0007X		
Date of Issue:	2006-06-02	Issue No.: 2	
		Page 2 of 5	
Manufacturer:	Micro Motion, inc. Boulder, Co. 80301 United States of America	I	
Manufacturing location(s):			
Micro Motion,	Inc.	Micro Motion Inc.	
7070 Wincheste Boulder, CO 80	er Circle 301	Ave. Miguel de Cervantes 111 Compleio Industrial	
United States of	f America	Chihuahua	
		México	
covered by this certificate, certificate is granted subject as amended.	was assessed and found to com ct to the conditions as set out in I	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O	perational Doc
STANDARDS: The electrical apparatus ar documents, was found to d	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standar	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific	arements. This perational Doc
STANDARDS: The electrical apparatus ar documents, was found to do IEC 60079-0 : 2000 Edition: 3.1	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: psive gas atmospheres - Part 0: Genera	al requirements
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: psive gas atmospheres - Part 0: Gener psive gas atmospheres - Part 11: Intrin	al requirements al requirements
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to co IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: psive gas atmospheres - Part 0: Genera psive gas atmospheres - Part 11: Intrine	al requirements in the ide
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: Gener osive gas atmospheres - Part 11: Intrin	al requirements al requirements
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com of to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: Genera osive gas atmospheres - Part 11: Intrine	al requirements. This
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: Gener osive gas atmospheres - Part 11: Intrine	al requirements al requirement
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com of to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: General osive gas atmospheres - Part 11: Intrins	irements. This perational Doc ate and the ide al requirement sic safety 'i'
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com of to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: Gener osive gas atmospheres - Part 11: Intrine	irements. This perational Doc ate and the ide al requirement sic safety 'i'
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo Electrical apparatus for explo ot indicate compliance with elect expressly included in th	by with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: General psive gas atmospheres - Part 11: Intrins psive gas atmospheres - Part 11: Intrins psive gas atmospheres - Part 11: Intrins	ents other than
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4	was assessed and found to com to the conditions as set out in i comply with the following standard Electrical apparatus for explo Electrical apparatus for explo electrical apparatus for explo	bly with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: Gener osive gas atmospheres - Part 11: Intrine osive gas atmospheres - Part 11: Intrine	irements. This perational Doc ate and the ide al requirement sic safety 'i'
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to co IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4 This Certificate does no TEST & ASSESSMENT A sample(s) of the equipmont	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo Electrical apparatus for explo et indicate compliance with elect expressly included in the REPORTS: ent listed has successfully met the	by with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: General osive gas atmospheres - Part 11: Intrins osive gas atmospheres - Part 11: Intrins o	irements. This perational Doc al requirement sic safety 'i' ents other than
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4 This Certificate does m TEST & ASSESSMENT A sample(s) of the equipmed IECEx ATR:	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	by with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: Gener osive gas atmospheres - Part 11: Intrine osive gas atmospheres - Part 11: Intrine	irements. This perational Doc al requirement sic safety 'i' ents other than
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4 This Certificate does not TEST & ASSESSMENT A sample(s) of the equipmont IECEx ATR: DE/BVS/04/2024	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	by with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: General psive gas atmospheres - Part 11: Intrins psive gas atmospheres - Part 11: Intrins p	irements. This perational Doc al requirement sic safety 'i' ents other than
STANDARDS: STANDARDS: The electrical apparatus ar documents, was found to c IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4 This Certificate does m TEST & ASSESSMENT A sample(s) of the equipmed IECEx ATR: DE/BVS/04/2024 DE/BVS/04/2024/N1	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	by with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: psive gas atmospheres - Part 0: Gener psive gas atmospheres - Part 11: Intrins psive gas atmospheres - Part 11: Intrins psi	irements. This perational Doc ate and the ide al requirement sic safety 'i' ents other than s recorded in
STANDARDS: The electrical apparatus ar documents, was found to co IEC 60079-0 : 2000 Edition: 3.1 IEC 60079-11 : 1999 Edition: 4 This Certificate does no TEST & ASSESSMENT A sample(s) of the equipmon IECEx ATR: DE/BVS/04/2024/N1 DE/BVS/04/2024/N1 DE/BVS/04/2024/N2	was assessed and found to com ct to the conditions as set out in I and any acceptable variations to it comply with the following standard Electrical apparatus for explo Electrical apparatus for explo	by with the IECEx Quality system requ ECEx Scheme Rules, IECEx 02 and O specified in the schedule of this certific ds: osive gas atmospheres - Part 0: General psive gas atmospheres - Part 11: Intrins psive gas atmospheres - Part 11: Intrins p	ents other than



Certificate No .:

IECEx BVS 04.0007X

Date of Issue:

2006-06-02

Issue No.: 2

Page 3 of 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. 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:

N A NO 1 N	and the second second
CMF010 *****C*I****	CMF200 *****C*I****
CMF025 *****C*I****	CMF300 *****C*I****
CMF050 *****C*I****	CMF200 *****F*I****
CMF100 *****C*I****	CMF300 *****F*J****
CMF010 *****F*!****	CMF400 *****F*J****
CMF025 *****F*I****	CMF400 *****C*I****
CMF050 *****F*I****	
CMF100 *****F*I****	
Ex ib IIB+H2 T1-5	Ex ib IIB T1-5
Ex ib IIC T1-5	Ex ib IIB T1-5
Ex ib IIC T1-5	Ex ib IIB T1-5
	CMF010 *****C*I**** CMF025 *****C*I**** CMF050 *****C*I**** CMF010 *****C*I**** CMF025 *****F*I**** CMF025 *****F*I**** CMF050 *****F*I**** CMF100 *****F*I**** Ex ib IIB+H2 T1-5 Ex ib IIC T1-5 Ex ib IIC T1-5



Certificate No.:

Date of Issue:

2006-06-02

IECEx BVS 04.0007X

Issue No.: 2

Page 4 of 5

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 *******, CMF300 ******* and CMF400 ******* 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)*1****, CMF300*****(R, H, S)*1**** and CMF400*****(R, H, S)*1**** 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)*1**** for a steel enclosure and CMF********(2, 4)*1**** for an aluminium enclosure.

The high temperature version CMF*** (A, B, C, E)****** 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.

		IEĈEx	IECE of	Ex Certificate Conformity
Certifi	cate No	D .:	IECEx BVS 04.0007X	
Date	of Issue	e:	2006-06-02	Issue No.: 2
				Page 5 of 5
Additio	nal inf	formation: <u> pe</u> ME*** *******		
Instead which c	of the '	*** in the complete erize the following	denomination letters and nurverse	merals will be inserted
type CN	Faaa	ebbbbcdlbbbbb		
where				
а	type	of sensor		
b	mark	ing without influen	ce to the type of protection	
с	elect	ronic interface:		
	A =	stainless steel er	nclosure with 4-wire integral s	signal processor for remotely mounted transmitter
	В =	stainless steel er mounted transm	nclosure with 4-wire integral s	signal processor with extended mount for remotely
	C =	with transmitter t	type *700****	
	F =	with transmitter t	type *700**** with extender	
	R =	9-wire epoxy pai	inted aluminum junction box	
	H =	9-wire epoxy pai	inted aluminum junction box v	with extended mount
	Q =	epoxy painted al transmitter	uminum enclosure with 4-wir	e integral signal processor for remotely mounted
	V =	epoxy painted al remotely mounted	luminum enclosure with 4-wir ed transmitter	e integral signal processor with extended mount for
	S =	9-wire stainless	steel junction box	n an
	2 =	aluminium enclo	sure with integral signal proc	essor type 800 (IECEx BVS 05.0010U)
	3 =	stainless steel e	nclosure with integral signal p	processor type 800 (IECEx BVS 05.0010U)
	4 =	aluminium enclo	sure with integral signal proc	essor type 800 (IECEx BVS 05.0010U) and with extend
н -	5 =	stainless steel e extender	nclosure with integral signal p	processor type 800 (IECEx BVS 05.0010U) and with
d	cond	uit connection		
e	High	temperature version	ons	
ų Vietos	A = B = C =	Stainless Steel 1 HY Tube 350°C Stainless Steel 1	Tube 350°C Tube 427°C	

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

. 3





Certificate No.:

IECEx BVS 04.0007X Issue 2 Annex Page 1 of 14

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:

C M F *	* * * * * * * * * * * * * *	
		Marking without influence to the type of protection
		etter for conduit connections
		etter for electronic interface = aluminium enhanced core processor = stainless enhanced core processor = aluminium enhanced core processor with extender
	5	= stainless enhanced core processor with extender = local core processor
	B	B = local core processor with extenderC = integral 1700/2700
	F R H	= integral 1700/2700 with extender = with junction box for 9-wire I = 9 wire junction box with extender
		 aluminium core processor aluminium core processor with extender 9-wire Stainless junction box
	N The second sec	Aarking without influence to the type of protection
	A B	A = High Temp. Stainless Steel Tube 350°C B = High Temp. HY Tube 350°C
x	C E C	C = High Temp. Stainless Steel Tube 427°C = High Temp. HY Tube 427°C Other marking without influence to the type of protection
	<u> </u>	numerals for type of sensor

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:

	CMF010*****(C, F)*I****	CMF200*****(C, F)*I****
	CMF025*****(C, F)*I****	CMF300*****(C, F)*I****
Transmitter	CMF050*****(C, F)*I****	CMF400*****(C, F)*I****
1 Idensitieter	CMF100*****(C, F)*I****	CMF200(A, B, C, E)*****(C or F)*I****
type	CMF100*****(C, F)*I**** C.I.C. A4	CMF300(A, B, C, E)*****(C or F)*I****
	CMF200*****(C, F)*I**** C.I.C A4	CMF400(A, B, C, E)*****(C or F)*I****
	CMF300*****(C, F)*I**** C.I.C A4	
	CMF400*****(C, F)*I**** C.I.C A4	
*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



IECEx BVS 04.0007X Issue 2 Annex Page 2 of 14

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	А
	Power	Pi		2,54	W

Ci

negligible

Effective internal capacitance

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	1 77, 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



IECEx BVS 04.0007X Issue 2 Annex Page 3 of 14

101	mA
101	mΔ
30	V
	30

Effective internal capacitance

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)* l **** CIC A3	2,0	41,9 38,7	0 to 567,9	-40 -55
CMF200*****(R , H , S)*I**** CIC A4	2,0		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 to 566,4	-240

1.3

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

	i emperature ene	una (terumana 5	, T and 7 OI	whes orange, yenow a			
	Voltage			Ui	DC	30	v
	Current		4	Ii		101	mA
	Power		a	Pi		750	mW
	Effective internal	capacitance		Ci		ne	gligible
٩	Effective internal	inductance		Li	,	ne	gligible

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



IECEx BVS 04.0007X Issue 2 Annex Page 4 of 14

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)*1**** 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.



IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 2 Annex Page 5 of 14

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.



IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 2 Annex Page 6 of 14

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



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



IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 2 Annex Page 7 of 14

Ambient temperature rangeTa $-240 \ ^{\circ}C$ up to $+60 \ ^{\circ}C$ The use of the sensor at higher ambient temperatures than $+60 \ ^{\circ}C$ is possible, provided that the ambienttemperature does not exceed the maximum temperature of the medium taking into account thetemperature 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	Α
Power	Pi		2,54	W
Effective internal capacitance	Ci		negli	gible

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)

		- 0				
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	D	C 30	V
Current		ſi		101	mA
Power		Pi		750	mW
Effective internal capacitance	,	Ci			negligible
Effective internal inductance		Li			negligible

Thermal data

2.4

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



IECEx BVS 04.0007X Issue 2 Annex Page 8 of 14

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



IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 2 Annex Page 9 of 14

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







IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 2 Annex Page 10 of 14

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.



IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 2 Annex Page 11 of 14

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. I 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.

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

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

Temperature class

4

4.1

4.2

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**** and CMF200*****(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.

Ta

Ambient temperature range

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

-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





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 13 of 14



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 rangeTa $-50 \,^{\circ}\text{C}$ up to $+55 \,^{\circ}\text{C}$ The use of the sensor at higher ambient temperatures than $+55 \,^{\circ}\text{C}$ is possible, since the electronics aremounted min. 1 meter away from the sensor by means of a flexible stainless steel hose and provided thatthe ambient temperature does not exceed the maximum temperature of the medium taking into accountthe temperature classification and the maximum operating temperature of the sensor.





Certificate No.:

IECEx BVS 04.0007X Issue 2 Annex Page 14 of 14

Marking

1)

2)

4)

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

Туре	Type of protection	Ambient/Fluid temperature
		range
CMF010 ***** ¹)*I****	Ex ib IIC T1-T6	$-240 \text{ °C} \le \text{Ta} \le +55 \text{ °C}$
CMF025 ***** ¹⁾ *I****	Ex ib IIC T1-T6	- 240 °C \leq Ta \leq +55 °C
CMF050 ***** ¹⁾ *I****	Ex ib IIC T1-T6	- 240 °C \leq Ta \leq +55 °C
CMF100***** ¹ *I****	Ex ib IIC T1-T6	$-60 \text{ °C} \le \text{Ta} \le +55 \text{ °C}$
CMF200 ***** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	$-55 \text{ °C} \le \text{Ta} \le +55 \text{ °C}$
CMF200 ***** ¹⁾ *I**** CIC A3		
CMF200 ***** ¹)*I**** CIC A4	Ex ib IIC T1-T6	$-240 \circ C \le Ta \le +55 \circ C$
CMF200 ⁴⁾ **** ¹⁾ *I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF300 ***** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	$-55 ^{\circ}\text{C} \le \text{Ta} \le +55 ^{\circ}\text{C}$
CMF300 ***** ¹⁾ *I**** CIC A3	the second second	т 1 страна и проделени страна и проделени 1 страна и проделени страна и продел
CMF300 ***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	-240 °C \leq Ta \leq +55 °C
CMF300 ⁴⁾ **** ¹⁾ *I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C
CMF400 ***** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	$-68 \ ^{\circ}C \le Ta \le +60 \ ^{\circ}C$
CMF400 ***** ¹)*I**** CIC A3		
CMF400 ***** ¹)*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +60 °C
CMF400 ⁴⁾ **** ¹⁾ *I****	Ex ib IIB T1-T6	$-50 \circ C \le Ta \le +55 \circ C$
CMF010 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-40 \ ^{\circ}C \le Ta \le +55 \ ^{\circ}C$
CMF025 ***** ²⁾ *I****	Ex ib IIC T1-T5	-40 °C \leq Ta \leq +55 °C
CMF050 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-40 \ ^{\circ}C \le Ta \le +55 \ ^{\circ}C$
CMF100 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF200 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	- 40 °C \leq Ta \leq +55 °C
CMF200 ***** ²⁾ *I**** CIC A3		1
CMF200 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	$-40 \text{ °C} \le \text{Ta} \le +55 \text{ °C}$
CMF200 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	$-50 \circ C \le Ta \le +55 \circ C$
CMF300 ***** ²⁾ *[**** incl.	Ex ib IIB T1-T5	- 40 °C \leq Ta \leq +55 °C
CMF300 ***** ²⁾ *I**** CIC A3	in the second seco	· · · ·
CMF300 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF300 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	$-50 \degree C \le Ta \le +55 \degree C$
CMF400 ***** ²⁾ *1**** incl.	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +60 °C
CMF400 ***** ²⁾ *I**** CIC A3		
CMF400 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	$-40 \degree C \le Ta \le +55 \degree C$
CMF400 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	$-50 \circ C \le Ta \le +55 \circ C$

at this place the letter R, H or S may be inserted

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

at this place the letter A, B, C or E may be inserted



Zertifizlerungsstelle

Carl-Beyling-Haus Dinnendahlstrasse 9 44809 Bochum

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

EXAM · Poslfach 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. dligende i.V. With

(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 HR8 5357

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

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



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)		
Status:	Current		'sagena et	Issue No. 2 (2006-6-2)		
Date of Issue:	2007-08-01	Page 1 of 5				
Applicant:	Micro Motion, Inc. Boulder, Co. 80301 United States of Ame	rica				
Electrical Apparatus: Optional accessory:	Sensor type CMF*** ***/	**** ****				
Type of Protection:	Intrinsic Safety					
Marking:	Ex ib IIB/IIC T1 - T5/T6					
Approved for issue on be Certification Body:	half of the IECEx	Dr. R. Jockers				
Position:		Head of Certification Body				
Signature: (for printed version) Date:		Jukus 01.08.2	007	_		
 This certificate and schedule may only be reproduced in full. This certificate is not transferable and remains the property of the issuing body. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website. 						
Certificate issued by:	್ ಕ್ರಮ ಕಾರ್ಯಕ್ರಮ ಪ್ರದಾ ಕಾರ್ಥಿಕ್ರಿಗೆ ಗ್ರಹಿತಿಯನ್ನು ಹೊಳಿಸುವುದು ಕರ್ನಾ	1 1 1 1 1 1 1 1 more madement	• · ·			
DE Dir	KRA EXAM GmbH mendahlstrasse 9 44809 Bochum Germany			EXAM GmbH		



Certificate No.: Date of Issue: IECEx BVS 04.0007X

2007-08-01

Issue No.: 3

Page 2 of 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

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
 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements

 Edition: 4.0
 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

 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



Certificate No .:

IECEx BVS 04.0007X

Date of Issue:

2007-08-01

Issue No.: 3

Page 3 of 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. 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



Certificate No.: Date of Issue: IECEx BVS 04.0007X

2007-08-01

Issue No.: 3

Page 4 of 5

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 ****** 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*J****.

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)*]****) an enclosure with an integral mounted signal processing device type 700 can be used; this variation gets the denomination type CMF******(A, B)*]**** for a steel enclosure and CMF********(Q, V)*]**** 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)******l**** 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)

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.

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

Additional information see Annex.



Certificate No.: Date of Issue: IECEx BVS 04.0007X

2007-08-01

Issue No.: 3

Page 5 of 5

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 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
 - $B = HY Tube 350^{\circ}C$
 - 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





Certificate No.:

IECEx BVS 04.0007X Annex Page 1 of 8

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****	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 *****C*I****
	CMF025 *****F*I****	CMF400 *****F*I****
	CMF050 *****F*I****	
	CMF100 *****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





Certificate No.:	IECEx BVS 04.0007X
	Annex
	Page 2 of 8

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	Α	
	Power	Pi		2,54	W	

Effective internal capacitance

negligible

V mA mW

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

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

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

1.2	Pick-Off circuits (Terminals 5/9 and 6/8 or v	vire colour green/white an	d blue/gre	ey)	
	Voltage	Ui	DC	30	
	Current	Ii		101	
	Power	Pi		750	





Certificate No.:	IECEx BVS 04.0007X
	Annex
	Page 3 of 8

Effective internal capacitance

negligible

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

for type CMF400 ***** R^{I****} and type CMF400 ***** H^{I****}

Effective internal capacitance

negligible

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

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	neglig	ible				
	Effective internal inductance	Li	neglig	ible				





Certificate No.: IECEx BVS 04.0007X Annex Page 4 of 8

- 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.





Certificate No.: IECEx BVS 04.0007X Annex

Page 5 of 8

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:

80 - 10 ± 50 ± 50 ± 50 ± 50 ± 50 ± 50 ± 50 ±		90		ієс Мітн	integri	OWABLE Al J-B	ONF40 OK BASI	D SENSO	r temp Aðient,	ERATURE-RATI	NG RATURE	
JENSON LEVIE LEMP (10)	MAX AMBIENT TEMP (+C)	80 - 70 - 50 - 50 - 40 - 30 - 20 - 10 - 0 - -10 - -20 - -30 - -40 - -50 -40	-20	0	T6	40 40	50 FLUII	T5	2 100 P (*0	*4	⊤3 	T1- T2- 180 200 220

Minimum medium temperature is -50°C.

1.5for all types CMF*** *****(R or H)*I**** except CMF400 *****(R or H)*I****
Ambient temperature rangeTa-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****

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
	Input circuits (terminals 1 - 4) Voltage Current Power Effective internal capacitance Effective internal inductance	Input circuits (terminals 1 - 4)VoltageUiCurrentIiPowerPiEffective internal capacitanceCiEffective internal inductanceLi	Input circuits (terminals 1 - 4)UiDCVoltageUiDCCurrentIiPowerPiEffective internal capacitanceCiEffective internal inductanceLi	Input circuits (terminals 1 - 4)UiDC17,3VoltageIi484CurrentIi484PowerPi2,1Effective internal capacitanceCi2200Effective internal inductanceLi30





Certificate No.: IECEx BVS 04.0007X Annex Page 6 of 8

- 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

Та

-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

Та

-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*********





Certificate No.: IECEx BVS 04.0007X Annex Page 7 of 8

- 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

Та

-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

Та

-20 °C up to +55 °C





Certificate No.:

IECEx BVS 04.0007X

Annex Page 8 of 8

<u>Marking</u>

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	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF025 ***** ¹⁾ *I****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF050 ***** ¹⁾ *I****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF100 ***** ¹⁾ *I****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF200 ***** ¹⁾ *I****	Ex ib IIB T1-T6	$-20^{\circ}C \leq Ta \leq +55^{\circ}C$
CMF300 ***** ¹⁾ *I****	Ex ib IIB T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF300A **** ¹⁾ *I****	Ex ib IIB T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF400 ***** ¹⁾ *I****	Ex ib IIB T1-T6	$-50^{\circ}C \le Ta \le +60^{\circ}C$
CMF010 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF025 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF050 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF100 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF200 ***** ²⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF300 ***** ²⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF400 ***** ²⁾ *I****	Ex ib IIB T1-T5	$-40^{\circ}C \le Ta \le +60^{\circ}C$
CMF010 ***** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF025 **** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF050 ***** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF100 ***** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF200 ***** ³⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF300 ***** ³⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF400 ***** ³⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$

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





Certificate No.:

IECEx BVS 04.0007X Issue 1

Annex Page 1 of 7

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 CMFaaa bbbbbcdIbbbb

where

- a type of sensor b marking without
 - 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**** CMF050 ****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)





Certificate No.:	IECEx BVS 04.0007X Issue 1
	Annex
	Page 2 of 7

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	Α
	Power	Pi		2,54	W
	effective internal capacitance			negli	gible

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





Certificate No.:	IECEx B Annex Page 3 of 7	VS 04.0007X Iss	sue 1	
Sensor type		Inductance [mH]	Coil resistance	Serial resistor
			[Ω]	[Ω]
CMF200 ***** ¹⁾ *I	**** CIC A3	2,0	46,3	0 - 567,9

CIVIT-200	2,0	40,5	0-307,9
CMF200 ***** ²⁾ *I**** CIC A3		at 20.°C	at 20 °C
CMF200 ***** ³⁾ *I**** CIC A3		at -20 °C	at -20 °C
CMF300 ***** ¹⁾ *I**** CIC A3	2,0	46,3	0 - 567,9
CMF300 ***** ²⁾ *I**** CIC A3		at 20.90	at 20.0C
CMF200 ***** ³⁾ *I**** CIC A3		at -20 °C	
CMF400 ***** ¹⁾ *I**** CIC A3	12,4	121,8	0 - 566,4
CMF400 ***** ²⁾ *I**** CIC A3		at 50 °C	at 50 °C
CMF400 ***** ³⁾ *I**** CIC A3		at -50 °C	at -30 °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

-20 °C up to +55 °C





Certificate No.: IECEx BVS 04.0007X Issue 1 Annex Page 4 of 7

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.



IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 1 Annex Page 5 of 7

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

-40 °C up to +60 °C





Certificate No.:

IECEx BVS 04.0007X Issue 1 Annex Page 6 of 7

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 rangeTa $-20 \ ^{\circ}C \ up \ to \ +55 \ ^{\circ}C$

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







Certificate No.:

IECEx BVS 04.0007X Issue 1

Annex

Page 7 of 7

Minimum medium temperature is -40°C.

Ambient temperature range

Та

-40 °C up to +55 °C

Marking

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

Туре	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**** incl.	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ¹⁾ *I**** CIC A3		
CMF300 ***** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ¹⁾ *I**** CIC A3		
CMF300A **** ¹⁾ *I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 ***** ¹⁾ *l**** incl.	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF400 ***** ¹⁾ *I**** CIC A3		
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⁾ * ****	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**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ²⁾ *I**** CIC A3		
CMF300 ***** ²⁾ *I**** incvl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****2)*I**** CIC A3		
CMF400 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF400 *****2)* **** CIC A3		
CMF010 ******	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⁾ * **** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ³⁾ *I**** CIC A3		
CMF300 ***** ³⁾ *I**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ³⁾ *I**** CIC A3		
CMF400 ***** ³⁾ *I**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 ***** ^{3)*} **** CIC A3		

at this place the letter R or H may be inserted
 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





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 1 of 14

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**** CMF100*****(C, F)*I**** C.I.C A4 CMF200*****(C, F)*I**** C.I.C A4 CMF300*****(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.





Certificate No.:	IECEx BVS 04.0007X Issue 2
	Annex
	Page 2 of 14

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 Π C 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	Α
	Power	Pi		2,54	W

Ci

negligible

Effective internal capacitance

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





negligible

Certificate No.:	IECEx BVS 04.0007X Issue 2
	Annex
	Page 3 of 14

1.2	.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	

Ci

Effective internal capacitance

·····				
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		ne	gligible
Effective internal inductance	Li		ne	gligible

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:





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 4 of 14

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





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 5 of 14

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 rangeTa $-55 \,^{\circ}C$ up to $+55 \,^{\circ}C$ The use of the sensor at higher ambient temperatures than $+55 \,^{\circ}C$ is possible, provided that the ambienttemperature does not exceed the maximum temperature of the medium taking into account thetemperature 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.





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 6 of 14

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



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

Ambient temperature rangeTa-68 °C up to +60 °CThe use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambienttemperature does not exceed the maximum temperature of the medium taking into account thetemperature 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 Jbox connected to MVD transmitters









Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 7 of 14

-240 °C up to +60 °C Ambient temperature range Та 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)	
2.1		
	Voltage	Ui

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	Α
Power	Pi		2,54	W
Effective internal capacitance	Ci		negli	gible

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

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

	0			
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		ne	gligible
Effective internal inductance	Li		ne	gligible

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:





Certificate No.: IECEX BVS 04.0007X Issue 2 Annex Page 8 of 14

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

() 90 80 - - - - - - - - - - - - -					
30 - 30 - 10 - -10 - -20 -	T6	T5 T4	T3	T2	T1
-30 -50 -50 -20	0 0 20 40	60 80 100 SEN	17 120 140 160 180 ISOR FLUID TEMP	⁸² 200 220 240 260 (°C)	77 ¹ 350 280 300 320 340 360

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 rangeTa $-50 \,^{\circ}C$ up to $+55 \,^{\circ}C$ The use of the sensor at higher ambient temperatures than $+60 \,^{\circ}C$ is possible, provided that the ambienttemperature does not exceed the maximum temperature of the medium taking into account thetemperature classification and the maximum operating temperature of the sensor.




Certificate No.:	IECEx BVS 04.0007X Issue 2
	Annex
	Page 9 of 14

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







Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 10 of 14

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

Та

-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









Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 11 of 14

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.

Та

Ambient temperature range

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





Ambient temperature range

Та

-40 °C up to +55 °C

-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





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 13 of 14



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.





Certificate No.:

IECEx BVS 04.0007X Issue 2 Annex Page 14 of 14

Marking

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

Туре	Type of protection	Ambient/Fluid temperature
CME010 ***** ¹)*1****	Ex ib IIC T1-T6	$-240 \circ C < T_{2} < \pm 55 \circ C$
CME025 ***** ¹)*****	Ex ib IIC T1-T6	$-240 C \le Ta \le +55 C$
CME050 ***** ¹)*I****	Ex ib IIC T1 T6	$-240 \degree C \le Ta \le +35 \degree C$
CMF100***** ¹)*I****	EX 10 IIC T1-T0	-240 °C $\le 1a \le +55$ °C
	EX 10 IIC 11-10	$-60 \circ C \leq 1a \leq +55 \circ C$
$CMF200 *****^{1}**** CIC A2$	EX 10 IIB 11-10	$-55 {}^{\circ}C \le Ta \le +55 {}^{\circ}C$
CMF200 ***** ¹ *I**** CIC A4	Ey ih IIC T1 T6	240.90 < To < 155.90
CMF200 ++++1)+1++++	EX 10 IIC 11-10	$-240 \circ C \le 1a \le +55 \circ C$
CMF200 ********	EX 10 IIB 11-16	-50 °C \leq Ta \leq +55 °C
CMF300 *****'' I**** incl.	Ex 10 IIB T1-T6	-55 °C \leq Ta \leq +55 °C
CMF300 ***** 01C A3		040.00 (50 (105.00)
CMF300 ***** 01C A4	EX 10 IIC 11-10	- 240 °C ≤ Ta ≤ +55 °C
CMF300 ^{-//} **** ^{//} *1****	Ex 1b IIB T1-16	-50 °C \leq Ta \leq +55 °C
$CMF400 *****^{1/2}I**** incl.$	Ex ib IIB T1-T6	- 68 °C ≤ Ta ≤ +60 °C
CMF400 *****//*1**** CIC A3	D	
CMF400 *****'/*1**** CIC A4	Ex ib IIC T1-T6	$-240 \text{ °C} \le \text{Ta} \le +60 \text{ °C}$
CMF400 ⁴ **** ¹ *I****	Ex ib IIB T1-T6	$-50 \circ C \le Ta \le +55 \circ C$
CMF010 ***** ²)*I****	Ex ib IIC T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF025 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-40 \text{ °C} \le Ta \le +55 \text{ °C}$
CMF050 **** ²⁾ *I****	Ex ib IIC T1-T5	- 40 °C \leq Ta \leq +55 °C
CMF100 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-40 \text{ °C} \le \text{Ta} \le +55 \text{ °C}$
CMF200 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF200 ***** ²⁾ *I**** CIC A3		
CMF200 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	$-40 \ ^{\circ}C \le Ta \le +55 \ ^{\circ}C$
CMF200 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	-50 °C \leq Ta \leq +55 °C
CMF300 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF300 ***** ²⁾ *I**** CIC A3		
CMF300 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	- 40 °C \leq Ta \leq +55 °C
CMF300 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF400 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	$-40 \circ C \le Ta \le +60 \circ C$
CMF400 ***** ²⁾ *I**** CIC A3		
CMF400 ***** ²)*I**** CIC A4	Ex ib IIC T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF400 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	$-50 \degree C \le Ta \le +55 \degree C$

1)

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

4) at this place the letter A, B, C or E may be inserted



Certificate No.: IECEx BVS 04.0007X Issue 3 Annex Page 1 of 6

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	Α
	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	
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	-50
CMF300(A, B, C, E)****(R, H, S)*I****	4.01	32.3	19.8	
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	-50
CMF400(A, B, C, E)****(R, H, S)*I****	7.75	54.3	19.8	
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	3.4	35.2	12.8	-50

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		
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0	569.2	-50
CMF300(A,B,C,E)****(R,H,S)*I****	1.25	15.4		
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0	569.2	-50
CMF400(A, B, C, E)****(R, H, S)*I***	6.5	41.1		
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	569.2	-50



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 3 Annex Page 2 of 6

1.3	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		negli	gible
	Effective internal inductance	Li		negli	gible

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





IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 3 Annex Page 3 of 6

- 1.5 Та -50 °C up to +55 °C Ambient temperature range 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	mА
	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





IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 3 Annex Page 4 of 6

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

⁽²⁾	Τ4	T3	Τ2	T1
-30 -50 -20 0 20 40 60	80 100 SENS	74 1 1 120 140 160 18 SOR FLUID TEMP	182 0 200 220 240 260 5 (°C)	277 ¹ 1 427 ¹ 280 300 320 340 450

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

2.3 Ambient temperature range Та

-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.

- Type CMF***(A,B,C,E)****(C,F)*I**** 3
- Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700********* 3.1
- 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





-50 °C up to +55 °C

IECEx BVS 04.0007X Issue 3 **Certificate No.:** Annex Page 5 of 6

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

- 00 - 00 - 00 - 00 - 00 - 00 - 00 - 00							
40 - 30 - 80 - 80 - 10 - XW - -10 - -20 -	Τ5		T4	тз	T2	T1	
-30 -50 -50 -20	0 20	40 60 80	82 11) 100 SENS	7 ¹ 1 1 120 140 160 18 SOR FLUID TEM	182 0 200 220 240 P (°C)	260 280 300 320	⁴²⁷¹ 340 450

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

3.3 Ambient temperature range

> 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.

Та



Certificate No.:

IECEx BVS 04.0007X Issue 3 Annex Page 6 of 6

Marking

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

Туре	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
CMF100***** ¹⁾ *J**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200 ***** ¹⁾ *I**** incl.		
CMF200 ***** ¹⁾ *I**** CIC A3		-55 °C ≤ 1a ≤ +55 °C
CMF200 ***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200 ⁴⁾ **** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	-50 °C < Ta < +55 °C
CMF200 ⁴)***** ¹)* **** CIC A5		
CMF300 ***** ¹)* **** incl.	Ex ib IIB T1-T6	-55 °C < Ta < +55 °C
CMF300 ***** 0*1**** CIC A3		
CMF 300 ***** 0*1**** CIC A4	Ex Ib IIC 11-16	<u>-240 °C ≤ Ta ≤ +55 °C</u>
CMF300 ⁴ /**** ¹ /*I**** incl.	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF300 ***********************************		
CMF400 ***** ¹⁾ *1**** CIC A2	Ex ib IIB T1-T6	-68 °C ≤ Ta ≤ +60 °C
CMF400 1 CIC A3	Exible T1 T6	240 °C < To < 160 °C
CME400 ⁴⁾ **** ¹⁾ *I**** incl		-240 C \leq 1a \leq $+60$ C
CMF400 ⁴⁾ **** ¹⁾ *I**** CIC A5	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.		10.00
CMF200 ***** ²⁾ *I**** CIC A3	EXIDINE 11-15	-40 °C ≤ 1a ≤ +55 °C
CMF200 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200 ⁴⁾ **** ²⁾ *I**** incl.	Evib IIB T1 T5	$50 ^{\circ}C < T_{2} < 155 ^{\circ}C$
CMF200 ⁴⁾ **** ²⁾ *I**** CIC A5		
CMF300 ***** ²)*I**** incl.	Ex ib IIB T1-T5	$-40 ^{\circ}\text{C} < \text{Ta} < +55 ^{\circ}\text{C}$
CMF300 ***** ²)*I**** CIC A3		
CMF300 *****2)*I**** CIC A4	Ex ib IIC T1-T5	<u>-40 °C ≤ Ta ≤ +55 °C</u>
CMF300 ⁴) **** ² /*I**** incl.	Ex ib IIB T1-T5	-50 °C < Ta < +55 °C
CMF300 ^{-//} ***** ² /*I**** CIC A5		
	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +60 °C
CIVIF400 ****** CIC A3		
CIVIF400 ****** CIC A4		$-40 \degree C \le 1a \le +55 \degree C$
$CME400^{4}$ **** ²)*1**** CIC A 5		-50 °C ≤ 1a ≤ +55 °C

1)

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

4) at this place the letter A, B, C or E may be inserted



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)		
Status:	Current		'sagena et	Issue No. 2 (2006-6-2)		
Date of Issue:	2007-08-01	Page 1 of 5				
Applicant:	Micro Motion, Inc. Boulder, Co. 80301 United States of Ame	rica				
Electrical Apparatus: Optional accessory:	Sensor type CMF*** ***/	**** ****				
Type of Protection:	Intrinsic Safety					
Marking:	Ex ib IIB/IIC T1 - T5/T6					
Approved for issue on be Certification Body:	half of the IECEx	Dr. R. Jockers				
Position:		Head of Certification Body				
Signature: (for printed version) Date:		Jukus 01.08.2	007	_		
 This certificate and schedule may only be reproduced in full. This certificate is not transferable and remains the property of the issuing body. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website. 						
Certificate issued by:	್ ಕ್ರಮ್ಮ ಮಾಡಿದರು. ಪರಿವಾ ಕರ್ಷಕ್ರಿಯ ಗ್ರೋಧಿಸಿದ್ದರೆ ಕಲ್ಲಿಗಳು ಬಿಸಿಕಾರ್ಯ	1 1 1 1 1 1 1 1 more madement	• · ·			
DE Dir	KRA EXAM GmbH mendahlstrasse 9 44809 Bochum Germany			EXAM GmbH		



Certificate No.: Date of Issue: IECEx BVS 04.0007X

2007-08-01

Issue No.: 3

Page 2 of 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

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
 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements

 Edition: 4.0
 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

 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



Certificate No .:

IECEx BVS 04.0007X

Date of Issue:

2007-08-01

Issue No.: 3

Page 3 of 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. 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



Certificate No.: Date of Issue: IECEx BVS 04.0007X

2007-08-01

Issue No.: 3

Page 4 of 5

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 ****** 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*J****.

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)*]****) an enclosure with an integral mounted signal processing device type 700 can be used; this variation gets the denomination type CMF******(A, B)*]**** for a steel enclosure and CMF********(Q, V)*]**** 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)******l**** 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)

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.

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

Additional information see Annex.



Certificate No.: Date of Issue: IECEx BVS 04.0007X

2007-08-01

Issue No.: 3

Page 5 of 5

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 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
 - $B = HY Tube 350^{\circ}C$
 - 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





Certificate No.:

IECEx BVS 04.0007X Annex Page 1 of 8

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****	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 *****C*I****
	CMF025 *****F*I****	CMF400 *****F*I****
	CMF050 *****F*I****	
	CMF100 *****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





Certificate No.:	IECEx BVS 04.0007X
	Annex
	Page 2 of 8

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	Α
	Power	Pi		2,54	W

Effective internal capacitance

negligible

V mA mW

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

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

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

1.2	Pick-Off circuits (Terminals 5/9 and 6/8 or v	d blue/gre	ey)		
	Voltage	Ui	DC	30	
	Current	Ii		101	
	Power	Pi		750	





Certificate No.:	IECEx BVS 04.0007X
	Annex
	Page 3 of 8

Effective internal capacitance

negligible

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

for type CMF400 ***** R^{I****} and type CMF400 ***** H^{I****}

Effective internal capacitance

negligible

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

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	neglig	ible			
	Effective internal inductance	Li	neglig	ible			





Certificate No.: IECEx BVS 04.0007X Annex Page 4 of 8

- 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.





Certificate No.: IECEx BVS 04.0007X Annex

Page 5 of 8

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:

80 - 10 ± 50 ± 50 ± 50 ± 50 ± 50 ± 50 ± 50 ±		90		іес Мітн	integri	OWABLE Al J-B	ONF40 OK BASI	D SENSO	r temp Aðient,	ERATURE-RATI	NG RATURE	
JENSON LEVIE LEMP (10)	MAX AMBIENT TEMP (+C)	80 - 70 - 50 - 50 - 40 - 30 - 20 - 10 - 0 - -10 - -20 - -30 - -40 - -50 -40	-20	0	T6	40 40	50 FLUII	T5	2 100 P (*0	*4	⊤3 	T1- T2- 180 200 220

Minimum medium temperature is -50°C.

1.5for all types CMF*** *****(R or H)*I**** except CMF400 *****(R or H)*I****
Ambient temperature rangeTa-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****

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
	Input circuits (terminals 1 - 4) Voltage Current Power Effective internal capacitance Effective internal inductance	Input circuits (terminals 1 - 4)VoltageUiCurrentIiPowerPiEffective internal capacitanceCiEffective internal inductanceLi	Input circuits (terminals 1 - 4)UiDCVoltageUiDCCurrentIiPowerPiEffective internal capacitanceCiEffective internal inductanceLi	Input circuits (terminals 1 - 4)UiDC17,3VoltageIi484CurrentIi484PowerPi2,1Effective internal capacitanceCi2200Effective internal inductanceLi30





Certificate No.: IECEx BVS 04.0007X Annex Page 6 of 8

- 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

Та

-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

Та

-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*********





Certificate No.: IECEx BVS 04.0007X Annex Page 7 of 8

- 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

Та

-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

Та

-20 °C up to +55 °C





Certificate No.:

IECEx BVS 04.0007X

Annex Page 8 of 8

<u>Marking</u>

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	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF025 ***** ¹⁾ *I****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF050 ***** ¹⁾ *I****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF100 ***** ¹⁾ *I****	Ex ib IIC T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF200 ***** ¹⁾ *I****	Ex ib IIB T1-T6	$-20^{\circ}C \leq Ta \leq +55^{\circ}C$
CMF300 ***** ¹⁾ *I****	Ex ib IIB T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF300A **** ¹)*I****	Ex ib IIB T1-T6	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF400 ***** ¹⁾ *I****	Ex ib IIB T1-T6	$-50^{\circ}C \le Ta \le +60^{\circ}C$
CMF010 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF025 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF050 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55 ^{\circ}C$
CMF100 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF200 ***** ²⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF300 ***** ²⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF400 ***** ²⁾ *I****	Ex ib IIB T1-T5	$-40^{\circ}C \le Ta \le +60^{\circ}C$
CMF010 ***** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF025 **** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF050 ***** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF100 ***** ³⁾ *I****	Ex ib IIC T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF200 ***** ³⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF300 ***** ³⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$
CMF400 ***** ³⁾ *I****	Ex ib IIB T1-T5	$-20^{\circ}C \le Ta \le +55^{\circ}C$

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





Certificate No.:

IECEx BVS 04.0007X Issue 1

Annex Page 1 of 7

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 CMFaaa bbbbbcdIbbbb

where

- a type of sensor b marking without
 - 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**** CMF050 ****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)





Certificate No.:	IECEx BVS 04.0007X Issue 1
	Annex
	Page 2 of 7

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	Α
	Power	Pi		2,54	W
	effective internal capacitance			negli	gible

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





Certificate No.:	IECEx B Annex Page 3 of 7	VS 04.0007X Iss	sue 1	
Sensor type		Inductance [mH]	Coil resistance	Serial resistor
			[Ω]	[Ω]
CMF200 ***** ¹⁾ *I	**** CIC A3	2,0	46,3	0 - 567,9

CIVIT-200	2,0	40,5	0-307,9
CMF200 ***** ²⁾ *I**** CIC A3		at 20.°C	at 20 °C
CMF200 ***** ³⁾ *I**** CIC A3		at -20 °C	at -20 °C
CMF300 ***** ¹⁾ *I**** CIC A3	2,0	46,3	0 - 567,9
CMF300 ***** ²⁾ *I**** CIC A3		at 20.90	at 20.0C
CMF200 ***** ³⁾ *I**** CIC A3		at -20 °C	
CMF400 ***** ¹⁾ *I**** CIC A3	12,4	121,8	0 - 566,4
CMF400 ***** ²⁾ *I**** CIC A3		at 50 °C	at 50 °C
CMF400 ***** ³⁾ *I**** CIC A3		at -50 °C	at -30 °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

-20 °C up to +55 °C





Certificate No.: IECEx BVS 04.0007X Issue 1 Annex Page 4 of 7

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.



IECEx Certificate of Conformity



IECEx BVS 04.0007X Issue 1 Annex Page 5 of 7

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

-40 °C up to +60 °C





Certificate No.:

IECEx BVS 04.0007X Issue 1 Annex Page 6 of 7

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 rangeTa $-20 \ ^{\circ}C \ up \ to \ +55 \ ^{\circ}C$

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







Certificate No.:

IECEx BVS 04.0007X Issue 1

Annex

Page 7 of 7

Minimum medium temperature is -40°C.

Ambient temperature range

Та

-40 °C up to +55 °C

Marking

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

Туре	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**** incl.	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ¹⁾ *I**** CIC A3		
CMF300 ***** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ¹⁾ *I**** CIC A3		
CMF300A **** ¹⁾ *I****	Ex ib IIB T1-T6	- 20°C ≤ Ta ≤ +55 °C
CMF400 ***** ¹⁾ *l**** incl.	Ex ib IIB T1-T6	- 50°C ≤ Ta ≤ +60 °C
CMF400 ***** ¹⁾ *I**** CIC A3		
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⁾ * ****	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**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ²⁾ *I**** CIC A3		
CMF300 ***** ²⁾ *I**** incvl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 *****2)*I**** CIC A3		
CMF400 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	- 40°C ≤ Ta ≤ +60 °C
CMF400 *****2)* **** CIC A3		
CMF010 ******	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⁾ * **** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF200 ***** ³⁾ *I**** CIC A3		
CMF300 ***** ³⁾ *I**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF300 ***** ³⁾ *I**** CIC A3		
CMF400 ***** ³⁾ *I**** incl.	Ex ib IIB T1-T5	- 20°C ≤ Ta ≤ +55 °C
CMF400 ***** ^{3)*} **** CIC A3		

at this place the letter R or H may be inserted
 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





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 1 of 14

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**** CMF100*****(C, F)*I**** C.I.C A4 CMF200*****(C, F)*I**** C.I.C A4 CMF300*****(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.





Certificate No.:	IECEx BVS 04.0007X Issue 2
	Annex
	Page 2 of 14

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 Π C 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	Α		
	Power	Pi		2,54	W		

Ci

negligible

Effective internal capacitance

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





negligible

Certificate No.:	IECEx BVS 04.0007X Issue 2
	Annex
	Page 3 of 14

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	

Ci

Effective internal capacitance

·····				
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		ne	gligible
Effective internal inductance	Li		ne	gligible

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:





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 4 of 14

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




Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 5 of 14

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.





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 6 of 14

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



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

Ambient temperature rangeTa-68 °C up to +60 °CThe use of the sensor at higher ambient temperatures than +60 °C is possible, provided that the ambienttemperature does not exceed the maximum temperature of the medium taking into account thetemperature 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 Jbox connected to MVD transmitters









Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 7 of 14

-240 °C up to +60 °C Ambient temperature range Та 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)	
2.1		
	Voltage	Ui

Voltage	Ui	DC	11,4	V
Current	Ii		2,45	Α
Power	Pi		2,54	W
Effective internal capacitance	Ci		negli	gible

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

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

	5			
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	\mathbf{Pi}		750	mW
Effective internal capacitance	Ci		ne	gligible
Effective internal inductance	Li		ne	gligible

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:





Certificate No.: IECEX BVS 04.0007X Issue 2 Annex Page 8 of 14

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

90 80 70 40 55 50 1 40 - 40 - - - - - - - - - - - - -					
30 - 30 - 10 - -10 - -20 -	T6	T5 T4	T3	T2	T1
-30 -50 -50 -20	0 0 20 40	60 80 100 SEN	17 120 140 160 180 SOR FLUID TEMP	⁸² 200 220 240 260 (°C)	77 ¹ 350 280 300 320 340 360

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 rangeTa $-50 \,^{\circ}C$ up to $+55 \,^{\circ}C$ The use of the sensor at higher ambient temperatures than $+60 \,^{\circ}C$ is possible, provided that the ambienttemperature does not exceed the maximum temperature of the medium taking into account thetemperature classification and the maximum operating temperature of the sensor.





Certificate No.:	IECEx BVS 04.0007X Issue 2
	Annex
	Page 9 of 14

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







Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 10 of 14

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

Та

-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









Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 11 of 14

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.

Та

Ambient temperature range

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





Ambient temperature range

Та

-40 °C up to +55 °C

-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





Certificate No.: IECEx BVS 04.0007X Issue 2 Annex Page 13 of 14



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.





Certificate No.:

IECEx BVS 04.0007X Issue 2 Annex Page 14 of 14

Marking

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

Туре	Type of protection	Ambient/Fluid temperature
CME010 ***** ¹)*1****	Ex ib IIC T1-T6	$-240 \circ C < T_{2} < \pm 55 \circ C$
CME025 ***** ¹)*****	Ex ib IIC T1-T6	$-240 C \le Ta \le +55 C$
CME050 ***** ¹)*I****	Ex ib IIC T1 T6	$-240 \degree C \le Ta \le +35 \degree C$
CMF100***** ¹)*I****	EX 10 IIC T1-T0	-240 °C $\le 1a \le +55$ °C
	EX 10 IIC 11-10	$-60 \circ C \leq 1a \leq +55 \circ C$
$CMF200 *****^{1}**** CIC A2$	EX 10 IIB 11-10	$-55 {}^{\circ}C \le Ta \le +55 {}^{\circ}C$
CMF200 ***** ¹ *I**** CIC A4	Ey ih IIC T1 T6	240.90 < To < 155.90
CMF200 ++++1)+1++++	EX 10 IIC 11-10	$-240 \circ C \le 1a \le +55 \circ C$
CMF200 ********	EX 10 IIB 11-16	-50 °C \leq Ta \leq +55 °C
CMF300 *****'' I**** incl.	Ex 10 IIB T1-T6	-55 °C \leq Ta \leq +55 °C
CMF300 ***** 01C A3		040.00 (50 () 55 00
CMF300 ***** 01C A4	EX 10 IIC 11-10	- 240 °C ≤ Ta ≤ +55 °C
CMF300 ^{-//} **** ^{//} *1****	Ex 1b IIB T1-16	-50 °C \leq Ta \leq +55 °C
$CMF400 *****^{1/2}I**** incl.$	Ex ib IIB T1-T6	- 68 °C ≤ Ta ≤ +60 °C
CMF400 *****//*1**** CIC A3	D	
CMF400 *****'/*1**** CIC A4	Ex ib IIC T1-T6	$-240 \text{ °C} \le \text{Ta} \le +60 \text{ °C}$
CMF400 ⁴ **** ¹ *I****	Ex ib IIB T1-T6	$-50 \circ C \le Ta \le +55 \circ C$
CMF010 ***** ²)*I****	Ex ib IIC T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF025 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-40 \text{ °C} \le Ta \le +55 \text{ °C}$
CMF050 **** ²⁾ *I****	Ex ib IIC T1-T5	- 40 °C \leq Ta \leq +55 °C
CMF100 ***** ²⁾ *I****	Ex ib IIC T1-T5	$-40 \text{ °C} \le \text{Ta} \le +55 \text{ °C}$
CMF200 ***** ²)*I**** incl.	Ex ib IIB T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF200 ***** ²⁾ *I**** CIC A3		
CMF200 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	$-40 \ ^{\circ}C \le Ta \le +55 \ ^{\circ}C$
CMF200 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	-50 °C \leq Ta \leq +55 °C
CMF300 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF300 ***** ²⁾ *I**** CIC A3		
CMF300 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	- 40 °C \leq Ta \leq +55 °C
CMF300 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF400 ***** ²⁾ *I**** incl.	Ex ib IIB T1-T5	$-40 \circ C \le Ta \le +60 \circ C$
CMF400 ***** ²⁾ *I**** CIC A3		
CMF400 ***** ²)*I**** CIC A4	Ex ib IIC T1-T5	$-40 \circ C \le Ta \le +55 \circ C$
CMF400 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	$-50 \degree C \le Ta \le +55 \degree C$

1)

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

4) at this place the letter A, B, C or E may be inserted



Certificate No.: IECEx BVS 04.0007X Issue 3 Annex Page 1 of 6

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	Α
	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	
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	-50
CMF300(A, B, C, E)****(R, H, S)*I****	4.01	32.3	19.8	
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	9.6	-50
CMF400(A, B, C, E)****(R, H, S)*I****	7.75	54.3	19.8	
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	3.4	35.2	12.8	-50

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		
CMF200(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0	569.2	-50
CMF300(A,B,C,E)****(R,H,S)*I****	1.25	15.4		
CMF300(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	0.5	8.0	569.2	-50
CMF400(A, B, C, E)****(R, H, S)*I***	6.5	41.1		
CMF400(A, B, C, E)****(R, H, S)*I**** C.I.C. A5	1.1	15.4	569.2	-50



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 3 Annex Page 2 of 6

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		negli	gible		
	Effective internal inductance	Li		negli	gible		

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





IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 3 Annex Page 3 of 6

- 1.5 Та -50 °C up to +55 °C Ambient temperature range 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





IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 3 Annex Page 4 of 6

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

⁽²⁾	Τ4	T3	Τ2	T1
-30 -50 -20 0 20 40 60	80 100 SENS	74 1 1 120 140 160 18 SOR FLUID TEMP	182 0 200 220 240 260 5 (°C)	277 ¹ 1 427 ¹ 280 300 320 340 450

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

2.3 Ambient temperature range Та

-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.

- Type CMF***(A,B,C,E)****(C,F)*I**** 3
- Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700********* 3.1
- 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





-50 °C up to +55 °C

IECEx BVS 04.0007X Issue 3 **Certificate No.:** Annex Page 5 of 6

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

- 00 - 00 - 00 - 00 - 00 - 00 - 00 - 00							
40 - 30 - 80 - 80 - 10 - XW - -10 - -20 -	Τ5		T4	тз	T2	T1	
-30 -50 -50 -20	0 20	40 60 80	82 11) 100 SENS	7 ¹ 1 1 120 140 160 18 SOR FLUID TEM	182 0 200 220 240 P (°C)	260 280 300 320	⁴²⁷¹ 340 450

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

3.3 Ambient temperature range

> 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.

Та



Certificate No.:

IECEx BVS 04.0007X Issue 3 Annex Page 6 of 6

Marking

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

Туре	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
CMF100***** ¹⁾ *J**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200 ***** ¹⁾ *I**** incl.		
CMF200 ***** ¹⁾ *I**** CIC A3		-55 °C ≤ 1a ≤ +55 °C
CMF200 ***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C
CMF200 ⁴⁾ **** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	-50 °C < Ta < +55 °C
CMF200 ⁴)***** ¹)* **** CIC A5		
CMF300 ***** ¹)* **** incl.	Ex ib IIB T1-T6	-55 °C < Ta < +55 °C
CMF300 ***** 0*1**** CIC A3		
CMF 300 ***** 0*1**** CIC A4	Ex Ib IIC 11-16	<u>-240 °C ≤ Ta ≤ +55 °C</u>
CMF300 ⁴ /**** ¹ /*I**** incl.	Ex ib IIB T1-T6	-50 °C ≤ Ta ≤ +55 °C
CMF300 ***********************************		
CMF400 ***** ¹⁾ *1**** CIC A2	Ex ib IIB T1-T6	-68 °C ≤ Ta ≤ +60 °C
CMF400 1 CIC A3	Exible T1 T6	240 °C < To < 160 °C
CME400 ⁴⁾ **** ¹⁾ *I**** incl		-240 C \leq 1a \leq $+60$ C
CMF400 ⁴⁾ **** ¹⁾ *I**** CIC A5	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.		10.00
CMF200 ***** ²⁾ *I**** CIC A3	EXIDINE 11-15	-40 °C ≤ 1a ≤ +55 °C
CMF200 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	-40 °C ≤ Ta ≤ +55 °C
CMF200 ⁴⁾ **** ²⁾ *I**** incl.	Evib IIB T1 T5	$50 ^{\circ}C < T_{2} < 155 ^{\circ}C$
CMF200 ⁴⁾ **** ²⁾ *I**** CIC A5		
CMF300 ***** ²)*I**** incl.	Ex ib IIB T1-T5	$-40 ^{\circ}\text{C} < \text{Ta} < +55 ^{\circ}\text{C}$
CMF300 ***** ²)*I**** CIC A3		
CMF300 *****2)*I**** CIC A4	Ex ib IIC T1-T5	<u>-40 °C ≤ Ta ≤ +55 °C</u>
CMF300 ⁴) **** ² /*I**** incl.	Ex ib IIB T1-T5	-50 °C < Ta < +55 °C
CMF300 ^{-//} ***** ² /*I**** CIC A5		
	Ex ib IIB T1-T5	-40 °C ≤ Ta ≤ +60 °C
CIVIF400 ****** CIC A3		
CIVIF400 ****** CIC A4		$-40 \degree C \le 1a \le +55 \degree C$
$CME400^{4}$ **** ²)*1**** CIC A 5		-50 °C ≤ 1a ≤ +55 °C

1)

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

4) at this place the letter A, B, C or E may be inserted



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-
Status:	Current		31) Issue No. 3 (2007-8-1) Issue No. 2 (2006 6 2)
Date of Issue:	2007-10-31	Page 1 of 4	ISSUE NO. 2 (2000-0-2)
Applicant:	Micro Motion, Inc. Boulder, Co. 80301 United States of Ame	rica	
Electrical Apparatus: Optional accessory:	Sensor type CMF*** ****	*** ****	
Type of Protection:	Intrinsic Safety		
Marking:	Ex ib IIB/IIC T1 - T5/T6		
Approved for issue on bea Certification Body:	half of the IECEx	Dr. R. Jockers	
Position:		Head of Certification Body	
Signature: (for printed version)		Jerkin	7
Date:		31.10.200-	/
 This certificate and sch This certificate is not tr The Status and authen 	nedule may only be reprod ansferable and remains th ticity of this certificate may	uced in full. e property of the issuing body. / be verified by visiting the Officia	al IECEx Website.
Certificate issued by:	nar a nary to all a consequences that a shifter can be	n te na state ann an te	
DE Dir	KRA EXAM GmbH mendahlstrasse 9 44809 Bochum Germany		DEKRA
	-		KA EAAM Gmbr



IECEx BVS 04.0007X		
2007-10-31	lssu	e No.: 4
	Pag	e 2 of 4
Micro Motion, Inc. Boulder, Co. 80301 United States of A	merica	
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
	IECEx BVS 04.0007X 2007-10-31 Micro Motion, Inc. Boulder, Co. 80301 United States of A Micro Motion Inc. AVE. Miguel de Cervantes Complejo Industrial Chihuahua Chihuahua 31109 Mexico	IECEx BVS 04.0007X 2007-10-31 Issu Page Micro Motion, Inc. Boulder, Co. 80301 United States of America Micro Motion Inc. AVE. Miguel de Cervantes Complejo Industrial Chihuahua Chihuahua Chihuahua Chihuahua States Cone Pudong Shanghai 201206 Chinahia

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

	Ex IE	ECEx Certificate of Conformity	
Certificate No.:	IECEx BVS 04.00	07X	
Date of Issue:	2007-10-31	Issue No.: 4	
		Page 3 of 4	
		Schedule	
EQUIPMENT: Equipment and syste	ms covered by this certificate are	as follows:	
The flow sensor in co The flow sensor, whi resistors, temperatur	ombination with a transmitter is us ch consists of magnetically excite e sensors and terminals and con	sed for flow measurement. ed oscillating tubes, contains as electrical components coils, nectors.	
Alternatively a transm variation gets the der	nitter type *700********** (IECEx E nomination type CMF *** ***** C * I *	3VS 04.0006X) can be mounted directly to the junction box; th **** and type CMF *** ***** F * I ****.	is
,			
- 		waveling to a suscentrationarian and a super-	
CONDITIONS OF CE	ERTIFICATION: YES as shown I	below:	
Special conditions fo	r safa usa	integration of the state of the state	
By mounting the sen modified according to	sor type CMF******(C,F)*I**** di	rectly to the transmitter *700******** the use of the unit will be	e
	Se	Ensor type	
	CMF025*****(C,F)*I****	CMF300*****(C,F)*1**** CIC A3	
	CMF050*****(C F)*I**** CMF100*****(C F)*I****	CMF400*****(C,F)*I****CIC A3	
Transmitter type	CMF100*****(C,F)*I**** CIC A4	CMF200(A,B,C,E)****(C,F)*I**** CIC A5	
Transmitter (ype	CMF200*****(C,F)*I**** CIC A4	CMF300(A,B,C,E)*****(C,F)* ****	
	CMF400*****(C,F)*I**** CIC A4	CMF400(A,B,C,E)*****(C,F)*1****	
	CMF800*****(C,F)*I**** CIC A4	CMF400(A,B,C,E)****(C,F)*I**** CIC A5	
		CMFHC3(A,B,C,E)*****(C,F)*1****	
*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	
 At this place the r At this place the r 	numeral 1 or 2 will be inserted.		
At this place the f	iumeral 3, 4 01 3 will be inserted.		

IEC IECEX	IEC	Ex Certificate
	U	Comonnity
Certificate No.:	IECEx BVS 04.0007X	
Date of Issue:	2007-10-31	Issue No.: 4
		Page 4 of 4
DETAILS OF CERTIFICATE CH	ANGES (for issues 1 and	above):
Description of the modifications The flow sensor can be modified The flow sensor can be mounted alternatively. The sensors type (other coil parameters and gets the The sensors can also have an a	for Issue 1 I and additional variations a I to the transmitter type *70 CMF200 ******* ****, CMF30 he Construction Identificatio Iternative 9-wire feed-throu	re available. 0*12****** or the transmitter type *700*15****** 0 ******[**** and CMF400 ******]**** may be produced with on Code (CIC) A3. gh.
Description of the modifications The sensors type CMF200 ****** parameters and get the Constru	<u>for Issue 2</u> **I****, CMF300 *******[**** ction Identification Code (C	and CMF400 *******I**** may be produced with other coil IC) A4 and canbe used in IIC areas.
Description of the modifications The high temperature versions of additional marking with C.I.C. As Also for testing of the sensors the is the result. The manufacturing location Eme The manufacturer Micro Motion Responsible is now DNV for all p	for Issue 3 CMF*** (A,B,C,E)******I**** 5. ie new standard versions of erson Process Managemen Inc., Boulder, United States production sites.	can be manufactured with other coils and get therefore the IEC 60079-* have been taken as basis.; a modified marking t Co., Ltd, Shanghai, People's Pepublic of China was added. s of America changed the EXCB for quality supervision.
Description of the modifications The sensor can be modified: New versions type CMF******* CMF800******* and type CM A new manufacturing location ha Netherlands	<u>for Issue 4</u> */**** (Electronics Interface IFCH3******* are possit as been added: Emerson P	for Extended Stainless Steel Junction Box), type ble. rocess Management Flow B.V., 6718 WX Ede, The
For "Subject and type", "Para	meters" and "Marking" se	e: BVS_04_0007X_issue4_Annex.pdf
7 5		
r i statuert		-
- manage - and - a	Annexe: BVS_04_0	007X_issue4_Annex.pdf



Certificate No.:

IECEx BVS 04.0007X Issue 4 Annex Page 1 of 18

Subject and Type

Sensor type CMF*** *******|****

Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the following variations:





Certificate No.:

IECEx BVS 04.0007X Issue 4 Annex Page 2 of 18

Parameters

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

1.1 Drive cir	cuit (connections 1 - 2 or red a	nd brown)			
Voltage		Úi	DC	11.4	V
Current		li		2.45	Α
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)* ****	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



Certificate No.:

IECEx BVS 04.0007X Issue 4 Annex Page 3 of 18

1.2	Pick-Off coil (Terminals 5/9 and 6/8 or v	wires green/white and blu	e/grey)		
	Voltage	Ui	DC	30	V
	Current	li		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)*!****	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 <u>5</u> 66.4	-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 of	or wires orange, ye	llow and violet)		
	Voltage	Ui	DC	30	V
	Current	li		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:



Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 4 of 18

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

Та

-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

-60 °C up to +55 °C

Та



Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 5 of 18

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

Та -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

-68 °C up to +60 °C

Та



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 4 Annex Page 6 of 18

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

Та -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

-240 °C up to +55 °C

Та



Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 7 of 18

1.4.7 For types CMF400*****(R,H,S,T)*|**** 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

-240 °C up to +60 °C Та

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

-240 °C up to +55 °C

Та



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 4 Annex Page 8 of 18

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 bro	wn)			
	Voltage	Ui	DC	11.4	V
	Current	li		2.45	А
	Power	Pi		2.54	W

Effective internal capacitance

negligible

	Inductance	Coil	Serial	Minimum
Sensor type	[mH]	resistance	resistor	Ambient/Fluid
	[IIII I]	[Ω]	$[\Omega]$	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 blu	e/grey)		
	Voltage	Ui	DC	30	V
	Current	li		101	mΑ
	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	Tempera	ture circuits (terminals 3, 4 and 7 or wires	orange, yellow and	l violet)	
	Voltage	Ui	DC	30	V
	Current	li		101	mΑ
	Power	Pi		750	mW
	Effective	internal capacitance	Ci	negligible	
	Effective	internal inductance	Li	negligible	



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 4 Annex Page 9 of 18

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

Та -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





Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 10 of 18

Ambient temperature range

Та -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	li		484	mΑ
	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

Та -40 °C up to +55 °C



Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 11 of 18

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

Та -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

-40 °C up to +55 °C Та



V

Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 12 of 18

- Type CMF*** (A,B,C,E) ****(2,3,4,5,A,B,Q,V)*I**** with integral Core Processor, inclusive Construction 4 Identification Code (CIC) A5 or no marking
- Input circuits (terminals 1 4) 4.1 Voltage Ui DC 17.3 Current li 484 mΑ Power Pi 2.1 W Effective internal capacitance Ci pF 2200 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

Та -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.



Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 13 of 18

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)*1**** and CMFHC3(C,E)****(2,3,4,5,A,B,Q,V)*1**** 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

-50 °C up to +55 °C Та

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****
- Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700********* 5.1
- 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)*|****,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



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007X Issue 4 Annex Page 14 of 18



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

-40 °C up to +55 °C Та



IECEx BVS 04.0007X Issue 4 Certificate No.: Annex Page 15 of 18

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

Та -40 °C up to +55 °C

- Type CMF***(A,B,C,E)****(C,F)*I**** inclusive Construction Identification Code (CIC) A5 or no 6 marking
- Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700********* 6.1
- 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)*1**** CIC A5 or no marking with integrally mounted transmitter





Certificate No.: IECEx BVS 04.0007X Issue 4 Annex Page 16 of 18

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

-50 °C up to +55 °C Та

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.


Certificate No.:

IECEx BVS 04.0007X Issue 4 Annex Page 17 of 18

Marking

The name of the manufacturer or his trademark

Serial number Certificate number

Туре	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		
CMF100*****1)*I**** CIC A4	Ex ib IIC T1-T6	-240 °C ≤ Ta ≤ +55 °C		
CMF200***** ¹⁾ *I**** incl.				
CMF200***** ¹⁾ *I**** CIC A3		-55 C \ 18 \ +55 C		
CMF200***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C		
CMF200 ⁴⁾ **** ¹⁾ *I**** incl.	Ex ib IIB T1 T6	50 °C < Ta < +55 °C		
CMF200 ⁴⁾ ***** ¹⁾ *I**** CIC A5				
CMF300***** ¹)*I**** incl.	Ex ib IIB T1-T6	- 55 °C < Ta < +55 °C		
CMF300***** ¹⁾ *I**** CIC A3				
CMF300***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C		
CMF300 ⁴⁾ **** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	$-50 ^{\circ}\text{C} < \text{Ta} < +55 ^{\circ}\text{C}$		
CMF300 ⁴⁷ **** ¹ /*I**** CIC A5				
CMF400 ***** ¹⁾ *I**** incl.	Ex ib IIB T1-T6	- 68 °C ≤ Ta ≤ +60 °C		
CMF400 ***** CIC A3				
CMF400 ***** 1/*1**** CIC A4	Exib IIC 11-16	<u>- 240 °C ≤ Ta ≤ +60 °C</u>		
CMF400 ⁴) **** ¹ /*1**** incl.	Ex ib IIB T1-T6	- 50 °C < Ta < +55 °C		
CMF400 ^{-//} **** ¹ /*I**** CIC A5				
CMF800*******		- 50 °C ≤ Ta ≤ +55 °C		
CMF800***** 1/*I**** CIC A4	Ex ib IIC T1-T6	- 240 °C ≤ Ta ≤ +55 °C		
CMF800 ⁴ / **** ¹ /* ****	Ex ib IIB T1-T6	<u>- 50 °C ≤ Ta ≤ +55 °C</u>		
CMF800 ⁴⁾ **** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	- 50 °C ≤ Ta ≤ +55 °C		
CMFHC3***** ¹⁾ *I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C		
CMFHC3***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	<u>- 240 °C ≤ Ta ≤ +55 °C</u>		
CMFHC3 ⁴⁾ **** ¹⁾ *I****	Ex ib IIB T1-T6	- 50 °C ≤ Ta ≤ +55 °C		
CMFHC3 ⁴⁾ **** ¹⁾ *I**** CIC A4	Ex ib IIC 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**** incl.	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C		
CMF100 ***** ²⁾ *I**** CIC A4				
CMF200 ***** ²⁾ *I**** incl.		$40 ^{\circ}\text{C} < \text{To} < \pm 55 ^{\circ}\text{C}$		
CMF200 ***** ²⁾ *I**** CIC A3				
CMF200 ***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C		
CMF200 ⁴⁾ **** ²⁾ *I**** incl.	Ex ih IIB T1. T5	50 °C < Ta < +55 °C		
CMF200 ⁴⁾ **** ²⁾ *I**** CIC A5				
CMF300 ***** ²)*I**** incl.	Ex ib IIB T1-T5	- 40 °C < Ta < +55 °C		
CMF300 *****2/*I**** CIC A3				
CMF300 ******/*I**** CIC A4	Ex Ib IIC T1-T5	<u>- 40 °C ≤ Ta ≤ +55 °C</u>		
CMF300 ^{*/} **** ² /* **** incl.	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C		
CMF300 ⁻⁷ *****/*I**** CIC A5				
CMF400 ****** incl.	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +60 °C		
		$ -40 \text{ °C} \le a \le +55 \text{ °C}$		





Certificate No.:

IECEx BVS 04.0007X Issue 4 Annex

Page 18 of 18

Туре	Type of protection	Ambient/Fluid
		temperature range
CMF400 ⁴⁾ **** ²⁾ *I**** incl.	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMF400 ⁴⁾ **** ²⁾ *I**** CIC A5		
CMF800***** ²⁾ *I****	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF800***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMF800 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C
CMFHC3**** ²⁾ *I****	Ex ib IIB T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMFHC3***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5	- 40 °C ≤ Ta ≤ +55 °C
CMFHC3 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5	- 50 °C ≤ Ta ≤ +55 °C

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



INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres for rules and details of the IECEx Scheme visit www.iecex.com						
Certificate No.: Status:	IECEx BVS 04.0007X	issue No.:5	Certificate history: Issue No. 5 (2008-11-3) Issue No. 4 (2007-10-			
Date of Issue:	2008-11-03	Page 1 of 4	31) Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)			
Applicant:	Micro Motion, Inc. Boulder, Co. 80301 United States of Ame	erica				
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 Certification Body:	behalf of the IECEx	Dr. R. Jockers				
Position:		Head of Certification Body				
Signature: (for printed version)		Jakus				
Date:		03.11.20	08			
 This certificate and This certificate is no The Status and aut 	schedule may only be repro ot transferable and remains t henticity of this certificate ma	duced in full. he property of the issuing body ay be verified by visiting the Off	icial IECEx Website.			
Certificate issued by:	DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany		DEKRA			



Certificate No.: Date of Issue:	IECEx BVS 04.0007X 2008-11-03			
Date of Issue:	2008-11-03			
			Issue No.: 5	
			Page 3 of 4	
	Sc	hedule		
EQUIPMENT: Equipment and systems covered by	y this certificate are as fo	ollows:		
The flow sensor in combination with The flow sensor, which consists of resistors, temperature sensors and	h a transmitter is used for magnetically excited ose terminals and connector	or flow measurement. cillating tubes, contains as rs.	electrical components coils,	arang nga nga nga nga nga nga
Alternatively a transmitter type *700 variation gets the denomination type	D********** (IECEx BVS (De CMF*** *****C*I**** a	04.0006X) can be mounted nd type CMF*** *****F*I***	d directly to the junction box; th *.	is
				an de de la constantinge
				reproducts Prod Ob Sociate Dis
				a para na para kana kana
- - 				ana a dari jamandar di se
-				an demonstration of the
				a na
·				ية ، ما المالية في المالية في الم
CONDITIONS OF CERTIFICATION	N: YES as shown below	v:		
Special conditions for safe use		· · · · · · · · · · · · · · · · · · ·		a a construction of the second
See Annex				a se a para para para para para para para p
4 9				n (j. rajnje) u djenodije na bij nje
				si standige og skrivet
* † ?				n belande sjonen digende
				one and the second second
				ala in diservice second
				and and a second second
				contents in our off off they is play in
ч ч ч ч ч ч ч ч ч ч ч ч ч ч ч ч ч ч ч				nonkovink ott klötar



Certificate No.: Date of Issue:

IECEx BVS 04.0007X

2008-11-03

Issue No.: 5

Page 4 of 4

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





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 1 of 23

Subject and Type

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

Instead of the *** letters and numerals will be inserted which characterize the following modifications:







Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 2 of 23

Parameters

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

1.1	Drive circuit (connections 1 - 2 or red and brown)						
	Voltage	Ui	DC	11.4	V		
	Current	li		2.45	Α		
	Power	Pi		2.54	W		

Internal capacitance

negligible

		Coil		Minimum
Sonsor type	Inductance	resistance $[\Omega]$	Serial resistor	Ambient/Fluid
Sensor type	[mH]	at min.	[Ω]	Temperature
		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	67	0	177.0	240
CMF100*****(R,H,S,T)*7****	0.7	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	0.5	0	177.0	240
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	9.5	0	177 0	-240
CMF300*****(R,H,S,T)*7****	3.5	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
CMF400 *****(R,H,S,T)*7****	11.75	0	107.1	-240
CMFHC2*****(R,H,S,T)*I****	5.0	19.5	38.5	-50
CMFHC2*****(R,H,S,T)*I**** CIC A4	5.0	0	126.0	-240
CMFHC2*****(R,H,S,T)*7****	5.0	0	120.0	-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
CMFHC3*****(R,H,S,T)*7****	0.0	U	120.0	-240





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex

Page 3 of 23

1.2	Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)						
	Voltage	Ui	DC	30	V		
	Current	li		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	li		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:





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 4 of 23

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

90 80 70 60 55 55										
H 40 - H 40 - H 30 - H 20 - X 10 - X W 0 - -10 -	T6	Т5	T4	-	T3		Т 1	-T2		
-240	0 20	40	60 8	0 100	120 1	1 ₄₅	160	180	204	220
210	0 20	SENS	OR FLUI	D TEMP	(°C)	10	100	100	201	220

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

```
Ambient temperature range
                                                Та
                                                                         -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

Та

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.

^{-60 °}C up to +55 °C





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 5 of 23

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 Та -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 Jbox connected to MVD transmitters



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

Ambient temperature range

Та

-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.



Certificate No.:

IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 5 Annex Page 6 of 23

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.

Та -50 °C up to +55 °C Ambient temperature range

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

Та

-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.





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 7 of 23

1.4.7 For types CMF400*****(R,H,S,T)*I**** with Construction Identification Code (CIC) marking A4 with Jbox 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
```

Та

-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







negligible

Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 8 of 23

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	Úi	DC	11.4	V
	Current	li		2.45	А
	Power	Pi		2.54	W

Ci Internal capacitance

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





negligible

Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex

Page 9 of 23

2.2	Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)							
	Voltage	Ui	DC	30	V			
	Current	li		101	mA			
	Power	Pi		750	mW			

Ci

Internal capacitance

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) V Voltage Ui DC 30 Current li 101 mΑ Power Pi 750 mW Internal capacitance Ci negligible Internal inductance negligible Li

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





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex

Page 10 of 23

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.

-50 °C up to +55 °C Ambient temperature range Та

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







Certificate No.: IECEx BVS 04.0007 X issue 5 Annex Page 11 of 23 Ambient temperature range Та -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.

- Type CMF*******(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with integral Core Processor inclusive 3 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 li -484 mΑ 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







Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 12 of 23

Ambient temperature range

Та

-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)*|**** 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

Та

-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







Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 13 of 23

- 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 li -484 mΑ Power Pi 2.1 W linternal 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







Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 14 of 23

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



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

Та -50 °C up to +55 °C Ambient temperature range

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.

- Type CMF*******(C,F)****** inclusive Construction Identification Code (CIC) A3 and A4 or no marking, 5 except CMF***(A,B,C,E)****(C,F)*****
- Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700********* 5.1

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:





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 15 of 23

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**** 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

-40 °C up to +55 °C





IECEx BVS 04.0007 X issue 5 Certificate No.: Annex Page 16 of 23

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

Та

-40 °C up to +55 °C

Type CMF***(A,B,C,E)****(C,F)****** inclusive Construction Identification Code CIC A4 or CIC A5 or 6 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

- Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700********* 6.1
- 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





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex

Page 17 of 23



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)*1**** 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

Та -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.





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex

Page 18 of 23

7 Types CMF*******(J,U)****** incl. CIC A4 with 2200S transmitter, except type CMF***(A,B,C,E)****J,Ú)******

7.1	Input circuits (terminals 1 - 2)				
	Voltage	Ui	DC	28	V
	Current	li		120	mΑ
	Power	Pi		0.84	W
	Internal capacitance	Ci	2	200	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

-40 °C up to +60 °C Та





Certificate No.:

IECEx BVS 04.0007 X issue 5

Annex Page 19 of 23

*(J,U)*I**** CIC A4 and CMF400*****(J,U)*7**** with integrally mounted 7.2.2 For types CMF400*** transmitter 2200S



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

Ambient temperature range

-40 °C up to +60 °C

Та

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

Та -40 °C up to +60 °C





Certificate No.: IECEx BVS 04.0007 X issue 5 Annex Page 21 of 23 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,É)****(J,Ú)*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 ()) 80 TEMP 70 60 50 40 30 20 10 0 AMB I ENT Τ4 T3 XW 0 -10 T2 Τ1

-20 -30 -50--50 -20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 450 SENSOR FLUID TEMP (°C)

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

Ambient temperature range

Та -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.





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex

- Page 20 of 23 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
- 8.1 Input circuits (terminals 1 - 2) Voltage Ui DC 28 V Current 120 li mΑ Power Pi 0.84 W pF Internal capacitance Ci 2200 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

() 90 •) 80 - dWJ 60					
H 50 - H 40 - 30 - H 20 - H 20 - H 20 - H 20 - - 20 - - 30 -	T4		T3	T2	TI
-50 -20	0 20 40	50 80 100 SENS	120 140 160 18 SOR FLUID TEMP	82 0 200 220 240 260 P (°C)	77 ¹ 350 ¹ 280 300 320 340 360

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

Ambient temperature range

Та -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.





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex

Page 22 of 23

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:

	Sensor type					
	CMF010*****(C.F)*I****	CMF200*****(C.F)*I**** CIC A3				
	CMF025*****(C.F)*I****	CMF300*****(C.F)*I**** CIC A3				
	CMF050*****(C F)*I****	CMF400*****(C.F)*I**** CIC A3				
	CMF100*****(C.F)*I****	CMFHC2*****(C.F)*I****				
	CMF100*****(C.F)*I**** CIC A4	CMFHC3*****(C.F)*I****				
	CMF100*****(C.F)*7****	CMF200(A.B.C.E)****(C.F)*I****				
	CMF200*****(C.F)*I**** CIC A4	CMF200(A.B.C.E)****(C.F)*I**** CIC A5				
	CMF200*****(C.F)*7****	CMF300(A.B.C.E)****(C.F)*I****				
	CMF300*****(C.F)*I**** CIC A4	CMF300(A.B.C.E)****(C.F)*I**** CIC A5				
	CMF300*****(C.F)*7****	CMF400(A.B.C.E)****(C.F)*I****				
	CMF400*****(C.F)*I**** CIC A4	CMF400(A.B.C.E)****(C.F)*I**** CIC A5				
T	CMF400*****(C.F)*7****	CMFHC2(A.B.C.E)****(C.F)*I****				
Iransmitter	CMFHC2*****(C.F)*I**** CIC A4	CMFHC2(A.B.C.E)****(C.F)*I**** CIC A6				
type	CMFHC2*****(C.F)*7****	CMFHC3(A.B.C.E)****(C.F)*I****				
iypo	CMFHC3*****(C.F)*I**** CIC A4	CMFHC3(A.B.C.E)****(C.F)*I**** CIC A6				
	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					
*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				

 $\frac{1}{2}$ At this place the numeral 1 or 2 will be inserted.

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





Certificate No.:

IECEx BVS 04.0007 X issue 5 Annex Page 23 of 23

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				
	CMF010*****(J.U)*I****	CMF200*****(J.U)*I****			
	CMF025*****(J.U)*I****	CMF300*****(J.U)*I****			
	CMF050*****(J.U)*I****	CMF400*****(J.U)*I****			
	CMF100*****(J.U)*I****	CMFHC2****(J.U)*I****			
	CMF100*****(J.U)*I**** CIC A4	CMFHC3*****(J.U)*I****			
	CMF100*****(J.U)*7****	CMF200(A.B.C.E)****(J.U)*I****			
	CMF200*****(J.U)*I**** CIC A4	CMF200(A.B.C.E)****(J.U)*I**** CIC A5			
	CMF200*****(J.U)*7****	CMF300(A.B.C.E)****(J.U)*I****			
	CMF300*****(J.U)*I**** CIC A4	CMF300(A.B.C.E)****(J.U)*I**** CIC A5			
	CMF300*****(J.U)*7****	CMF400(A.B.C.E)****(J.U)*I****			
	CMF400*****(J.U)*I**** CIC A4	CMF400(A.B.C.E)****(J.U)*I**** CIC A5			
	CMF400*****(J.U)*7****	CMFHC2(A.B.C.E)****(J.U)*I****			
Sensor	CMFHC2*****(J.U)*I**** CIC A4	CMFHC2(A.B.C.E)****(J.U)*I**** CIC A6			
Sensol	CMFHC2*****(J.U)*7****	CMFHC3(A.B.C.E)****(J.U)*I****			
type	CMFHC3*****(J.U)*I**** CIC A4	CMFHC3(A.B.C.E)****(J.U)*I**** CIC A6			
	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)*/****				
	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)*I**** CIC A6				
Transmitter type 2200S***1*****	Ex ib IIC T1-T4	Ex ib IIB T1-T4			



INTER IEC C	NATIONAL ELE ertification Scho for rules and details of	CTROTECHNICAL C eme for Explosive At f the IECEx Scheme visit www.iecex	OMMISSION mospheres
Certificate No.:	IECEX BVS 04.0007X	issue No.:6	Certificate history:
Status:	Current		Issue No. 5 (2009-6-12) Issue No. 5 (2008-11-3) Issue No. 4 (2007-10-
Date of Issue:	2009-08-12	Page 1 of 4	31) Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)
Applicant:	Micro Motion, Inc. Boulder, Co. 80301 United States of Ame	erica	1^ 1
Electrical Apparatus: Optional accessory:	Туре С МГ*** *********** ****		
Type of Protection:	Intrinsic Safety 'i'		
Marking:	Ex ib B/ C T4/T5/T6		
Approved for issue on b Certification Body:	ehalf of the IECEx	Dr. F. Eickhoff	
Position:		Deputy Head of Certification Body	
Signature: (for printed version)		Ci lloft	
Dale:		2009-08-1	12
 This certificate and sc This certificate is not t The Status and auther 	thedule may only be reprod transferable and remains th nticity of this certificate may	luced in full. te property of the issuing body. y be verified by visiting the Official IE	CEx Website.
Certificate issued by:	EVDA EVAN Ombu		
Di	innendahlstrasse 9 44809 Bochum		DEKRA
	Germany	DEKRA	A EXAM GmbH
		·	



Certificate No.:	IECEx BVS 04.0007X						
Date of Issue:	2009-08-12	issu	ve No.: 6				
		Pag	je 2 of 4				
Manufacturer:	Micro Motion, Inc. Boulder, Co. 80301 United States of A	merica					
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 found to comply with the IEC covered by this certificate, v certificate is granted subject as amended.	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 documents, was found to co	d any acceptable variations to amply with the following standa	it specified in the schedule of ards:	this certificate and the identified				
IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for expl	osive gas atmospheres - Part	0: General requirements				
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Pa	rt 11: Equipment protection by	/ intrinsic safety "i"				
This Certificale does n ot	indicate compliance with elec expressly included in l	lrical safely and performance the Slandards lisled above.	requirements other than those				
TEST & ASSESSMENT RE A sample(s) of the equipme	PORTS: nt listed has successfully met	the examination and test requ	irements as recorded in				
IECEX ATR:		File Reference:					
DE/BVS/ExTR06.0009/06		DE/BVS/04/2024/N6	5				

,



.

Certificate No.:

IECEx BVS 04.0007X

Date of Issue:

2009-08-12

Issue No.: 6

Page 3 of 4

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

	of Co	onformity					
Certificate No.:	IECEx BVS 04.0007X						
Date of Issue:	2009-08-12	Issue No.: 6 Page 4 of 4					
ETAILS OF CERTIFICAT	E 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.							





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 1 of 34

Subject and Type

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

Instead of the *** letters and numerals will be inserted which characterize the following modifications:







Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 2 of 34

Parameters

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

1.1	Drive circuit (connections 1 - 2 or red and brown)				
	Voltage	Ui	DC	11,4	V
	Current	li		2,45	Α
	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)* ****		(IIC)	2.51	0	945.1	-240

Sensor type	K		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF025*****(R,H,S,T)	* * * * *	(IIC)	2.51	0	170.1	-240
CMF050*****(R,H,S,T)	*]****	(IIC)	2.51	0	170.1	-240
CMF100*****(R,H,S,T)*I**** (IIC)		(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	, în		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	0	(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)		(IIC)	11.75	0	187.1	-240
CMF400*****(R,H,S,T)*7**** (IIC)		11.75	0	187.1	-240	





Certificate No.:

IECEx BVS 04.0007X Issue 6

Annex Page 3 of 34

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/grev)

-		whos green white and blackgrey			
	Voltage	Ui	DC	21,13	V
	Current	li		18,05	mΑ
	Power	Pì		45	mW

Sensor type	F		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)	* ***	(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)*J**** 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 (II		(IIB)	2.0	38.7	0 to 567.9	-55
CMF300*****(R,H,S,T)*I**** CIC A4 (IIC		(IIC)	2.0	0	0 to 567.9	-240
CMF300*****(R,H,S,T)	*7***	(IIC)	2.0	0	0 to 567.9	-240




Certificate No.:

IECEx BVS 04.0007X Issue 6

Annex Page 4 of 34

Sensor type	Q		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fłuid 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	li		26	mΑ
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

		coil		Minimum
Sensor type	inductance	resistance	serial resistor	Ambient/Fluid
	[mH]	[Ω]	[Ω]	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





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 5 of 34

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

Та

-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.





IECEx BVS 04.0007X Issue 6 Annex Page 6 of 34





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

Ambient temperature range

Та

-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	<u>, </u>			
CMF200*****(R	,H,S,T)*I**** CIC A3	(IIB)		
CMF300*****(R,H,S,T)*I**** CIC A3 (IIB)				





IECEx BVS 04.0007X Issue 6 Annex Page 7 of 34



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

Ambient temperature range

Та

-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)







Certificate No.:

IECEx BVS 04,0007X Issue 6 Annex Page 8 of 34

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

Ambient temperature range:

Та

-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.







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

Ambient temperature range

Та

-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.





20

10 AMB | 0 -10-MAX -20 -30 -40 -240

-240 - 40

1.4.7

-20

IECEx BVS 04.0007X Issue 6 Annex Page 9 of 34



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

140

T3

Ambient temperature range:

0

20

Τ6

Τ5

40 ⁵⁰ 60⁶⁵

Τ4

80

SENSOR FLUID TEMP (°C)

100

120

Та

165

T1-T2

180

204 220

-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.

CMFHC2****(R,H,S,T)*I**** (IIB) CMFHC3****(R,H,S,T)*I**** (IIB) CMFHC3****(R,H,S,T)*I**** (IIB)	Sensor type		
CMEHC3*****(R H S T)*I**** (IIB)	CMFHC2*****(R,H,S,T)*I****	(IIB)	Connected to MVD transmitters, e.g.
1000/2000/3000MVD series	CMFHC3*****(R,H,S,T)*I****	(!IB)	1000/2000/3000MVD series





IECEx BVS 04.0007X Issue 6 Annex Page 10 of 34



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

Ambient temperature range

Та

-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,F	I,S,T)*I**** CIC A4	(IIC)	
CMFHC2*****(R,H,S,T)*7****		(IIC)	Connected to MVD transmitters, e.g.
CMFHC3*****(R,H,S,T)*I**** CIC A4		(IIC)	1000/2000/3000MVD series
CMFHC3*****(R,H,S,T)*7****		(IIC)	





IECEx BVS 04.0007X Issue 6 Annex Page 11 of 34



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

Ambient temperature range:

-240°C to + 55°C Та

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









Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 12 of 34

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

Ambient temperature range: Та

-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.



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

Ambient temperature range:

Та

-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	li		2.45	Α
	Power	Pi		2.54	W
	Internal capacitance	Ci	negligible		





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex

Page 13 of 34

Sensor type		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200(A, B, C, E)****(D, L, S, T)*/****		4.0	32.3	19.8	-50
CME200(A, B, C, E)****(R,H,S,T)*1**** CIC A5		1.1	15.4	9.6	-50
CME200(A, B, C, E) (R, H, S, T) T CIC A4		1.1	15.4	41	-50
		1.1	10.4	41	-50
		4.0	32.3	19.0	-50
CME300(A, B, C, E) (R, H, S, T) T CIC AS		1.1	15.4	9.0	-50
CME300(A, B, C, E) (R, H, S, T) CIC A4		1 1	15.4	41	-50
CME400(A, B, C, L) ((I, 3, T) /		7 75	54 3	10.0	-50
CME400(A, B, C, E)****(B H S T)* **** CIC A5		3.4	35.2	12.0	-50
CME400(A, B, C, E) (R, R, S, T) $CIC A0$		3.4	35.2	63.2	-50
CME400(A B C E)****(B H S T)*7****		3.4	35.2	63.2	-50
CMEHC2(A B C E)****(B H S T)*!****		5.95	51.3	12.8	-50
CMEHC2(A, B, C, E)****(B H S T)*!**** CIC A4		5.95	51.3	88.0	-50
CMEHC2(A, B, C, E) (1,1,5,1) COUNT		5.95	51.3	88.9	-50
CMEHC2(A, B, C, E)****(B H S T)*!**** CIC A6	(11B)	7 75	54.3	24.7	-50
CMEHC2(A, B, C, E)****(B H S T)*7**** CIC A6		7.75	54.3	106.7	-50
CMEHC3(A, B, C, E)****(R,H,S,T)*!****	(IIB)	5.95	51.3	12.8	-50
CMFHC3(A, B, C, E)****(R,H,S,T)*[**** CIC A4		5.95	51.3	88.9	-50
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)*[**** 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 w	rires green/white and blue/grey)			
	Voltage	Ui	DC	21.13	V
	Current	li		18.05	mΑ
	Power	Pi		45	mW
	Internal capacitance	Ci	negligible		

Internal capacitance

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





Certificate No.:

IECEx BVS 04.0007X Issue 6

Annex

Page 14 of 34

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	lí		26	mΑ
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	nealiaible		

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







Certificate No.: IECEx BVS 04.0007X Issue 6 Annex Page 15 of 34 CMF200(A or B)****(R,H,S,T)*I**** (IIB) Connected to MVD transmitters, CMF200(A or B)****(R,H,S,T)*I**** CIC A4 (IIC)e.g. 1000/2000/3000MVD series CMF200(A or B)****(R,H,S,T)*I**** CIC A5 (IIB) CMF200(A or B)****(R,H,S,T)*7**** CMF300(A or B)****(R,H,S,T)*I**** (IIC) (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)*|**** (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

Та

-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.





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex

Page 16 of 34

2.4.2				
	Sens o r type			
	CMF200(C	or E)****(R,H,S,T)*[****	(IIB)	Connected to MVD transmitters,
	CMF200(C	or E)****(R,H,S,T)*I**** CIC A4	(IIC)	e.g. 1000/2000/3000MVD series
	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	C or E)****(R,H,S,T)*I****	(IIB)	
	CMFHC2(C	C or E)****(R,H,S,T)*I**** CIC A4	(IIC)	
	CMFHC2(C	C or E)****(R,H,S,T)*I**** CIC A6	(IIB)	
	CMFHC2(C	C or E)****(R,H,S,T)*7****		
	CMFHC2(C	C or E)****(R,H,S,T)*7**** CIC A6	(IIC)	
	CMFHC3(C	C or E)****(R,H,S,T)*I****	(IIB)	
	CMFHC3(C	C or E)****(R,H,S,T)*I**** CIC A4	(IIC)	
	CMFHC3(C	C or E)****(R,H,S,T)*I**** CIC A6	(IIB)	
	CMFHC3(C	C or E)****(R,H,S,T)*7****	(IIC)	
	CMFHC3(C	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

-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.





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 17 of 34

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 3 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	li		484	mΑ
	Power	Pi		2.1	W
	Effective internal capacitance	Ci		2200	pF
	Effective internal inductance	Li		30	μĤ

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	, , СМF200	0/300	
CMF010*****	(2,3,4,5,6,7,8,9,A,B	,D,E,Q,V,W,Y)*I***	*	(IIC)	
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	3, D, E, Q, V, W, Y)*I***	*	(IIC)	
CMF200*****	(2,3,4,5,6,7,8,9,A,B	3,D,E,Q,V,W,Y)*I***	* CIC A3	(IIB)	With integral core
CMF200*****	(2,3,4,5,6,7,8,9,A,B	3,D,E,Q,V,W,Y)*I***	* CIC A4	(IIC)	processor
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	s,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)	





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 18 of 34



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

Та

Ambient temperature range



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

Ambient temperature range

-40 °C up to +60 °C

-40 °C up to +55 °C





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 19 of 34





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

Ambient temperature range

Та

-40 °C up to +55 °C





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 20 of 34



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

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

Type CMF***(A, B, C or E)****(2 – 9, A, B, D, E, Q, V, W or Y)***** with integral core processor. 4



4.1	Input circuits (terminals 1 - 4)				
	Voltage	Ui	DC	17.3	V
	Current	li		484	mΑ
	Power	Pi		2.1	W
	linternal capacitance	Ci		2200	pF
	Internal inductance	Li		30	μH





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 21 of 34

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:

Λ	2	1
-		

Sensor type	Ţ		
CMF200(A or B)****(2,3,4,5,6,7	,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral
CMF200(A or B)****(2,3,4,5,6,7	,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	core processor
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	7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	
CMF300(A or B)****(2,3,4,5,6,7	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	7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIČ)	
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	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.





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 22 of 34

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.

Sensor type			
OME000/0 -= E****/0.0.4.5.0.3		(110)	Mith integral
$CIVIEZUU(C or E)^{(2,3,4,5,6,7)}$			with integral
CMF200(C or E)****(2,3,4,5,6,7	7,8,9,A,B,D,E,Q,V,W,Y)^1^^^ CIC A4		core processor
CMF200(C or E)****(2,3,4,5,6,7	7,8,9,A,B,D,E,Q,V,W,Y)11000 CIC A5		
CMF200(C or E)****(2,3,4,5,6,7	(,8,9,A,B,D,E,Q,V,W,Y)*/****		
CMF300(C or E)****(2,3,4,5,6,7	7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	
CMF300(C or E)****(2,3,4,5,6,7	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	7,8,9,A,B,D,E,Q,V,W,Y)* **** CIC A5	(IIB)	
CMF300(C or E)****(2,3,4,5,6,7	<u>′,</u> 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 <u>,E,Q,V,W,Y</u>)*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	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	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)	







IECEx BVS 04.0007X Issue 6 Certificate No.: Annex Page 23 of 34

Ambient temperature range	Та	-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.

Type CMF*******(C,F)****** inclusive Construction Identification Code (CIC) A3 and A4 or no marking, 5 except CMF***(A,B,C,E)****C*****

Obsolete

6 Type CMF***(A, B, C or E)****C*1**** High-temperature sensor with integral 1700/2700 transmitter



Electrical parameters see IECEx BVS 04.0006 X for the transmitter type *700********* 6.1

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:

Sensor type	2 U		
CMF200(A or B)****C	* ****	(IIB)	With Integral
CMF200(A or B)****C	*I**** CIC A5	(IIB)	1700/2700
CMF200(A or B)****C	*I**** CIC A4	(IIC)	Transmitter
CMF200(A or B)****C	*7****	(IIC)	
CMF300(A or B)****C	* * * * *	(IIB)	
CMF300(A or B)****C*j**** CIC A5		(IIB)	
CMF300(A or B)****C*I**** CIC A4		(IIC)	
CMF300(A or B)****C	*7****	(IIC)	
CMF400(A or B)****C	* ***	(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	(IIB)		
CMFHC2(A or B)****C	C*I**** CIC A4	(IIC)	
CMFHC2(A or B)****C	C*7****	(IIC)	





Certificate No.:

IECEx BVS 04.0007X Issue 6

Annex

Page 24 of 34

CMFHC2(A or B)****C*7**** CIC A6	(IIC)
CMFHC3(A or B)****C*I****	(IIB)
CMFHC3(A or B)****C*1**** 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)



Sensor type			
CMF200(C or E)****C*2		(IIB)	With Integral
CMF200(C or E)****C*Z	2**** CIC A5	(IIB)	1/00/2/00
CMF200(C or E)****C*Z	<u>Cirxxxx</u> CIC A4	(IIC)	Transmitter
CMF200(C or E)****C*6	****	(IIC)	
CMF300(C or E)****C*Z		(IIB)	
CMF300(C or E)****C*Z	2**** CIC A5	(IIB)	
CMF300(C or E)****C*Z**** CIC A4			
CMF300(C or E)****C*6****			
CMF400(C or E)****C*Z	(IIB)		
CMF400(C or E)****C*Z	(IIB)		
CMF400(C or E)****C*Z	<u>***** CIC A4</u>	(IIC)	
CMF400(C or E)****C*6	****	(IIC)	
CMFHC2(C or E)****C*2	<u>Z****</u>	(IIB)	
CMFHC2(C or E)****C*2	Z**** CIC A6	(IIB)	
CMFHC2(C or E)****C*2	Z**** CIC A4	(IIC)	
CMFHC2(C or E)****C*6	<u>5***</u> *	(IIC)	
CMFHC2(C or E)****C*6	6**** CIC A6	(IIC)	
CMFHC3(C or E)****C*2	Z****	(IIB)	
CMFHC3(C or E)****C*2	Z**** CIC A6	(IIB)	
CMFHC3(C or E)****C*2	Z**** CIC A4	(IIC)	
CMFHC3(C or E)****C*6	5***	(IIC)	
CMFHC3(C or E)****C*6	6**** CIC A6	(IIC)	





IECEx BVS 04.0007X Issue 6 Annex Page 25 of 34



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	li		120	mΑ
	Power	Pi		0.84	W
	Internal capacitance	Ci		2200	рF
	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:

Sensor type	CMF010	CMF100	CMF20	00/300	
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					
CMF200****	**(J or U)*I**** CIC	(IIC)			





IECEx BVS 04.0007X Issue 6

Annex

Page 26 of 34		
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

Та

-40 °C up to +60 °C

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)	







Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 27 of 34

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

Ambient temperature range

Та

-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)*1****	(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

Та

-40 °C up to +60 °C





IECEx BVS 04.0007X Issue 6 Annex Page 28 of 34





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

Ambient temperature range

Та

-40 °C up to +60 °C

8 Type CMF***(A, B, C or E)****(J or U)****** with integral 2200S transmitter.



Input circuits (terminals 1 - 2)				
Voltage	Ui	DC	28	V
Current	li		120	mΑ
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	μH
	Input circuits (terminals 1 - 2) Voltage Current Power Internal capacitance Internal inductance	Input circuits (terminals 1 - 2)UiVoltageUiCurrentIiPowerPiInternal capacitanceCiInternal inductanceLi	Input circuits (terminals 1 - 2)UiDCVoltageUiDCCurrentIiPowerPiInternal capacitanceCiInternal inductanceLi	Input circuits (terminals 1 - 2)UiDC28VoltageLi120CurrentLi120PowerPi0.84Internal capacitanceCi2200Internal inductanceLi45





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 29 of 34

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)*l****	(IIB)	With integral 2200S
CMF200(A or B)****(J or U)*I**** CIC A4	(IIC)	5
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)*1**** 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)****(<u>J or U)*7**** CIC A6</u>	(IIC)	
Q 90			
0 80 - g 70 -			
μ ⁶⁰ 50			1



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

Ambient temperature range

.

-50 °C up to +60 °C





Certificate No.:

IECEx BVS 04.0007X Issue 6

Annex Page 30 of 34

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	<u>(</u> 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)* **** 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	(118)	
CMFHC2(C or E)****(J or U)*7****	(IIC)	
CMFHC2(C or E)****(J or U)*7**** CIC A6			
CMFHC3(C or E)****(J or U)*I****			
CMFHC3(C or E)****(J or U)*I**** CIC A4			
CMFHC3(C or E)****(J or U)*I**** CIC A6			
CMFHC3(C or E)****(J or U)*7****		(IIC)	
GMFHC3(C or E)****(J or U)*7**** CIC A6	(IIC)	
<u>ତି ୭୦ ၂</u>			



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

Ambient temperature range

Та

-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.





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 31 of 34

Marking

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

for sensors with junction box connected to MVD transmitter

Туре	Type of protection	Min. ambient/fluid temperature
CMF010***** ¹⁾ * ****	Ex ib IIC T1-T6	-240°C
CMF025***** ^{1)*} I****	Ex ib IIC T1-T6	-240°C
CMF050***** ¹⁾ *I****	Ex ib IIC T1-T6	-240°C
CMF100***** ^{1)*} I****	Ex ib IIC T1-T6	-60°C
CMF100***** ¹⁾ *I**** 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 (b IJC 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)*} I**** CIC A5	Ex ib IIB T1-T6	-50°C
CMF200 ^{4)****1)*}	Ex ib IIC T1-T6	-50°C
CMF200 ⁴ **** ¹ *7****	Ex ib IIC T1-T6	-50°C
CMF300***** ^{1)*} l**** CIC A3	Ex ib IIB T1-T6	-55°C
CMF300***** ^{1]*} I**** CIC A4	Ex ib IIC T1-T6	-240°C
CMF300***** ^{1]} *7****	Ex ib IIC T1-T6	-240°C
CMF300 ^{4}****1)*} I****	Ex ib IIB T1-T6	-50°C
CMF3004)****1)*1**** CIC A5	Ex ib IIB T1-T6	-50°C
CMF3004/****1)*/**** CIC A4	Ex ib IIC T1-T6	-50°C
CMF300 ^{4]****1]*} 7****	Ex ib IIC T1-T6	~50°C
CMF400***** ¹⁾ *I**** 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⁾*I****}	Ex ib IIB T1-T6	-50°C
CMF400 ^{4)****1]*} I**** CIC A5	Ex ib JJB T1-T6	-50°C
CME4004)****1]*I**** 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⁾ *I**** 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⁾ *I****	Ex ib IIB T1-T6	-50°C
CMFHC2***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	-240°C
CMFHC2***** ⁽⁾ *7****	Ex ib IIC T1-T6	-240°C
CMFHC2 ^{4]****⁷/*/****}	Ex ib IIB T1-T6	-50°C
CMFHC2 ^{4)****1)*} I**** CIC A4	Ex ib IIC T1-T6	-50°C
CMFHC2 ^{4)****1)*} 7****	Ex ib IIC T1-T6	-50°C
CMFHC2 ^{4)****1)*} I**** CIC A6	Ex ib IIB T1-T6	-50°C
CMFHC2 ^{4)****1)*7****} CIC A6	Ex ib IIC T1-T6	-50°C
CMFHC3***** ^{1}} *I****	Ex ib IIB T1-T6	-50°C
CMFHC3***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6	-240°C
CMFHC3***** ^{1}} *7****	Ex ib IIC T1-T6	-240°C
CMFHC3 ^{4}****¹*I****}	Ex ib IIB T1-T6	-50°C
CMFHC3 ^{4}****1} *I**** CIC A4	Ex ib IIC T1-T6	-50°C
CMFHC3 ^{4}****¹*7****}	Ex ib IIC T1-T6	-50°C
CMFHC3 ^{4]****1]*} I**** 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.





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex

Page 32 of 34

for sensor with integral 700 or 800 core processor

Туре	Type of protection	Min. ambient/fluid temperature
CMF010***** ^{2}*T}	Ex ib IIC T1-T5	-40°C
CMF025***** ²⁾ *I****	Ex ib IIC T1-T5	-40°C
CMF050***** ²⁾ *]****	Ex ib IIC T1-T5	-40°C
CMF100***** ^{2}} *I****	Ex ib IIC T1-T5	-40°C
CMF100***** ^{2]} *i**** CIC A4	Ex ib IIC T1-T5	-40°C
CMF100***** ²⁾ *7****	Ex ib IIC T1-T5	-40°C
CMF200***** ^{2]} *I**** 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⁾ *1****	Ex ib IIB T1-T5	-50°C
CMF200 ^{4]****2]*} J**** CIC A5	Ex ib IIB T1-T5	-50°C
CMF200 ^{4)****2)*} J**** 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⁾ *I**** 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 *I**** CIC A5	Ex ib IIB T1-T5	-50°C
CMF300 ⁴ **** ² *I**** 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]*} I****	Ex ib IIB T1-T5	-50°C
CMF400 ⁴	Ex ib IIB T1-T5	-50°C
CMF400 ⁴ /**** ² /*I**** 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*****CIC A4	Ex ib IIC T1-T5	-40°C / -29°C
CMFHC*Y******7**	Ex ib IIC T1-T5	-40°C / -29°C
CMFHC2******/* ****	Ex ib IIB T1-T5	-40°C
CMFHC2******2/* ***** CIC A4	Ex ib IIC T1-T5	-40°C
CMFHC2********	Ex ib IIC T1-T5	
CMFHC2"/*****/* ****	Ex ib IIB T1-T5	-50°C
CMFHC2*/*****CIC A4	Ex ib IIC T1-T5	-50°C
CMFHC2*/*****7***	Ex ib IIC T1-T5	-50°C
CMFHC2 ⁴ /***** ² /* **** CIC A6	Ex ib IIB T1-T5	-50°C
CMFHC2*/*****/*7**** CIC A6	Ex ib IIC T1-T5	-50°C
CMFHC3***** ² /* ****	Ex ib IIB T1-T5	-40°C
CMFHC3******2/*J**** CIC A4	Ex ib IIC T1-T5	-40°C
CMFHC3******	Ex ib IIC T1-T5	-40°C
	Ex ib IIB T1-T5	-50°C
CMFHC3*/*****CIC A4	Ex ib IIC T1-T5	-50°C
	Exib IIC 11-15	-50°C
CMFHC37/*****/*I**** CIC A6	Ex ib IIB T1-T5	-50°C
CMFHC3"/*****/*/**** CIC A6	Ex ib IIC 1- [5	I -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





Certificate No.:

IECEx BVS 04.0007X Issue 6 Annex Page 33 of 34

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:



	Se	nsor type
Transmitter type	CMF010****(J,U)*I**** CMF025****(J,U)*I**** CMF050****(J,U)*I**** CMF100****(J,U)*I**** CMF200****(J,U)*I**** CMF200****(J,U)*I**** CMF300*****(J,U)*I**** CMF300*****(J,U)*I**** CMF400*****(J,U)*I**** CMF400*****(J,U)*I**** CMFHC2*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMF200(A,B,C,E)****(J,U)*I**** CMF200(A,B,C,E)****(J,U)*I**** CMF300(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CMF400(A,B,C,E)****(J,U)*I**** CMFHC2(A,B,C,E)****(CMF200*****(J,U)* **** CIC A3 CMF300*****(J,U)* **** CIC A3 CMF400*****(J,U)* **** CMF400*****(J,U)* **** CMFC2*****(J,U)* **** CMF200(A,B,C,E)****(J,U)* **** CIC A5 CMF300(A,B,C,E)****(J,U)* **** CIC A5 CMF300(A,B,C,E)****(J,U)* **** CMF400(A,B,C,E)****(J,U)* **** CMF400(A,B,C,E)****(J,U)* **** CMF400(A,B,C,E)****(J,U)* **** CMF402(A,B,C,E)****(J,U)* **** CMFHC2(A,B,C,E)****(J,U)* **** CMFHC2(A,B,C,E)****(J,U)* **** CMFHC3(A,B,C,E)****(J,U)* **** CMFHC3(A,B,C,E)****(J,U)* **** CMFHC3(A,B,C,E)****(J,U)* **** CMFHC3(A,B,C,E)****(J,U)* **** CMFHC3(A,B,C,E)****(J,U)* **** CMFHC3(A,B,C,E)****(J,U)* ****
2200S***1*I****		



Certificate No.:

IECEx BVS 04.0007X issue 6 Annex Page 34 of 34

By mounting the sensor type CMF******C****** directly to the transmitter *700********* the use of the unit will be modified according to the following:



	Senso	r type
Transmitter type	CMF200(A,B,C,E)****C*I**** CIC A4 CMF200(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*I**** CIC A6 CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I****	CMF200(A,B,C,E)****C*I**** CMF200(A,B,C,E)****C*I**** CMF300(A,B,C,E)****C*I**** CMF300(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I****
*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.



Certificate No.:	IECEx BVS 04.0007X	issue No.:7	Certificate history: Issue No. 7 (2010-2-16)
Status:	Current		Issue No. 6 (2009-8-12) Issue No. 5 (2008-11-3)
Date of Issue:	2010-02-16	Page 1 of 4	Issue No. 4 (2007-10- 31) Issue No. 3 (2007-8-1)
Applicant:	Micro Motion, Inc. 7070 Winchester Circle, Boulder, Co. 80301 United States of Ameri	ica	ISSUE NO. 2 (2000-0-2)
Electrical Apparatus: Optional accessory:	Sensor type CMF*** *****	****	
Type of Protection:	Intrinsic Safety 'i'		
Marking:	Ex ib IIB/IIC ⊺4/T5/T6 Gb		
Approved for issue on l Certification Body:	behalf of the IECEx	HCh. Simanski	
Position:	ŀ	Head of Certification Body	
Signature: (for printed version)	_	1. a. hinh.	
Date:	-	16.02.2018	
1. This certificate and s 2. This certificate is not 3. The Status and authe	chedule may only be reproduc transferable and remains the enticity of this certificate may b	eed in full. property of the issuing body. be verified by visiting the Official 0	ECEx Website.
ertificate issued by:			
D	innendahlstrasse 9 44809 Bochum		DEKRA
	Germany	DEKR	A EXAM GmbH

	IEC of	Ex Certificate 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 An	Page 2 of 4 ³ , nerica
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 found to comply with the IE covered by this certificate, v certificate is granted subjec as amended.	verification that a sample(s), rep C Standard list below and that th was assessed and found to comp t to the conditions as set out in I	resentative of production, was assessed and tested and le manufacturer's quality system, relating to the Ex products oly with the IECEx Quality system requirements. This ECEx Scheme Rules, IECEx 02 and Operational Documents
STANDARDS: The electrical apparatus and documents, was found to co	d any acceptable variations to it omply with the following standard	specified in the schedule of this certificate and the identified ds:
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 electri expressly included in the	cal safety and performance requirements other than those Standards listed above.
TEST & ASSESSMENT RE A sample(s) of the equipment	PORTS: nt listed has successfully met the	e examination and test requirements as recorded in
IECEx ATR: DE/BVS/ExTR06.0009/07		File Reference: DE/BVS/04/2024/N7

	IECE of	Ex Certificate Conformity
Certificate No .:	IECEx BVS 04.0007X	
Date of Issue:	2010-02-16	Issue No.: 7 Page 3 of 4
	Sched	ule
EQUIPMENT: Equipment and systems co	overed by this certificate are as follow	s:
Subject and type:		
See Annex		
CONDITIONS OF CERTIFI	CATION: YES as shown below:	
Special conditions for safe	use	
See Annex		

4

(

. ...

	IECE: of C	x Certificate Conformity
Certificate No .:	IECEx BVS 04.0007X	
Date of Issue:	2010-02-16	Issue No.: 7
		Page 4 of 4
DETAILS OF CERTIFICAT	FE CHANGES (for issues 1 and above	e):
The sensor can be modifie Sensors type CMFHC4****	d: ***(I,7)**** and type CMFHC4(A,B,C,E))******(I,7)**** have been added,
Temperature diagrams for	type CMF400*******(I,7)**** and type C	MF400*****(J,U)*(I,7)**** have been modified,
Flex Conduit for High Tem	p Sensors have been revised.	
Sensors type CMF*******(I 09.0022U.	R,H,S,T)*(I,7)**** can also be executed	with the alternate junction box covered in IECEx BVS
New sensors type CMFHC type CMFHC4*****(2,3,4,5, type CMFHC3*****(2,3,4,5, (2,3,4,5,6,7,8,9,A,B,D,E,Q, type CMFHC2*****(2,3,4,5, type CMFHC2*****(2,3,4,5, type CMF300*****(2,3,4,5,6) type CMF300*****(2,3,4,5,6) temperature of -240 °C are	4 ⁴⁷ (2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y 6,7,8,9,A,B,D,E,Q,V,W,Y)*1**** CIC A4 6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** & ETO V,W,Y)*1**** CIC A4 & ETO 16995, 6,7,8,9,A,B,D,E,Q,V,W,Y)*7**** & ETO 6,7,8,9,A,B,D,E,Q,V,W,Y)*1**** CIC A4 5,7,8,9,A,B,D,E,Q,V,W,Y)*1**** CIC A4 5,7,8,9,A,B,D,E,Q,V,W,Y)*1**** CIC A4 possible.	9 77-55 & ETO 17192, & ETO 17192, 9 16995, type CMFHC3***** 9 17076, & ETO 17076, 17151 and & ETO 17151 for a minimum ambient-/process
The following modifications	have also been carried out:	
Transmitters type *700*1*4	****** and associated temperature diag	rams have been added.
Transmitters Type 22**S*(5	5,6)***I**** have been added.	
Ambient Temperature Limit +60°C.	t for sensors type CMF*******(2,3,4,5,6	3,7,8,9,A,B,D,E,Q,V,W,Y)*I***** has been changed to
Also for the sensors have b modified marking.	een assessed in acc. with the latest rev	visions of standard IEC 60079-0:2007, which leads to
	Annexe: BVS_04_00 07X_Micro M	lotion_Annex_lissue7.pdif





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 1 of 44

Subject and Type

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

Instead of the *** letters and numerals will be inserted which characterize the following modifications:

CMF*	* * * * * * * * * * * *	
CMF *		 Marking without influence to the type of protection —Approval I = IECEx Zone 1 IECEx Zone 1 - CMF100/200/300/400/HC2/HC3/HC4 for gas group IIC Letter for conduit connections Letter for electronic interface a stainless enhanced core processor stainless enhanced core processor with extender stainless enhanced core processor for direct host a stainless enhanced core processor with extender for direct host a aluminum enhanced core processor for direct host a aluminum enhanced core processor with extender for direct host a stainless enhanced core processor with extender for direct host a clocal core processor b coal core processor with extender c integral 1700/2700 b coal core processor with extender c aluminum core processor with extender q aluminum core processor with extender q aluminum core processor with extender q aluminum core processor with extender y aluminum core processor with extender<!--</td-->


IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 7 Annex Page 2 of 44

Parameters

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

1.1	Drive circuit (connections 1 - 2 or red and b	rown)			
	Voltage	Ui	DC	11.4	V
	Current	li		2.45	Α
	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)	* ****	(IIC)	2.51	0	170.1	-240
CMF050*****(R,H,S,T)	* ****	(IIC)	2.51	0	170.1	-240
CMF100*****(R,H,S,T)	* ****	(IIC)	6.7	52.4	89.0	-60
CMF100*****(R,H,S,T)*I**** CIC A4 (IIC)		(IIC)	6.7	0	177.0	-240
CMF100*****(R,H,S,T)	*7****	(IIC)	6.7	0	177.0	-240

Sensor type	, <u> </u>	3	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	0	101	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		(IIC)	11.75	0	187.1	-240
CMF400*****(R,H,S,T)*7**** (III		(IIC)	11.75	0	187.1	-240





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 3 of 44

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)* _****	(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)

Sensor type	J.		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		(IIC)	2.51	0	0	-240
CMF100*****(R,H,S,T)*I**** (III		(IIC)	0.441	9.9	0	-60
CMF100*****(R,H,S,T)*I**** CIC A4 (IIC)		(IIC)	0.441	0	0	-240
CMF100*****(R,H,S,T)	*7****	(IIC)	0.441	0	0	-240





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex

Page 4 of 44

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	0		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)	*1**** (11	B)	2.8	49.2	42.6 to 566.4	-50
CMFHC2****(R,H,S,T)	*I**** CIC A4 (II	C)	2.8	0	198.4 to 566.4	-240
CMFHC2****(R,H,S,T)	*7**** (!!	C)	2.8	0	198.4 to 566.4	-240
CMFHC3****(R,H,S,T)	* **** (B)	2.8	49.2	42.6 to 566.4	-50
CMFHC3****(R,H,S,T)	*I**** CIC A4 (II	C)	2.8	0	198.4 to 566.4	-240
CMFHC3****(R,H,S,T)	*7**** (11	C)	2.8	0	198.4 to 566.4	-240
CMFHC4****(R,H,S,T)	* **** (B)	2.8	49.2	42.6 to 566.4	-50
CMFHC4****(R,H,S,T)	*I**** CIC A4 (II	C)	2.8	0	198.4 to 566.4	-240
CMFHC4****(R,H,S,T)	*7**** (C)	2.8	0	198.4 to 566.4	-240
CMFHC*Y****(R,H,S,T)	* **** (B)	2.8	49.2	42.6 to 566.4	-50/-29
CMFHC*Y****(R,H,S,T)	*I**** CIC A4 (II	C)	2.8	0	198.4 to 566.4	-240/-29
CMFHC*Y****(R,H,S,T)	*7**** (11	C)	2.8	0	198.4 to 566.4	-240/-29





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 5 of 44

1.3 Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet)					
	Voltage	Ui	DC	21.13	V
	Current	li		26	mΑ
	Power	Pi		112	mW
	Internal capacitance	Ci	negligible		
	Internal inductance	Li	negligible		

Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

		coil		Minimum
sensor type	inductance	resistance	serial resistor	Ambient/Fluid
	[mH]	[Ω]	[Ω]	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

Та

-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.



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 6 of 44





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

Ambient temperature range

Та

-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.





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 7 of 44



AMB [20 Τ6 Τ5 Τ4 ТЗ T1-T2 10 MAX 0 -10 -55 145 100 120 140 160 180 204 -55 0 20 40 80 220 60 SENSOR FLUID TEMP (°C)

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

Ambient temperature range

Та

-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.



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 8 of 44

1.4.4

Sensor type			, <u> </u>			
	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.



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 9 of 44





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

Ambient temperature range

Та

-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.





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 10 of 44





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

Ambient temperature range:

Та

-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.



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 11 of 44





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

Ambient temperature range

Та

-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.



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 12 of 44





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.



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 13 of 44





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.



Certificate No.:

10

0 -10 -20 -30 -40 -240

-29

0

Τ6

30

T5

77 92

90

SENSOR FLUID TEMP (°C)

60

т4

IECEx BVS 04.0007 X issue 7 Annex Page 14 of 44



T3

150

T2 - T1

192 204

210

180

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

127

120

-240°C to + 55°C Ambient temperature range: Та

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.



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 7 Annex Page 15 of 44

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

2.1	Drive circuit (connections 1 - 2 or red and br	own)			
	Voltage	Ui	DC	11.4	V
	Current	li		2.45	Α
	Power	Pi		2.54	W

Ci

Internal capacitance

negligible

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200(A, B	B, C, E)****(R,S)*I****	(IIB)	4.0	32.3	19.8	-50
CMF200(A, B	5, C, E)****(R,S)*I**** CIC A5	(IIB)	1.1	15.4	9.6	-50
CMF200(A, B	5, 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, E	3, <u>C, E)****(R,S)*I****</u>	(IIB)	5.95	51.3	12.8	-50
CMFHC2(A, E	3, C, E)****(R,S)*I**** CIC A4	(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, E	3, C, E)****(R,S)*7****	(IIC)	5.95	51.3	88.9	-50
CMFHC2(A, E	3, C, E)****(R,S)*I**** CIC A6	(IIB)	7.75	54.3	24.7	-50
CMFHC2(A, E	3, C, E)****(R,S)*7**** CIC A6	(IIC)	7.75	54.3	106.7	-50
CMFHC3(A, E	B, C, E)****(R,S)*I	(IIB)	5.95	51.3	12.8	-50
CMFHC3(A, E	3, C, E)****(R,S)*I**** CIC A4	(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, E	B, C, E)****(R,S)*7****	(IIC)	5.95	51.3	88.9	-50
CMFHC3(A, E	3, C, E)****(R,S)* **** CIC A6	(IIB)	7.75	54.3	24.7	50
CMFHC3(A, E	3, C, E)****(R,S)*7**** CIC A6	(IIC)	7.75	54.3	106.7	-50
CMFHC4(A, E	3, C, E)****(R,S)*I****	(IIB)	5.95	51.3	12.8	-50
CMFHC4(A, E	3, C, E)****(R,S)*I**** CIC A4	(IIC)	5.95	51.3	88.9	-50
CMFHC4(A, E	3, C, E)****(R,S)*7****	(IIC)	5.95	51.3	88.9	-50
CMFHC4(A, E	3, C, E)****(R,S)* **** CIC A6	(IIB)	7.75	54.3	24.7	-50
CMFHC4(A, E	3, 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	li		18.05	mΑ			
	Power	Pi		45	mW			
	Internal capacitance	Ci	negligible					





Certificate No.:

IECEx BVS 04.0007 X issue 7

Annex Page 16 of 44

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	8, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B	8, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B	5, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B	8, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B	5, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, B	5, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, B	5, 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, yello	w and violet)		
	Voltage	Ui	DC	21.13	V
	Current	li		26	mΑ
	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



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 17 of 44

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)* ****	(IIB)	Connected to MVD transmitters,
CMF200(A	or B)****(R,S)*I**** CIC A4	(IIC)	e.g. 1000/2000/3000MVD series
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)*/**** CIC A6		
CMFHC4(A	or B)****(R,S)* ****	(IIB)	
	or B)****(R,S)*I**** CIC A4	(IIC)	
CMFHC4(A	or B)****(R,S)*I**** CIC A6	(IIB)	
CMFHC4(A	or B)****(R,S)*/****		
CMFHC4(A	or B)****(R,S)*7**** CIC A6	(IIC)	

() 90 0 - 0 0 - 0 0 0 - 0 0 0 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
E 50 - IN 40 - B 20 - V 10 - V 0 - -10 - -20 - -30 - -50 -	T6	T5 T4	13	T2	11
-50 -	-20 0 20 40	60 80 100 SEN	120 140 160 180 ISOR FLUID TEMP) 200 220 240 260 (°C)	280 300 320 340 360



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 18 of 44

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	Ľ		
	CMF200(C	or E)****(R,S)*I****	(IIB)	Connected to MVD transmitters,
	CMF200(C	or E)****(R,S)* **** CIC A4	(IIC)	e.g. 1000/2000/3000MVD series
	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	C or E)****(R,S)*I****	(<u>IIB)</u>	
	CMFHC2(C	C or E)****(R,S)*I**** CIC A4	(IIC)	
	CMFHC2(C	C or E)****(R,S)*I**** CIC A6	(IIB)	
	CMFHC2(C	C or E)****(R,S)*7****	(IIC)	
	CMFHC2(C	C or E)****(R,S)*7**** CIC A6	(IIC)	
	CMFHC3(C	C or E)****(R,S)*I****	(IIB)	
	CMFHC3(C	C or E)****(R,S)*I**** CIC A4	(IIC)	
	CMFHC3(C	C or E)****(R, <u>S</u>)*I**** CIC A6	(IIB)	
	CMFHC3(C	C or E)****(R,S)*7****	(IIC)	
	CMFHC3(C	C or E)****(R,S)*7**** CIC A6	(IIC)	
	CMFHC4(C	C or E)****(R,S)*I****	(IIB)	
	CMFHC4(C	or E)****(R,S)*I**** CIC A4	(IIC)	
	CMFHC4(C	C or E)****(R,S)*I**** CIC A6	(IIB)	
	CMFHC4(C	C or E)****(R,S)*7****	(IIC)	
	CMFHC4(C	c or E)****(R,S)*7**** CIC A6	(IIC)	



Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 19 of 44



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

Ambient temperature range

Та

-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 1	7.3	V
	Current	li	48	4	mΑ
	Power	Pi		2.1	W
	Effective internal capacitance	Ci	220	0	pF
	Effective internal inductance	Li	3	0	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:





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 20 of 44

3.2.1





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

Ambient temperature range

Та

-40 °C up to +60 °C







Certificate No.: IECEx BVS 04.0007 X issue 7 Annex

Page 21 of 44



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







Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 22 of 44

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

Ambient temperature range

Та

-40 °C up to +60 °C

3.2.4

Sensor type			3
CMFHC2****(2,3	,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	
CMFHC2*****(2,3	,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	
CMFHC2****(2,3	(IIC)		
CMFHC3****(2,3	(IIB)	With integral core	
CMFHC3*****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4 (IIC)			processor
CMFHC3****(2,3	p10065301		
CMFHC4****(2,3	(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

-40 °C up to +60 °C



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 23 of 44







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	8,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral core
CMFHC*Y****(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4 (IIC)		(IIC)	processor
CMFHC*Y****(2,3	8,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	processor



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 24 of 44



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



Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 25 of 44

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	li		484	mΑ
	Power	Pi		2.1	W
	linternal 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:





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 26 of 44

4.2.1

Sensor type			
CMF200(A or B)****(2,3,6,7,A,I	D,Q,W)*I****	(IIB)	With integral
CMF200(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A4	(IIC)	core processor
CMF200(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A5	(IIB)	
CMF200(A or B)****(2,3,6,7,A,I	D,Q,W)*7****	(IIC)	
CMF300(A or B)****(2,3,6,7,A,I	D,Q,W)*I****	(IIB)	
CMF300(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A4	(IIC)	
CMF300(A or B)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(IIB)	
CMF300(A or B)****(2,3,6,7,A,I	D,Q,W)*7****	(IIC)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*I****	(IIB)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A4	(IIC)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A5	(IIB)	
CMF400(A or B)****(2,3,6,7,A,E	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.



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 27 of 44

Ambient	temperature	range
---------	-------------	-------

Та

-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.

Sensor type			3
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*I****	(IIB)	With integral
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	core processor
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(IIB)	
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*7****	(IIC)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*I****	(IIB)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(IIB)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*7****	(IIC)	
CMF400(C or E)****(2,3,6,7,A,E	D,Q,W)*I****	(IIB)	
CMF400(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	
CMF400(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(IIB)	
CMF400(C or E)****(2,3,6,7,A,E	D,Q,W)*7****	(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,I	D,Q,W)*I****	(IIB)	
CMFHC2(C or E)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A4	(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A6	(IIB)	
CMFHC2(C or E)****(2,3,6,7,A,I	D,Q,W)*7****	(IIC)	
CMFHC2(C or E)****(2,3,6,7,A,I	D,Q,W)*7**** CIC A6	(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,I	D,Q,W)*I****	(IIB)	
CMFHC3(C or E)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A4	(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A6	(IIB)	
CMFHC3(C or E)****(2,3,6,7,A,I	D,Q,W)*7_***	(IIC)	
CMFHC3(C or E)****(2,3,6,7,A,I	D,Q,W)*7**** CIC A6	(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,I	D,Q,W)*I****	(IIB)	
CMFHC4(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A6	(IIB)	
CMFHC4(C or E)****(2,3,6,7,A,E	D,Q,W)*7****	(IIC)	
CMFHC4(C or E)****(2,3,6,7,A,E	D,Q,W)*7**** CIC A6	(IIC)	

4.2.2



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 28 of 44



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:





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 29 of 44

5.2.1

Sensor type	U		
CMF200(A or B)****C	* ****	(IIB)	With Integral
CMF200(A or B)****C	*I**** CIC A5	(IIB)	1700/2700
CMF200(A or B)****C	*I**** CIC A4	(IIC)	Transmitter
CMF200(A or B)****C	*7***	(IIC)	
CMF300(A or B)****C	* ****	(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	* ****	(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	;* ****	(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	;* ****	(IIB)	
CMFHC3(A or B)****C	*I**** CIC A6	(IIB)	
CMFHC3(A or B)****C	*I**** CIC A4	(IIĆ)	
CMFHC3(A or B)****C	*7***	(IIC)	
CMFHC3(A or B)****C	*7**** CIC A6	(IIC)	
CMFHC4(A or B)****C	* ****	(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)	





IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 30 of 44

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"):

	60 <u>,</u> ,				
T TEMP (°C)	50 40 30 20				
AMBIEN	10 0 -10	Ť4	T3	T2	T1
MAX	-20 -30 -50	<u>_</u>	, , , , , , , , , , , , , , , , , , ,		350
	و.	0 -20 0 20 40 60 80 100 1 SENS	20 140 160 18 DR FLUID T	0 200 220 240 260 2 EMP (°C)	80 300 320 340 360

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

Ambient temperature range

Та

-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.





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 31 of 44

5.2.2

Sensor type			
CMF200(C or E)****C	* ***	(IIB)	With Integral
CMF200(C or E)****C	*I**** CIC A5	(IIB)	1700/2700
CMF200(C or E)****C	*I**** CIC A4	(IIC)	Transmitter
CMF200(C or E)****C	*7****	(IIC)	
CMF300(C or E)****C	* ****	(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	* ****	(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)* ****	(IIB)	
CMFHC2(C or <u>E)****</u> C	C*I**** CIC A6	(IIB)	
CMFHC2(C or E)****C	C*I**** CIC A4	(IIC)	
CMFHC2(C or E)****C	\$*7***	(IIC)	
CMFHC2(C or E)****C	C*7**** CIC A6	(IIC)	
CMFHC3(C or E)****C	.* ****	(IIB)	
CMFHC3(C or E)****C	C*I**** CIC A6	(IIB)	
CMFHC3(C or E)****C	C*I**** CIC A4	(IIC)	
CMFHC3(C or E)****C	*7***	(IIC)	
CMFHC3(C or E)****C	2*7**** CIC A6	(IIC)	
CMFHC4(C or E)****C	;* **** 	(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.



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 7 Annex Page 32 of 44

Ambient temperature range

Та -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

-50 °C up to +55 °C

Та

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.

Types CMF*******(J,U)*I**** incl. CIC A4 with 2200S transmitter, except type 6 CMF***(A,B,C,E)****J,U)*I****

Input circuits (terminals 1 - 2)				
Voltage	Ui	DC	28	V
Current	li	1	20	mΑ
Power	Pi		0.84	W
Internal capacitance	Ci	22	00	pF
Internal inductance	Li		45	μH
	Input circuits (terminals 1 - 2) Voltage Current Power Internal capacitance Internal inductance	Input circuits (terminals 1 - 2)UiVoltageUiCurrentIiPowerPiInternal capacitanceCiInternal inductanceLi	Input circuits (terminals 1 - 2)UiDCVoltageUiDCCurrentIi12PowerPi12Internal capacitanceCi220Internal inductanceLi42	Input circuits (terminals 1 - 2)UiDC28VoltageIi120CurrentIi120PowerPi0.84Internal capacitanceCi2200Internal inductanceLi45

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:





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 33 of 44

6.2.1

Sensor type	CMF010	CMF100	CMF20	00/300	
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

Та -40 °C up to +60 °C





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 34 of 44

6.2.2

Sensor type			ę
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

Та -40 °C up to +60 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 7 Annex Page 35 of 44





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

Ambient temperature range

Та -40 °C up to +60 °C



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 7 Annex Page 36 of 44





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 Current Power Internal capacitance Internal inductance

V Ui DC 28 120 li mΑ 0.84 Pi W Ci 2200 pF 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:





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 37 of 44



Sensor type	Ū		
CMF200(A or B)****J	* ****	(IIB)	With integral 2200S
CMF200(A or B)****J	*I**** CIC A4	(IIC)	Ũ
CMF200(A or B)****J	*I**** CIC A5	(IIB)	
CMF200(A or B)****J	*7****	(IIC)	
CMF300(A or B)****J*	* ****	(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*	· ****	(IIB)	
CMF400(A or B)****J*	'I**** CIC A4	(IIC)	
CMF400(A or B)****J*	1**** CIC A5	(IIB)	
CMF400(A or B)****J*	7****	(IIC)	
CMFHC2(A or B)****J	* ****	(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	* ****	(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	* ****	(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.


IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 7 Annex Page 38 of 44

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	U		
CMF200(C or E)****J	* ****	(IIB)	With integral 2200S
CMF200(C or E)****J	*I**** CIC A4	(IIC)	Ũ
CMF200(C or E)****J	*I**** CIC A5	(IIB)	
CMF200(C or E)****J	*7****	(IIC)	
CMF300(C or E)****J	* ****	(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	* ****	(IIB)	
CMF400(C or E)****J*I**** CIC A4 (IIC)			
CMF400(C or E)****J*I**** CIC A5 (III			
CMF400(C or E)****J*7****			
CMFHC2(C or E)****J*I****			
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	* ****	(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	* ****	(IIB)	
CMFHC4(C or E)****J	*I**** CIC A4	(IIC)	
CMFHC4(C or E)****J	*I** <u>*</u> * CIC A6	(IIB)	
CMFHC4(C or E)****J	*7***	(IIC)	
CMFHC4(C or E)****J	*7**** CIC A6	(IIC)	





IECEx BVS 04.0007 X issue 7 Annex Page 39 of 44



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

Ambient temperature range

Та -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.





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 40 of 44

Marking

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

for sensors with junction box connected to MVD transmitter

Туре	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⁾ *(**** 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
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
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
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 <u>****</u>	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 <u>A6</u>	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*****'/*7****	Ex ib IIC T1-T6 Gb	-240°C
CMFHC3"/****1/*I****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC3*/**** 1/*1**** CIC A4	Ex ib IIC T1-T6 Gb	-50°C
CMFHC3*/*****/*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



Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex

Page 41 of 44

Туре	Type of protection	Min. ambient/fluid temperature
CMFHC4***** ¹⁾ *I****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC4***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6 Gb	-240°C
CMFHC4**** ¹⁾ *7****	Ex ib IIC T1-T6 Gb	-240°C
CMFHC4 ⁴)**** ¹ /*I****	Ex ib IIB T1-T6 Gb	-50°C
CMFHC4 ⁴⁾ **** ¹⁾ *I**** 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⁾ *I**** 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

Туре	Type of protection	Min. ambient/fluid temperature
CMF010***** ²⁾ *I****	Ex ib IIC T1-T5 Gb	-40°C
CMF025***** ^{2}} *I****	Ex ib IIC T1-T5 Gb	-40°C
CMF050***** ^{2]} *I****	Ex ib IIC T1-T5 Gb	-40°C
CMF100***** ²⁾ *I****	Ex ib IIC T1-T5 Gb	-40°C
CMF100***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMF100***** ²⁾ *7****	Ex ib IIC T1-T5 Gb	-40°C
CMF200***** ²⁾ *I**** CIC A3	Ex ib IIB T1-T5 Gb	-40°C
CMF200***** ²⁾ *I**** 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⁾ *I**** CIC A3	Ex ib IIB T1-T5 Gb	-40°C
CMF300***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMF300***** ²⁾ *I**** 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⁾ *I****	Ex ib IIB T1-T5 Gb	-50°C
CMF300 ⁴⁾ **** ²⁾ *I**** CIC A5	Ex ib IIB T1-T5 Gb	-50°C
CMF300 ⁴⁾ **** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-50°C
CMF300 ⁴⁾ **** ²⁾ *7****	Ex ib IIC T1-T5 Gb	-50°C
CMF400***** ²⁾ *I**** CIC A3	Ex ib IIB T1-T5 Gb	-40°C
CMF400***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-40°C
CMF400**** ² *7***	Ex ib IIC T1-T5 Gb	-40°C
CMF400 ⁴⁾ **** ² *I****	Ex ib IIB T1-T5 Gb	-50°C
CMF400 ⁴⁾ **** ^{2]} *I**** CIC A5	Ex ib IIB T1-T5 Gb	-50°C
CMF400 ⁴⁾ **** ²⁾ *I**** 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⁾ *I****	Ex ib IIB T1-T5 Gb	-40°C / -29°C
CMFHC*Y**** ²⁾ *I**** 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





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex

Page 42 of 44

Туре	Type of protection	Min. ambient/fluid temperature
CMFHC2***** ²⁾ *I****	Ex ib IIB T1-T5 Gb	-40°C
CMFHC2***** ²⁾ * **** 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 *	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⁾ * ****	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





Certificate No.:

IECEx BVS 04.0007 X issue 7 Annex Page 43 of 44

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:



	Se	ensor type
Transmitter type	CMF010*****(J,U)* **** CMF025*****(J,U)* **** CMF050*****(J,U)* **** CMF100*****(J,U)* **** CMF200*****(J,U)* **** CMF200*****(J,U)*/**** CMF300*****(J,U)*/**** CMF400*****(J,U)*/**** CMF400*****(J,U)*/**** CMF400*****(J,U)*/**** CMFHC2*****(J,U)*/**** CMFHC2*****(J,U)*/**** CMFHC3*****(J,U)*/**** CMFHC3*****(J,U)*/**** CMF200(A,B,C,E)****J*/**** CMF200(A,B,C,E)****J*/**** CMF300(A,B,C,E)****J*/**** CMF300(A,B,C,E)****J*/**** CMF400(A,B,C,E)****J*/***** CMF400(A,B,C,E)****J*/***** CMF400(A,B,C,E)****J*/***** CMF400(A,B,C,E)****J	CMF200*****(J,U)*I**** CIC A3 CMF300*****(J,U)*I**** CIC A3 CMF400*****(J,U)*I**** 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**** CMF300(A,B,C,E)****J*I**** CMF300(A,B,C,E)****J*I**** CMF400(A,B,C,E)****J*I**** CMF400(A,B,C,E)****J*I**** CMF400(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I****
2200S***1*I****		





IECEx BVS 04.0007 X issue 7 Annex Page 44 of 44

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 ty	pe
Transmitter type	CMF200(A,B,C,E)****C*I**** CIC A4 CMF200(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*T**** CMFHC2(A,B,C,E)****C*T**** CMFHC2(A,B,C,E)****C*T**** CMFHC2(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC4(A,B,C,E)****C*T**** CMFHC4(A,B,C,E)****C*I**** CIC A6	CMF200(A,B,C,E)****C*I**** CMF200(A,B,C,E)****C*I**** CMF200(A,B,C,E)****C*I**** CMF300(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CMF400(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CMFHC2(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CMFHC3(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I**** CMFHC4(A,B,C,E)****C*I****
*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

At this place the numeral 1 or 2 will be inserted. 1 = 1

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



	RNATIONAL ELE Certification Sch for rules and details o	CTROTECHNICAL C eme for Explosive A f the IECEx Scheme visit www.iece	COMMISSION Atmospheres ex.com
Certificate No.: Status:	IECEx BVS 04.0007X	issue No.:8	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)
Date of Issue: Applicant:	2011-05-17 Micro Motion, Inc. 7070 Winchester Circle, Boulder, Co. 80301 United States of Ame	Page 1 of 4	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:	Intrinsic Safety 'i'		
Marking:	Ex ib IIB/IIC T4/T5/T6 C	Gb	
Approved for issue on Certification Body:	behalf of the IECEx	HCh. Simanski	
Position:		Head of Certification Body	
Signature: (for printed version)		H. a. hil.	2
Date:		17/5/2011	
 This certificate and This certificate is no The Status and aut 	schedule may only be reprod ot transferable and remains th henticity of this certificate ma	duced in full. he property of the issuing body. ly be verified by visiting the Official	IECEx Website.
Certificate issued by:	DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany	DEK	DEKRA RA EXAM GmbH

Certificate No.:	IECEx BVS 04.0007X		
Date of Issue:	2011-05-17	lss	ue No.: 8
Manufacturer:	Micro Motion, Inc. 7070 Winchester Circ Boulder, Co. 80301 United States of A	Pa: :le, merica	ge 2 of 4
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 found to comply with the IEC covered by this certificate, v certificate is granted subject as amended.	verification that a sample(s), re C Standard list below and that vas assessed and found to cor t to the conditions as set out in	epresentative of production, v the manufacturer's quality sy nply with the IECEx Quality s IECEx Scheme Rules, IECE	vas assessed and tested and stem, relating to the Ex products ystem requirements. This x 02 and Operational Documen
The electrical apparatus and	d any acceptable variations to	it specified in the schedule of	this certificate and the identified
The electrical apparatus and documents, was found to co	d any acceptable variations to omply with the following standa Explosive atmospheres - Pa	it specified in the schedule of ards: rt 0:Equipment - General reg	this certificate and the identified
The electrical apparatus and documents, was found to co IEC 60079-0 : 2007-10 Edition: 5 IEC 60079-11 : 2006 Edition: 5	d any acceptable variations to omply with the following standa Explosive atmospheres - Pa Explosive atmospheres - Pa	it specified in the schedule of ards: rt 0:Equipment - General req rt 11: Equipment protection b	this certificate and the identified uirements y intrinsic safety "i"
The electrical apparatus and documents, was found to co IEC 60079-0 : 2007-10 Edition: 5 IEC 60079-11 : 2006 Edition: 5 This Certificate does not	d any acceptable variations to omply with the following standa Explosive atmospheres - Pa Explosive atmospheres - Pa tindicate compliance with elec expressly included in t	it specified in the schedule of ards: rt 0:Equipment - General req rt 11: Equipment protection b trical safety and performance the Standards listed above.	this certificate and the identified uirements y intrinsic safety "i" <i>requirements other than those</i>
The electrical apparatus and documents, was found to co IEC 60079-0 : 2007-10 Edition: 5 IEC 60079-11 : 2006 Edition: 5 This Certificate does not TEST & ASSESSMENT RE A sample(s) of the equipme	d any acceptable variations to omply with the following standa Explosive atmospheres - Pa Explosive atmospheres - Pa t indicate compliance with elec expressly included in the EPORTS: nt listed has successfully met	it specified in the schedule of ards: rt 0:Equipment - General req rt 11: Equipment protection b trical safety and performance the Standards listed above. the examination and test requ	this certificate and the identified uirements y intrinsic safety "i" <i>requirements other than those</i> uirements as recorded in
The electrical apparatus and documents, was found to co IEC 60079-0 : 2007-10 Edition: 5 IEC 60079-11 : 2006 Edition: 5 <i>This Certificate does not</i> TEST & ASSESSMENT RE <i>A sample(s) of the equipme</i> IECEx ATR: DE/BVS/ExTR06.0009/08	d any acceptable variations to omply with the following standa Explosive atmospheres - Pa Explosive atmospheres - Pa indicate compliance with elec expressly included in t EPORTS: nt listed has successfully met	it specified in the schedule of ards: rt 0:Equipment - General req rt 11: Equipment protection b trical safety and performance the Standards listed above. the examination and test requ File Reference: DE/BVS/04/2024/N	this certificate and the identified uirements y intrinsic safety "i" <i>requirements other than those</i> <i>uirements as recorded in</i> 8
The electrical apparatus and documents, was found to co IEC 60079-0 : 2007-10 Edition: 5 IEC 60079-11 : 2006 Edition: 5 This Certificate does not TEST & ASSESSMENT RE A sample(s) of the equipme IECEx ATR: DE/BVS/ExTR06.0009/08	d any acceptable variations to omply with the following standa Explosive atmospheres - Pa Explosive atmospheres - Pa indicate compliance with elec expressly included in t PORTS: nt listed has successfully met	it specified in the schedule of ards: rt 0:Equipment - General req rt 11: Equipment protection b trical safety and performance the Standards listed above. the examination and test req File Reference: DE/BVS/04/2024/N	this certificate and the identified uirements y intrinsic safety "i" <i>requirements other than those</i> <i>uirements as recorded in</i>
The electrical apparatus and documents, was found to co IEC 60079-0 : 2007-10 Edition: 5 IEC 60079-11 : 2006 Edition: 5 <i>This Certificate does not</i> TEST & ASSESSMENT RE A sample(s) of the equipme IECEx ATR: DE/BVS/ExTR06.0009/08	d any acceptable variations to omply with the following standa Explosive atmospheres - Pa Explosive atmospheres - Pa indicate compliance with elec expressly included in t EPORTS: nt listed has successfully met	it specified in the schedule of ards: rt 0:Equipment - General req rt 11: Equipment protection b trical safety and performance the Standards listed above. the examination and test requ File Reference: DE/BVS/04/2024/N	this certificate and the identified uirements y intrinsic safety "i" <i>requirements other than those</i> uirements as recorded in 8

IEC	IECEX

Certificate No .:

IECEx BVS 04.0007X

Date of Issue:

2011-05-17

Issue No.: 8

Page 3 of 4

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



Certificate No .:

IECEx BVS 04.0007X

Date of Issue:

2011-05-17

Issue No.: 8

Page 4 of 4

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





Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 1 of 43

Subject and Type

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

Instead of the *** letters and numerals will be inserted which characterize the following modifications:





IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 2 of 43

Parameters

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

1.1	Drive circuit (connections 1 - 2 or red and brow	n)			
	Voltage	Úi	DC	11.4	V
	Current	li		2.45	Α
	Power	Pi		2.54	W

Internal capacitance

negligible

Sensor type	FQ		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T)	*]****	(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)	* ****	(IIC)	2.51	0	170.1	-240
CMF050*****(R,H,S,T)	* ****	(IIC)	2.51	0	170.1	-240
CMF100*****(R,H,S,T)	* ****	(IIC)	6.70	58.4	89.0	-40
CMF100*****(R,H,S,T)	* ****	(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	ļ	{	Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200*****(R,H,S,T)*	**** 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)*	**** CIC A4	(IIC)	9.5	0	177.0	-240
CMF300*****(R,H,S,T)*	7****	(IIC)	9.5	0	177.0	-240

Sensor type		Inductanc e (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





Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 3 of 43

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	2 Pick-Off coil (Terminals 5/9 and 6/8 or wires green/white and blue/grey)						
	Voltage	Ui	DC	/	21.13	V	
	Current	li			18.05	mA	
	Power	Pi			45	mW	

Sensor type	F.G.		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010*****(R,H,S,T))*[****	(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)	*[****	(IIC)	2.51	0	0	-240
CMF050*****(R,H,S,T)	* ****	(IIC)	2.51	0	0	-240
CMF100*****(R,H,S,T)	* ****	(IIC)	0.441	11.1	0	-40
CMF100*****(R,H,S,T)	* ****	(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





IECEx BVS 04.0007 X issue 8 **Certificate No.:** Annex Page 4 of 43

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	Q		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





Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 5 of 43

1.3	Temperature circuits (terminals 3, 4 and	7 or wires orange, yello	w and violet)		
	Voltage	Ui	DC	21.13	V
	Current	li		26	mΑ
	Power	Pi		112	mW
	Internal capacitance	Ci	negligible		
	Internal inductance	Li	negligible		

Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

		coil		Minimum
sensor type	inductance	resistance	serial resistor	Ambient/Fluid
	[mH]	[Ω]	[Ω]	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





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

Ambient temperature range

Та

-240 °C up to +55 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 6 of 43

1.4.2

Sensor type	Ţ	
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

Та

-60 °C up to +55 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 7 of 43





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

Ambient temperature range Та -55 °C up to +55 °C





Certificate No.: IECEx BVS 04.0007 X issue 8 Annex Page 8 of 43

1.4.4

Sensor type				
	CMF100*****(R,H,S,T)*I**** CIC A4	(IIC)	CMF200*****(R,H,S,T)*I**** CIC A4	(IIC)
1	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: Та -240 °C up to +55 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 9 of 43





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

Ambient temperature range

Та

-68 °C up to +60 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 10 of 43





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

Ambient temperature range:

Та

-240 °C to +60 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 11 of 43





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

Ambient temperature range

Та

-50 °C up to +55 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 12 of 43



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

Ambient temperature range:

Та

-240 °C to +55 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 13 of 43





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

Ambient temperature range:

Та

-50 °C to +55 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 14 of 43



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

Ambient temperature range: Та -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.



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 15 of 43

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	li		2.45	Α
	Power	Pi		2.54	W

Ci

Internal capacitance

negligible

Sensor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF200(A, E	3, C, E)****(R,S)*I****	(IIB)	4.00	32.3	19.8	-50
CMF200(A, E	3, C, E)****(R,S)*I**** CIC A5	(IIB)	1.10	15.4	9.6	-50
CMF200(A, E	3, C, E)****(R,S)*I**** CIC A4	(IIC)	1.10	15.4	41	-50
CMF200(A, E	B, C, E)****(R,S)*7****	(IIC)	1.10	15.4	41	-50
CMF200(A, E	3, C, E)****(R,S)*7**** CIC A7	(IIC)	4.00	32.3	88.9	-50
CMF300(A, E	3, C, E)****(R,S)*I****	(IIB)	4.00	32.3	19. <u>8</u>	50
CMF300(A, E	3, C, E)****(R,S)*I**** CIC A5	(IIB)	1.10	15.4	9.6	-50
CMF300(A, E	B, C, E)****(R,S)*I**** CIC A4	(IIC)	1.10	15.4	41	-50
CMF300(A, E	B, C, E)****(R,S)*7****	(IIC)	1.10	15.4	41	-50
CMF300(A, E	B, C, E)****(R,S)*7**** CIC A7	(IIC)	4.00	32.3	88.9	-50
CMF400(A, E	B, C, E)****(R,S)*I****	(IIB)	7.75	54.3	19.8	-50
CMF400(A, E	B, C, E)****(R,S)*I**** CIC A5	(IIB)	3.40	35.2	12.8	- <u>50</u>
CMF400(A, E	B, C, E)****(R,S)*I**** CIC A4	(IIC)	3.40	3 <u>5.</u> 2	63.2	-50
CMF400(A, E	B, C, E)****(R,S)*7****	(IIC)	3.40	35.2	63.2	-50
CMF400(A, E	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	- <u>5</u> 0
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 wire	es green/white and blu	ue/grey)			
	Voltage	Ui	DC	21.13	V	
	Current	li		18.05	mΑ	
	Power	Pi		45	mW	
	Internal capacitance	Ci	nealiaible			





21.13

26

V

mΑ

mW

Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex

Page 16 of 43

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)* **** 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)	<u>1.25</u>	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	B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B	B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC2(A, B	B, C, E)****(R,S)*7****	(IIC)	0.85	<u>9.1</u>	42.6	-50
CMFHC2(A, B	B, C, E)****(R,S)*I**** CIC_A6	(IIB)	0.85	9.1	42.6	-50
CMFHC2(A, B	B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, E	B, C, E)****(R,S)*I****	(IIB)	0.85	9 <u>.1</u>	42.6	-50
CMFHC3(A, E	B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, E	B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	-50
CMFHC3(A, E	B, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	-50
CMFHC3(A, E	B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, E	B, C, E)****(R,S)*I****	(IIB)	0.85	9.1	42.6	-50
CMFHC4(A, E	B, C, E)****(R,S)*I**** CIC A4	(IIC)	0.85	9.1	42.6	-50
CMFHC4(A, E	B, C, E)****(R,S)*7****	(IIC)	0.85	9.1	42.6	50
CMFHC4(A, E	3, C, E)****(R,S)*I**** CIC A6	(IIB)	0.85	9.1	42.6	50
CMFHC4(A, E	B, C, E)****(R,S)*7**** CIC A6	(IIC)	0.85	9.1	42.6	

Temperature circuits (terminals 3, 4 and 7 or wires orange, yellow and violet) 2.3 Voltage Ui DC Current li 112 Power Pi 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





Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 17 of 43

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)*[****	(IIB)	Connected to MVD transmitters
CME200(A	or B)****(B S)*I**** CIC A4		e.g. 1000/2000/3000MVD series
CMF200(A	or B)****(B,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	<u>or B)****(R,S)*7**** CIC A6</u>	(IIC)	
CMFHC3(A	<u>or B)****(R,S)*I****</u>	(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**** <u>CIC A6</u>	(IIC)	1
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)	1
CMFHC4(A	or B)****(R,S)*7**** CIC A6	(IIC)	

() 90 80 60 60 50 60 55					
LN 30 - LN 40 - 30 - 10 - 20 -	T6	T5 T4	т3	Τ2	T1
-30 -50 -50 -20	0 20 40	60 80 100 SENS	71 (110 120 140 160 180 SOR FLUID TEMP	200 220 240 260 (°C)	77' 1 356) 280 300 320 340 360





Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 18 of 43

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

Ambient temperature range

Та

-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
CMF200(C	or E)****(R.S)*I**** CIC A4	(IIC)	e.a. 1000/2000/3000MVD series
CMF200(C	or E)****(R.S)*[**** 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	c or E)****(R,S)*7**** CIC A7	(IIC)	
CMFHC2(0	C or E)****(R,S)*I****	(IIB)	
CMFHC2(0	C or E)****(R,S)*I**** CIC A4	(IIC)	
CMFHC2(0	C or E)****(R,S)*I**** CIC A6	(IIB)	
CMFHC2(0	C or E)****(R,S)*7****	(IIC)]
CMFHC2(0	C or E)****(R,S)*7**** CIC A6	(IIC)	
CMFHC3(0	C or E)****(R,S)*I****	(IIB)	
CMFHC3(C	C or E)*****(R,S)*I**** CIC A4	(IIC)	
CMFHC3(0	C or E)****(R,S)*I**** CIC A6	(IIB)	
CMFHC3(C	C or E)****(R,S)*7****	(IIC)	
CMFHC3(C	C or E)****(R,S)*7**** CIC A6	(IIC)	
CMFHC4(C	C or E)****(R,S)*I****	(IIB)	
CMFHC4(0	C or E)****(R,S)*I**** CIC A4	(IIC)	
CMFHC4(0	C or E)****(R,S)*I**** CIC A6	(IIB)	
CMFHC4(0	<u>C or E)****(R,S)*7****</u>	(IIC)	
CMFHC4(C	C or E)****(R,S)*7**** CIC A6	(IIC)	



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 19 of 43



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

-50 °C up to +55 °C Ambient temperature range Та

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.

Type CMF*******(2,3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** with integral Core Processor inclusive 3 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	li		484	mΑ
	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:



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 20 of 43

3.2.1

Sensor type	CMF010	CMF100	CMF200	0/300	3
CMF010*****	(2,3,4,5,6,7,8,9,A,B	3,D,E,Q,V,W,Y)*I***	*	(IIC)	
CMF025*****	(2,3,4,5,6,7,8,9,A,B	3,D,E,Q,V,W,Y)*I***	*	(IIC)	
CMF050*****	(2,3,4,5,6,7,8,9,A,E	3,D,E,Q,V,W,Y)*I***	*	(IIC)	
CMF100*****	(2,3,4,5, <u>6</u> ,7,8,9,A,B	3,D, <u>E,Q</u> ,V,W,Y)*I***	*	(IIC)	
CMF200*****	(2,3,4,5,6,7,8,9,A,B	3,D,E,Q,V, <u>W</u> ,Y)*I***	* CIC A3	(IIB)	With integral core
CMF200*****	(2,3,4,5,6,7,8,9,A,E	8,D,E,Q,V,W,Y)*I***	* CIC A4	(IIC)	processor
CMF200*****	<u>(2,3,4,5,6,7,8,9,A,</u> B	3, <u>D,E,Q,V,W</u> ,Y)*7**	**	(IIC)	
CMF300*****	(2,3,4,5,6,7,8,9,A,B	8,D,E,Q,V,W,Y)*I***	* CIC A3	(IIB)	
CMF300*****	(2,3,4,5,6,7,8,9,A,E	8,D,E,Q,V, <u>W</u> ,Y)*I***	* CIC A4	(IIC)	
CMF300*****	(2,3,4,5,6,7,8,9,A,E	3,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

Та

-40 °C up to +60 °C





IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 21 of 43



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

-240 °C up to +60 °C Ambient temperature range: Та

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.

2	2	0
3	.∠	.0







Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 22 of 43

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

Ambient temperature range

Та

-40 °C up to +60 °C

3.2.4





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

Ambient temperature range

-40 °C up to +60 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 23 of 43

3.2.5





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

Ambient temperature range

Та -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.

Sensor type			
CMFHC*Y****(2,3	3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I****	(IIB)	With integral core
CMFHC*Y****(2,3	3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*I**** CIC A4	(IIC)	processor
CMFHC*Y***(2,3	3,4,5,6,7,8,9,A,B,D,E,Q,V,W,Y)*7****	(IIC)	pi0063301

3.2.6





IECEx BVS 04.0007 X issue 8 **Certificate No.:** Annex Page 24 of 43



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

Ambient temperature range

```
Та
            -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	li		484	mΑ	
	Power	Pi		2.1	W	
	Internal capacitance	Ci	2	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:





Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 25 of 43

4.2.1

Sensor type			
CMF200(A or B)****(2.3.6.7.A.E	D.Q.W)*I****	(IIB)	With integral
CMF200(A or B)****(2.3.6.7.A.E	D.Q.W)*[**** CIC A4	(IIC)	core processor
CMF200(A or B)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(11B)	
CMF200(A or B)****(2,3,6,7,A,E	D,Q,W)*7****	(IIC)	
CMF200(A or B)****(2,3,6,7,A,E	D,Q,W)*7**** CIC A7	(IIC)	
CMF300(A or B)****(2,3,6,7,A,E	D,Q,W)*I****	(IIB)	
CMF300(A or B)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	
CMF300(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A5	(IIB)	
CMF300(A or B)****(2,3,6,7,A,I	D,Q,W)*7****	(IIC)	
CMF300(A or B)****(2,3,6,7,A,I	D,Q,W)*7**** CIC A7	(IIC)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*I****	(IIB)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A4	(IIC)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*I**** CIC A5	(IIB)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*7****	(IIC)	
CMF400(A or B)****(2,3,6,7,A,I	D,Q,W)*7**** CIC A7	(IIC)	
CMFHC2(A or B)****(2,3,6,7,A,	D,Q,W)*l****	(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)	
90 80 70 60 60]

	90 -					
	80 -					
ŝ	70 -					
	60 -					
Ξ	50 -					
H	40 -					
E	30 ·					
Ξ.	20 -	Т5	т4	тз	Т2	т1
8	10 -	15	• •			
Į	0 -					
×	-10 -					
A	-20 -					
12	-30 -					
	-50 -	······	2 1		2) 2)	350
	-5	50 –20 0 20 40 60 80	0 100 1	20 140 160 18	0 200 220 240 260 2	80 300 320 340 36
			SENS	OR FLUID T	EMP (°C)	


IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 8 Annex Page 26 of 43

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

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

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.

Sensor type			
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)* ***	(IIB)	With integral
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	core processor
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(IIB)	
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*7****	(IIC)	
CMF200(C or E)****(2,3,6,7,A,E	D,Q,W)*7**** CIC A7	(IIC)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*I****	(IIB)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(IIB)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*7****	(IIC)	
CMF300(C or E)****(2,3,6,7,A,E	D,Q,W)*7**** <u>CIC A7</u>	(IIC)	
CMF400(C or E)****(2,3,6,7,A,E	D,Q,W)*I****	(IIB)	
CMF400(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A4	(IIC)	
CMF400(C or E)****(2,3,6,7,A,E	D,Q,W)*I**** CIC A5	(IIB)	
CMF400(C or E)****(2,3,6,7, <u>A</u> ,E	D,Q,W)*7****	(IIC)	
CMF400(C or E)****(2,3,6,7, <u>A</u> ,E	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****		
CMFHC3(C or E)****(2,3,6,7,A,	D,Q,W)*/**** CIC A6		
$CMFHC4(C \text{ or } E)^{****}(2,3,6,7,A,$			
$CMFHC4(C \text{ or } E)^{****}(2,3,6,7,A,$			
$CMFHC4(C \text{ or } E)^{****}(2,3,6,7,A,$			
$CMFHC4(C \text{ or } E)^{****}(2,3,6,7,A,$	D,Q,W)*/****		
T CIVIEHC4(C or E)****(2,3,6,7,A,	D,Q,W)"/"""" CIC A6	$\Gamma(\Pi C)$	

4.2.2



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 27 of 43



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

Ambient temperature range

Та

-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:



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 28 of 43

5.2.1

Sensor type	U		
CMF200(Ā or B)****C	* ****	(IIB)	With Integral
CMF200(A or B)****C	*I**** CIC A5	(11B)	1700/2700
CMF200(A or B)****C	*I**** CIC A4	(IIC)	Transmitter
CMF200(A or B)****C	*7****	(IIC)	
CMF200(A or B)****C	*7**** CIC A7	(IIC)	
CMF300(A or B)****C	* ***	(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	* ***	(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****			
CMFHC2(A or B)****C*I**** CIC A6		(IIB)	
CMFHC2(A or B)****0	C*I**** CIC A4	(IIC)	
CMFHC2(A or B)****(C*7****	(IIC)	
CMFHC2(A or B)****0	C*7**** <u>C</u> IC 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	C*7***	(IIC)	
CMFHC4(A or B)****0	C*7**** CIC A6	(IIC)	





IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 29 of 43

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

Ambient temperature range Та -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"):

	60 35	L				
0	50					
10	40	-				
Ξ.	30					
۱۳	20					
1	10		T4	T3	T2	Т1
1	0					
15	-10					
X	-20					
Σ	-30					
	-50				52 , , , , , , , , , , , , , , , , , , ,	350
	-	50-20 0 20	40 60 80 100 1	20 140 160 16	0 200 220 240 260 2	80 300 320 340 36
			SENS	OR FLUID 1	EMP (°C)	

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

-50 °C up to +55 °C Ambient temperature range Та

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 DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 30 of 43

5.2.2

Sensor type			
CMF200(C or E)****C)* **** 	(IIB)	With Integral
CMF200(C or E)****C	*I**** CIC A5	(IIB)	1700/2700
CMF200(C or E)****C	*I**** CIC A4	(IIC)	Transmitter
CMF200(C or E)****C	*7***	(IIC)	
CMF200(C or E)****C	*7**** CIC A7	(IIC)	
CMF300(C or E)****C)*[****	(IIB)	
CMF300(C or E)****C	CIC A5	(IIB)	
CMF300(C or E)****C	C*I**** CIC A4	(IIC)	
CMF300(C or E)****C	*7****	(IIC)	
CMF300(C or E)****C	2*7**** CIC A7	(IIC)	
CMF400(C or E)****C)* ****	(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*** <u>*</u>	(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.



Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 31 of 43

Ambient temperature range

Та -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

-50 °C up to +55 °C Та

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.

Types CMF*******(J,U)*I**** incl. CIC A4 with 2200S transmitter, except type 6 CMF***(A,B,C,E)****J,U)*I****

Input circuits (terminals 1 - 2)				
Voltage	Ui	DC	28	V
Current	li		120	mΑ
Power	Pi		0.84	W
Internal capacitance	Ci		2200	pF
Internal inductance	Li		45	μH
	Input circuits (terminals 1 - 2) Voltage Current Power Internal capacitance Internal inductance	Input circuits (terminals 1 - 2)UiVoltageUiCurrentliPowerPiInternal capacitanceCiInternal inductanceLi	Input circuits (terminals 1 - 2)UiDCVoltageUiDCCurrentliPowerPiInternal capacitanceCiInternal inductanceLi	Input circuits (terminals 1 - 2)UiDC28Voltageli120Currentli120PowerPi0.84Internal capacitanceCi2200Internal inductanceLi45

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:



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 32 of 43

6.2.1

Sensor type	CMF010	CMF100	CMF20	0/300	
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

Та -40 °C up to +60 °C



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 33 of 43





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

Ambient temperature range

-40 °C up to +60 °C Та



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 34 of 43

6.2.3

	Sensor type			
Ì	CMFHC2****	*(J or U)*I****	(IIB)	With integral 2200S
	CMFHC2****	*(J or U)*I**** CIC A4		
	CMFHC2****	*(J or U)*7****	(IIC)	
	CMFHC3****	*(J or U)*I****	(IIB)	
	CMFHC3*****(J or U)*I**** CIC A4			
CMFHC3****(J or U)*7**** (II			(IIC)	
	CMFHC4*****(J or U)*I****]
	CMFHC4****	*(J or U)*I**** CIC A4	(IIC)]
	CMFHC4****	*(J or U)*7****	(IIC)	1
	80 70 50 40 10 20 30 10 40 -20 -30 -40 -20 -40 -20 -20 -20 -20 -20 -20 -20 -2	T4	127	/ DE-RATE SLOPE: -0.093°C AMBIENT PER °C FLUID T3 T2-T1 192 204

SENSOR FLUID TEMP (°C)

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

Ambient temperature range

-40 °C up to +60 °C

Та



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 35 of 43

6.2.4





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

Ambient temperature range

Та -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 Current Power Internal capacitance Internal inductance

V
mΑ
W
pF
μĤ

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:



IECEx Certificate DEKRA of Conformity



IECEx BVS 04.0007 X issue 8 Annex Page 36 of 43

7.2.1

Sensor type	ł U		
CMF200(A or B)****J	* ****	(IIB)	With integral 2200S
CMF200(A or B)****J	*I**** <u>CIC</u> A4	(IIC)	
CMF200(A or B)****J	*I**** CIC A5	(IIB)	
CMF200(A or B)****J	*7****	(IIC)	
CMF200(A or B)****J	*7** <u>**</u> CIC A7	(IIC)	
CMF300(A or B)****J	* ****	(IIB)	
CMF300(A or B)****J)*I**** CIC A4	(IIC)	
CMF300(A or B)****J	*I**** CIC <u>A5</u>	(IIB)	
CMF300(A or B)****J	*7****	(IIC)	
CMF300(A or B)****J	*7**** CIC A7	(IIC)	
CMF400(A or B)****J	* ****	(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**** CI <u>C</u> 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 <u>A6</u>	(IIC)	
CMF <u>HC</u> 3(A or B)****	J* ****	(IIB)	
CMFHC3(A or B)****.	J*I**** CIC A4	(IIC)	
CMFHC3(A or B)****J*I**** CIC A6 (IIE		(IIB)	
CMFHC3(A or B)****	J*7****	(IIC)	
CMFHC3(A or B)****	J*7**** CIC A6	(IIC)	
CMFHC4(A or B)****	J* <u>**</u> **	(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.





Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 37 of 43

Ambient temperature range

Та -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	* ****	(IIB)	With integral 2200S
CMF200(C or E)****J	*I <u>**** CIC A4</u>	(IIC)	
CMF200(C or E)****J	*I**** CIC A5	(IIB)	
CMF200(C or E)****J	*7****	(IIC)	
CMF200(C or E)****J	* <u>7**** CIC A7</u>	(IIC)	
CMF300(C or E)****J	* ****	(IIB)	
CMF300(C or E)****J	*I**** CIC A4	(IIC)	
CMF300(C or E)****J	*I***** CIC A5	(IIB)	
CMF300(C or E)****J	*/****		
CMF300(C or E)****J*7**** CIC A7			
CMF400(C or E)****J			
CMF400(C or E)****J	* <u>1*****</u> CIC <u>A5</u>		
CNF400(C or E)	<u>/</u> *7**** <u>CIC A7</u>		
CNFHC2(C or E)	1*1****		
CMEHC2(C or E)**** * **** CIC A4			
1000000000000000000000000000000000000			
$\frac{CMEHC2(C \text{ or } E)}{CMEHC2(C \text{ or } E)}$	<u> +7****</u>		
CMEHC2(C or E)****			
CMFHC3(C or E)****	* ****	(IIB)	
CMFHC3(C or E)****	J*I**** CIC A4		
CMFHC3(C or E)****,	J*I**** CIC A6	(IIB)	
CMFHC3(C or E)****J*7****			
CMFHC3(C or E)****	J*7**** CIC A6		
CMFHC4(C or E)****	J* ****	(IIB)	1
CMFHC4(C or E)**** J*I**** CIC A4			
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)	



IECEx Certificate DEKRA of Conformity

IECEx BVS 04.0007 X issue 8 Annex Page 38 of 43



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

Ambient temperature range

-50 °C up to +60 °C

Та

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.



Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 39 of 43

Marking

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

for sensors with junction box connected to MVD transmitter

Туре	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***** ^{T)} *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⁾ * **** 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 *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	
CMFHC3 ⁴⁾ **** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6 Gb	-50 °C
CMFHC3 ⁴)**** ¹)*7****	Ex ib IIC T1-T6 Gb	
CMFHC3 ⁴ **** ¹ *I**** CIC A6	Ex ib IIB T1-T6 Gb	- <u></u>
CMFHC3 ⁴ **** ¹ *7**** CIC A6	Ex ib IIC T1-T6 Gb	-50 °C



Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex

Page 40 of 43

Туре	Type of protection	Min. ambient/fluid temperature
CMFHC4***** ¹⁾ *I****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC4***** ¹⁾ *I**** CIC A4	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC4***** ¹⁾ *7****	Ex ib IIC T1-T6 Gb	-240 °C
CMFHC4 ^{4)****1)*} I****	Ex ib IIB T1-T6 Gb	-50 °C
CMFHC4 ^{4)****1)*} I**** 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)*} I**** 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

Туре	Type of protection	Min. ambient/fluid temperature
CMF010***** ²⁾ *I****	Ex ib IIC T1-T5 Gb	-40 °C
CMF025***** ²⁾ *I****	Ex ib IIC T1-T5 Gb	-40 °C
CMF050***** ²⁾ *I****	Ex ib IIC T1-T5 Gb	-40 °C
CMF100***** ²⁾ *I****	Ex ib IIC T1-T5 Gb	-40 °C
CMF100***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF100***** ²⁾ *7****	Ex ib IIC T1-T5 Gb	-40 °C
CMF200***** ²⁾ *I**** CIC A3	Ex ib IIB T1-T5 Gb	-40 °C
CMF200***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF200**** ²⁾ *7****	Ex ib IIC T1-T5 Gb	-40 °C
CMF200 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5 Gb	-50 °C
CMF200 ⁴⁾ **** ²⁾ *I**** CIC A5	Ex ib IIB T1-T5 Gb	-50 °C
CMF200 ⁴ **** ² *I**** 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⁾ *I**** CIC A3	Ex ib IIB T1-T5 Gb	-40 °C
CMF300***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF300***** ²⁾ *I**** 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⁾ *I****	Ex ib IIB T1-T5 Gb	-50 °C
CMF300 ⁴⁾ **** ²⁾ *I**** CIC A5	Ex ib IIB T1-T5 Gb	-50 °C
CMF300 ⁴⁾ **** ²⁾ *I**** 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⁾ *I**** CIC A3	Ex ib IIB T1-T5 Gb	-40 °C
CMF400***** ²⁾ *I**** CIC A4	Ex ib IIC T1-T5 Gb	-40 °C
CMF400**** ² *7****	Ex ib IIC T1-T5 Gb	-40 °C
CMF400 ⁴⁾ **** ²⁾ *I****	Ex ib IIB T1-T5 Gb	-50 °C
CMF400 ⁴⁾ **** ²⁾ *I**** CIC A5	Ex ib IIB T1-T5 Gb	-50 °C
CMF400 ⁴ **** ² *I**** 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⁾ *I****	Ex ib IIB T1-T5 Gb	-40 °C / -29 °C
CMFHC*Y**** ²⁾ *I**** 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



Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 41 of 43

Туре	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⁾ *1****	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⁾ *J**** 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

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 at this place the letter A, B, C or E may be inserted



Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 42 of 43

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:



	Se	nsor type
	Se CMF010****(J,U)*I**** CMF025****(J,U)*I**** CMF050****(J,U)*I**** CMF100****(J,U)*I**** CMF200****(J,U)*I**** CMF200****(J,U)*I**** CMF300****(J,U)*I**** CMF400*****(J,U)*I**** CMF400*****(J,U)*I**** CMF400*****(J,U)*I**** CMFHC2*****(J,U)*I**** CMFHC2*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMFHC3*****(J,U)*I**** CMFC2*****(J,U)*I**** CMF200(A,B,C,E)****J*I**** CMF200(A,B,C,E)****J*I**** CMF300(A,B,C,E)****J*I**** CMF300(A,B,C,E)****J*I**** CMF300(A,B,C,E)****J*I**** CMF400(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I***** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I***** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I***** CMFHC2(A,B,C,E)****J*I***** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I***** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I***** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A,B,C,E)****J*I**** CMFHC2(A	CMF200*****(J,U)* **** CIC A3 CMF300*****(J,U)* **** CIC A3 CMF400*****(J,U)* **** CIC A3 CMF400*****(J,U)* **** CMFHC2*****(J,U)* **** CMFHC3*****(J,U)* **** CMFHC4*****(J,U)* **** CMF200(A,B,C,E)****J* **** CMF200(A,B,C,E)****J* **** CMF300(A,B,C,E)****J* **** CMF300(A,B,C,E)****J* **** CMF400(A,B,C,E)****J* **** CMF400(A,B,C,E)****J* **** CMF400(A,B,C,E)****J* **** CMF400(A,B,C,E)****J* **** CMF400(A,B,C,E)****J* **** CMF402(A,B,C,E)****J* **** CMFHC2(A,B,C,E)****J* **** CMFHC3(A,B,C,E)****J* **** CMFHC3(A,B,C,E)****J* **** CMFHC3(A,B,C,E)****J* **** CMFHC3(A,B,C,E)****J* **** CMFHC3(A,B,C,E)****J* **** CMFHC4(A,B,C,E)****J* **** CMFHC4(A,B,C,E)****J* ****
	CMFHC3(A,B,C,E)****J*7**** CIC A4 CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*I**** CMFHC3(A,B,C,E)****J*7**** CIC A6 CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*I**** CMFHC4(A,B,C,E)****J*7**** CIC A6	
Transmitter type	Ex ib IIC T1-T4	Ex ib IIB T1-T4
2200S***1*I****		



Certificate No.:

IECEx BVS 04.0007 X issue 8 Annex Page 43 of 43

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 typ	e
Transmitter type	CMF200(A,B,C,E)****C*I**** CIC A4 CMF200(A,B,C,E)****C*I**** CIC A7 CMF200(A,B,C,E)****C*I**** CIC A7 CMF300(A,B,C,E)****C*I**** CIC A4 CMF300(A,B,C,E)****C*I**** CIC A7 CMF300(A,B,C,E)****C*I**** CIC A7 CMF400(A,B,C,E)****C*I**** CIC A4 CMF400(A,B,C,E)****C*I**** CIC A7 CMF400(A,B,C,E)****C*I**** CIC A7 CMF400(A,B,C,E)****C*I**** CIC A7 CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*I**** CIC A4 CMFHC2(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC3(A,B,C,E)****C*I**** CIC A6 CMFHC3(A,B,C,E)****C*I**** CIC A4 CMFHC4(A,B,C,E)****C*I**** CIC A4 CMFHC4(A,B,C,E)****C*I**** CIC A4 CMFHC4(A,B,C,E)****C*I**** CIC A6	CMF200(A,B,C,E)****C* **** CMF200(A,B,C,E)****C* **** CMF300(A,B,C,E)****C* **** CMF300(A,B,C,E)****C* **** CMF400(A,B,C,E)****C* **** CMF400(A,B,C,E)****C* **** CMF400(A,B,C,E)****C* **** CMFHC2(A,B,C,E)****C* **** CMFHC2(A,B,C,E)****C* **** CMFHC3(A,B,C,E)****C* **** CMFHC3(A,B,C,E)****C* **** CMFHC3(A,B,C,E)****C* **** CMFHC4(A,B,C,E)****C* **** CMFHC4(A,B,C,E)****C* **** CMFHC4(A,B,C,E)****C* **** CMFHC4(A,B,C,E)****C* **** CMFHC4(A,B,C,E)****C* **** CMFHC4(A,B,C,E)****C* **** CMFHC4(A,B,C,E)****C* ****
*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.



INTER IEC C	ENATIONAL ELE Certification Sch for rules and details of	ECTROTECHNICA Teme for Explosiv of the IECEx Scheme visit www	L COMMISSION e Atmospheres w.iecex.com
Certificate No.:	IECEx BVS 04.0007X	issue No.:9	Certificate history: Issue No. 9 (2013-8-1) Issue No. 8 (2011-5-17)
Date of Issue:	Current 2013-08-01	Page 1 of 4	Issue No. 7 (2010-2-16) Issue No. 6 (2009-8-12) Issue No. 5 (2008-11-3) Issue No. 4 (2007-10-
Applicant:	Micro Motion, Inc. 7070 Winchester Circle Boulder, Co. 80301 United States of Am	erica	Issue No. 3 (2007-8-1) Issue No. 2 (2006-6-2)
Electrical Apparatus: Optional accessory:	Sensor type Type CM	~ ******	
Type of Protection:	Equipment protection	by intrinsic safety "i"	
Marking:	Ex ib IIB/IIC T4/T5/T6 C	Gb	
Approved for issue on t Certification Body:	behalf of the IECEx	Dr. F. Eickhoff	
Position:		Deputy Head of Certification	n Body
Signature: (for printed version)		Cuichhi	R
Date:		2013-08	-01
 This certificate and s This certificate is not The Status and author 	chedule may only be repro transferable and remains t enticity of this certificate ma	duced in full. he property of the issuing bod ay be verified by visiting the Of	y. ficial IECEx Website.
Certificate issued by: D	EKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany	D	DEKRA EKRA EXAM GmbH



IECEx BVS 04.0007X Certificate No 1 2013-08-01 Issue No.: 9 Date of Issue: Page 2 of 4 Micro Motion, Inc. Manufacturer: 7070 Winchester Circle, Boulder, Co. 80301 **United States of America** Additional Manufacturing location (s) Emerson Process Emerson Process Micro Motion, Inc. Micro Motion Inc. AVE. Miguel de Cervantes 7070 Winchester Circle, Management Flow B.V. Management Flow Boulder, Co. 80301 Complejo Industrial Technologies Co., Ltd. Neonstraat 1 Chihuahua United States of America 6718 WX Ede 111, Xing Min South Road, Chihuahua 31109 The Netherlands Jiangning, Nanjing, Jiangsu Province 211100 Mexico 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: Explosive atmospheres - Part 0: General requirements IEC 60079-0 : 2011 Edition: 6.0 IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" Edition: 6.0 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/ExTR06.0009/09

DE/BVS/04/2024/N9



Certificate No.:

IECEx BVS 04.0007X

Date of Issue:

2013-08-01

Issue No.: 9

Page 3 of 4

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



Certificate No.:

IECEx BVS 04.0007X

Date of Issue:

2013-08-01

Issue No.: 9

Page 4 of 4

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

The sensor can be modified:

A modified junction box can be used.

Also the sensor has been assessed in acc. with the actual standard versions.





Annex Page 1 of 46

Subject and Type

Certificate No.:

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

Instead of the *** letters and numerals will be inserted which characterize the following modifications:





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 2 of 46

Para	meters						
1	Type CMF****** and no marking,	**(R,H,S,T)****** except type CM	with J-b F***(A,E	ox, inclusive C 3,C,E)****(R,H,	construction Ide S,T)*****	entification Code (CIC) A3 and A4
11	1 Drive circuit (connections 1, 2 or red and brown)						
1.1	Voltage		reu an	Ui		DC 11.4	V
	Current			li		2.4	5 A
	Power			Pi		2.5	4 W
	Internal capacita	ance				negligible	
		HH			Coil	Series	Minimum
Sen	isor type			Inductance	Resistance	Resistor	Ambient/Fluid
		and the second s		(mH)	(Ω)	(Ω)	lemp
CNAEC		*1****		2.51		045.1	(°C)
	ЛО (К,П,З,Т)	1		2.51	0	945.1	-240
Sen	isor type	K		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMFC)25*****(R,H,S,T)*	* ****	(IIC)	2.51	0	170.1	-240
CMFC)50*****(R,H,S,T)*	* ****	(IIC)	2.51	0	170.1	-240
CMF1	100*****(R,H,S,T)*	* ****	(IIC)	6.7	58.4	89.0	-40
CMF1	100*****(R,H,S,T)*	* ****	(IIC)	6.7	52.4	89.0	-60
CMF1	100*****(R,H,S,T)*	*I**** CIC A4	(IIC)	6.7	0	177.0	-240
CMF1	100*****(R,H,S,T)*	*7***	(IIC)	6.7	0	177.0	-240
					1		
Sen	isor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF	200*****(R,H,S,T))*I**** CIC A3	(IIB)	9.5	85.8	0	-55
CMF	200*****(R,H,S,T))*I**** CIC A4	(IIC)	9.5	0	177.0	-240
CMF	200*****(R,H,S,T))*7***	(IIC)	9.5	0	177.0	-240
CMF	300*****(R,H,S,T))*I**** CIC A3	(IIB)	9.5	85.8	0	-55
CMF	300*****(R,H,S,T))*I**** CIC A4	(IIC)	9.5	0	177.0	-240
CMF	<u>300*****(R,H,S,T)</u>)*7***	(IIC)	9.5	_0	177.0	-240
Sens	sor type	0		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF	350*****(R,H,S,T)	*I**** CIC A3	(IIB)	11.75	71.4	19.8	-68
CMF	350*****(R,H,S,T))*I**** CIC A4	(IIC)	11.75	0	187.1	-240
CMF	350*****(R,H,S,T))*7***	(IIC)	11.75	0	187.1	-240
CMF	400*****(R,H,S,T))*I**** CIC A3	(IIB)	11.75	71.4	19.8	-68
CMF	400*****(R,H,S,T))*I**** CIC A4	(IIC)	11.75	0	187.1	-240
CMF	400****(R,H,S,T))*7***	(IIC)	11.75	0	187.1	-240
ļ							





Т

Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 3 of 46

Sensor type		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMEHC2*****(R H S T)* ****	(IIB)	5.0	19.5	38.5	-50
CMFHC2****(R H S T)*[**** CI	C A4 (IIC)	5.0	0	126.0	-240
CMEHC2*****(B H S T)*7****		5.0	0	126.0	-240
CMEHC3*****(B H S T)*1****	(IIB)	5.0	19.5	38.5	-50
CMEHC3*****(B H S T)*I**** CI	C A4 (IIC)	5.0	0	126.0	-240
CMEHC3*****(R H S T)*7****		5.0	0	126.0	-240
CMEHC4*****/PHST)*/****	- (IIC) (IIB)	5.0	19 5	38.5	-50
		5.0	0	126.0	-340
		5.0	0	126.0	240
		5.0	10.5	29.5	-240
		5.0	19.5	126.0	-30/-40
		5.0	0	120.0	-240/-40
		5.0	0	120.0	-240/-40
1.2 Pick-Off coil (Terminals 5 Voltage Current Power	/9 and 6/8 or wi	res green/white Ui Ii Pi	e and blue/grey) D	0C 21.13 18.05 45	V mA mW
Sensor type		Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
CMF010****(R,H,S,T)*I****	(11C) 2.51	0	0	-240
Sensor type	The second secon	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)*l****	(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)*1**** (CIC A4 (IIC) 0.441	0	0	-240
CMF100****(R,H,S,T)*7****	(IIC) 0.441	0	0	-240
	`				





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 4 of 46



Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 5 of 46

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	-240/-40	





IECEx BVS 04.0007 X issue 9

Annex Page 6 of 46

Voltage	Ui	DC	21.13	V
Current	li		26	mΑ
Power	Pi		112	mW
Internal capacitance	Ci	negligible		
Internal inductance	Li	negligible		

Identification resistor circuit (terminals 3 and 4 or wires orange and yellow)

		COIL		Minimum
sensor type	inductance	resistance	serial resistor	Ambient/Fluid
	[mH]	[Ω]	[Ω]	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





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

Ambient temperature range

Та

-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.



Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex







IECEx BVS 04.0007 X issue 9 Annex

Page 8 of 46





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 10 of 46





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 11 of 46





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 12 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 13 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 14 of 46






Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 15 of 46





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 16 of 46

2		Туре СМІ	⁼ ***(A,B,C,E)****(R,S)****** with J-bo	х				
2	.1	Drive circ Voltage Current Power	uit (connections 1 - 2 or red and bro	wn) U Ii P	i	DC	11.4 2.45 2.54	V A W
		Internal c	apacitance	С	i	negligible		
	Ser	nsor type			Inductance (mH)	Coil Resistance (Ω)	Series Resistor (Ω)	Minimum Ambient/Fluid Temp (°C)
	CM	IF200(A,B	,C,E)****(R,S)*I****	(IIB)	4.0	32,3	19.8	-50
	CM	F200(A,B	C,E)****(R,S)*I**** CIC A5	(IIB)	1.1	15.4	9.6	-50
	CM	F200(A.B	,C,E)****(R,S)*I**** CIC A4		1.1	15.4	41	-50
	СМ	F200(A.B	.C.E)****(R.S)*7***		1.1	15.4	41	-50
	СM	F200(A.B	.C,E)****(R,S)*7**** CIC A7		4.0	32.3	88.9	-50
	CM	IF300(A,B	,C,E)****(R,S)*l****	(IIB)	4.0	32.3	19.8	-50
	СM	F300(A B	C,E)****(R,S)*I**** CIC A5	(IIB)	1.1	15.4	9.6	-50
	CM	F300(A,B	,C,E)****(R,S)*I**** CIC A4	(IIC)	1.1	15.4	41	-50
	СM	IF300(A,B	,C,E)****(R,S)*7****		1,1	15.4	41	-50
	CM	IF300(A,B	,C,E)****(R,S)*7**** CIC A7		4.0	32.3	88.9	-50
	CM	IF350(A.B	.C.E)****(R.S)*I****	(IIB)	7,75	54.3	19.8	-50
	СM	IF350(A.B	C,E)****(R,S)*[**** CIC A5	(IIB)	3.4	35.2	12.8	-50
	ĒΜ	IF350(A,B	,C,E)****(R,S)*I**** CIC A4		3.4	35.2	63.2	-50
	ĒΜ	IF350(A,B	,C,E)****(R,S)*7****		3.4	35.2	63.2	-50
	СM	IF350(A,B	,C,E)****(R,S)*7**** CIC A7		7.75	54.3	106.7	-50
	CM	F400(A,B	,C,E)****(R,S)*I****	(IIB)	7.75	54.3	19.8	-50
	CM	F400(A,B	,C,E)****(R,S)*I**** CIC A5	(IIB)	3.4	35.2	12.8	-50
	CM	F400(A.B	.C.E)****(R.S)*I**** CIC A4	(IIC)	3.4	35.2	63.2	-50
	CM	IF400(A.B	.C.E)****(R.S)*7****		3.4	35.2	63.2	-50
	CM	IF400(A.B	.C.E)****(R.S)*7**** CIC A7		7.75	54.3	106.7	-50
	СМ	IFHC2(A.E	3.C.E)****(R.S)*I****	(IIB)	5.95	51.3	12.8	-50
	CM	IFHC2(A.E	3.C.E)****(R.S)*I**** CIC A4	(IIC)	5.95	51.3	88.9	-50
	СМ	IFHC2(A.E	3.C.E)****(R.S)*7****	(IIC)	5.95	51.3	88.9	-50
	CM	IFHC2(A.E	3.C.E)****(R.S)* **** CIC A6	(IIB)	7.75	54.3	24.7	-50
	CM	IFHC2(A.E	3.C.E)****(R.S)*7**** CIC A6	(IIC)	7.75	54.3	106.7	-50
	CM	IFHC3(A.E	3.C.E)****(R.S)* ****	(IIB)	5.95	51.3	12.8	-50
	CM	IFHC3(A.E	3.C.E)****(R.S)*I**** CIC A4	(IIC)	5.95	51.3	88.9	-50
	CM	IFHC3(A.E	3.C.E)****(R.S)*7****	(IIC)	5.95	51.3	88.9	-50
	CM	IFHC3(A.E	3.C.E)****(R.S)*I**** CIC A6	(IIB)	7.75	54.3	24.7	-50
	CM	IFHC3(A.E	3.C.E)****(R.S)*7**** CIC A6	(IIC)	7.75	54.3	106.7	-50
	CM	IFHC4(A.E	3.C.E)****(R.S)*I****	(IIB)	5.95	51.3	12.8	-50
	CM	IFHC4(A.E	3.C.E)****(R.S)*I**** CIC A4	(IIC)	5.95	51.3	88.9	-50
	CM	IFHC4(A.E	3.C.E)****(R.S)*7****	(IIC)	5.95	51.3	88.9	-50
	CN	IFHC4(A.E	3.C.E)****(R.S)*I**** CIC A6	(IIB)	7.75	54.3	24.7	-50
	CM	IFHC4(A.E	3.C.E)****(R.S)*7**** CIC A6	(IIC)	7.75	54.3	106.7	-50
			`	•				





Certificate No.:

IECEx BVS 04.0007 X issue 9

Annex Page 17 of 46

2.2 Pick-Off Voltage Current Power	coil (Terminals 5/9 and 6/8 or wires	s green/wh Ui Ii Pi	ite and blue/g	rey) DC	21.13 18.05 m. 45 mV	V A V
Internal o	apacitance	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)* **** 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
			·I			





Certificate No.:

IECEx BVS 04.0007 X issue 9

Annex

Page 18 of 46

2.3	Temperature circuits (terminals 3. 4 and 7 or Voltage Current Power Internal capacitance Internal inductance	wires orange. Ui Ii Pi Ci Li	yellow and v [r r	violet) DC 21.1 26 112 negligible negligible	3 V mA mW
	Identification resistor circuit (terminals 3 and	4 or wires ora	nge and yell	ow)	
	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





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 19 of 46

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.
CMF200(A.	B)****(R.S)*I**** CIC A4	(IIC)	e.g. 1000/2000/3000MVD series
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. <u>S)*7****</u>	(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)	1
CMFHC4(A	.B)****(R.S)*7**** CIC A6	(IIC)	



Certificate No.:

IECEx BVS 04.0007 X issue 9

Annex







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 21 of 46

Sensor type			
CMF200(C	.E)****(R.S)*I****	(IIB)	Connected to MVD transmitters.
CMF200(C	.E)****(R.S)* **** CIC A4	(IIC)	e.g. 1000/2000/3000MVD series
CMF200(C	.E)****(R.S)* **** 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)* **** CIC A4	(IIC)	
CMF350(C	.E)****(R.S)* **** 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*** <u>*</u>	(IIC)	_
CMF400(C	.E)****(R.S)*7**** CIC A7	(IIC)	_
CMFHC2(C	C.E)****(R.S)*I****	(IIB)	
CMFHC2(C	C.E)****(R.S)*I**** CIC A4	(IIC)	4
CMFHC2(C	C.E)****(R.S)*I**** CIC A6	(IIB)	4
CMFHC2(C	C.E)****(R.S)*/****	(IIC)	-
CMFHC2(C	D.E)****(R.S)*/**** CIC A6		-
CMFHC3(C	<u>2.E)****(R.S)*I**** 010 A 4</u>		-
	J.E)****(R.S)*I**** CIC A4		4
	5.E)"""""(K.S)" """" UICA6		-
CIVIEHC3(C	DE)****(D S)*7**** CIC AC		
	D.E) (K.O) / UU AD		
		(IIC) (IIR)	-
	D.L) (N.O) OOAO		-
	<u></u> (N.8) /		4



Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 23 of 46





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 24 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9

Annex









Certificate No.:

IECEx BVS 04.0007 X issue 9

Annex







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 27 of 46





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 28 of 46

4	Type CMF***(A.B.C.E)****(2.3.6.7.A.D.Q.V.W)***** with integral co	ore processor.			
4.1	Input circuits (terminals 1 - 4) Voltage Current Power Iinternal capacitance Internal inductance	Ui li Pi Ci Li	DC	17.3 484 2.1 2200 30	V mA W pF μH
4.2	Temperature class The classification into a temperature class depends on the temperatu account the maximum operating temperature of the sensor and are s	ire of the mec hown in the fo	lium t	aking into ng graph:	





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 29 of 46

Sensor type			
CMF200(A.B)****(2.3.6.7.A.D.C	2.W)*I****	(IIB)	With integral
CMF200(A.B)****(2.3.6.7.A.D.C	2.W)*I**** CIC A4	(IIC)	core processor
CMF200(A.B)****(2.3.6.7.A.D.G	2.W)*I**** CIC A5	(IIB)	
CMF200(A.B)****(2.3.6.7.A.D.C	2.W)*7****	(IIC)	
CMF200(A.B)****(2.3.6.7.A.D.C	0.W)*7**** CIC A7	(IIC)	
CMF300(A.B)****(2.3.6.7.A.D.C	2.W)*I****	(IIB)	
CMF300(A.B)****(2.3.6.7.A.D.C	0.W)*I**** CIC A4	(IIC)	
CMF300(A.B)****(2.3.6.7.A.D.C	0.W)*I**** CIC A5	(IIB)	
CMF300(A.B)****(2.3.6.7.A.D.C).W)*7****	(IIC)	
CMF300(A.B)****(2.3.6.7.A.D.C	0.W)*7**** CIC A7	(IIC)	
CMF350(A.B)****(2.3.6.7.A.D.C).W)*I****	(IIB)	
CMF350(A.B)****(2.3.6.7.A.D.C	2.W)*I**** CIC A4	(IIC)	
CMF350(A.B)****(2.3.6.7.A.D.C	0.W)*I**** CIC A5	(IIB)	
CMF350(A.B)****(2.3.6.7.A.D.C	2.W)*7****	(IIC)	
CMF350(A.B)****(2.3.6.7.A.D.C	0.W)*7**** CIC A7	(IIC)	
CMF400(A.B)****(2.3.6.7.A.D.C	2.W)*I****	(IIB)	
CMF400(A.B)****(2.3.6.7.A.D.G	2.W)*I**** CIC A4	(IIC)	
CMF400(A.B)****(2.3.6.7.A.D.G	2.W)*I**** CIC A5	(IIB)	
CMF400(A.B)****(2.3.6.7.A.D.C	2.W)*7****	(IIC)	
CMF400(A.B)****(2.3.6.7.A.D.G	2.W)*/**** CIC A/	(IIC)	
CMFHC2(A.B)****(2.3.6.7.A.D.C	2.VV)*I****	(IIB)	
CMFHC2(A.B)****(2.3.6.7.A.D.C	2.VV)*I**** CIC A4		
CMFHC2(A.B)****(2.3.6.7.A.D.C	J.W)^I^^^ CIC A6		
CMFHC2(A.B)****(2.3.6.7.A.D.(
CMFHC2(A.B)****(2.3.6.7.A.D.(
CMEHC3(A.B)****(2.3.6.7.A.D.(
CMEHC2(A B)****(2 2 6 7 A D (
CMEHC2(A B)****(2 2 6 7 A D (2.VV) 1 CIC A0		
CMEHC2(A B)****(2 2 6 7 A D (
CMFHC4(A B)****(2 3 6 7 A D (∑.vv) /		
CMFHC4(A B)****(2 3 6 7 A D (Σ.VV)*I**** CIC. Δ4		
CMFHC4(A B)****(2 3 6 7 A D (2.W)*I**** CIC A6		
CMFHC4(A B)****(2 3 6 7 A D (C W)*7****		





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex









Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 31 of 46

Sensor type			
CMF200(C.E)****(2.3.6.7.A.D.C	2.W)*I****	(IIB)	With integral
CMF200(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A4	(IIC)	core processor
CMF200(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A5	(IIB)	
CMF200(C.E)****(2.3.6.7.A.D.C	Q.W)*7***	(IIC)	
CMF200(C.E)****(2.3.6.7.A.D.C	Q.W)*7**** CIC A7	(IIC)	
CMF300(C.E)****(2.3.6.7.A.D.C	Q.W)*I****	(IIB)	
CMF300(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A4	(IIC)	
CMF300(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A5	(IIB)	
CMF300(C.E)****(2.3.6.7.A.D.C	Q.W)*7****	(IIC)	
CMF300(C.E)****(2.3.6.7.A.D.C	Q.W)*7**** CIC A7	(IIC)	
CMF350(C.E)****(2.3.6.7.A.D.C	Q.VV)*I****	(IIB)	
CMF350(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A4	(IIC)	
CMF350(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A5	(IIB)	
CMF350(C.E)****(2.3.6.7.A.D.C	Q.W)*7***	(IIC)	
CMF350(C.E)****(2.3.6.7.A.D.C	Q.W)*7**** CIC A7	(IIC)	
CMF400(C.E)****(2.3.6.7.A.D.C	Q.W)*I****	(IIB)	
CMF400(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A4	(IIC)	
CMF400(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A5	(IIB)	
CMF400(C.E)****(2.3.6.7.A.D.C	Q.W)*7***	(IIC)	
CMF400(C.E)****(2.3.6.7.A.D.C	Q.W)*7**** CIC A7	(IIC)	
CMFHC2(C.E)****(2.3.6.7.A.D.C	Q.W)*I****	(IIB)	
CMFHC2(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A4	(IIC)	
CMFHC2(C.E)****(2.3.6.7.A.D.C	Q.W)*I**** CIC A6	(IIB)	
CMFHC2(C.E)****(2.3.6.7.A.D.C	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.0	Q.W)*I****	(IIB)	
CMFHC3(C.E)****(2.3.6.7.A.D.0	Q.W)* **** CIC A4	(IIC)	
CMFHC3(C.E)****(2.3.6.7.A.D.0	Q.W)*I**** CIC A6	(IIB)	
CMFHC3(C.E)****(2.3.6.7.A.D.0	Q.W)*7****	(IIC)	
CMFHC3(C.E)****(2.3.6.7.A.D.C	Q.W)*7**** CIC A6	(IIC)	
CMFHC4(C.E)****(2.3.6.7.A.D.C	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.C	Q.W)*7**** CIC A6	(IIC)	





IECEx BVS 04.0007 X issue 9 Annex Page 32 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 33 of 46

Sensor type	Ū	9
CMF200(A.B)****C*I****	(IIB)	With Integral
CMF200(A.B)****C*I**** CIC	A5 (IIB)	1700/2700
CMF200(A.B)****C*I**** CIC	A4 (IIC)	Transmitter
CMF200(A.B)****C*7****	(IIC)	1
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	CA7 (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	CA7 (IIC)	-
CMF400(A.B)****C*I****	(IIB)	_
CMF400(A.B)****C*I**** CIC	A5 (IIB)	_
CMF400(A.B)****C*1**** CIC	A4 (IIC)	_
CMF400(A.B)****C*7****		-
CMF400(A.B)****C*/**** CIC	A/ (IIC)	-
CMFHC2(A.B)		-
		-
		-
		-
		-
	(IIB)	1
	2 A (IIC)	-
CMEHC3(A B)****C*7****		-
CMEHC3(A B)****C*7**** CI		4
CMFHC4(A B)****C*I****	(IIB)	-
CMFHC4(A,B)****C*1**** CIC	CA6 (IIB)	1
CMFHC4(A,B)****C*I**** CIC	CA4 (IIC)	1
CMFHC4(A.B)****C*7****	(IIC)	-
CMFHC4(A.B)****C*7**** CI0	C A6 (IIC)	1





IECEx BVS 04.0007 X issue 9 Annex Page 34 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 35 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 36 of 46



Ambient temperature range

Та -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.





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 37 of 46

6	Тур СМ	es CM F***(A	F***** .B.C.E	***(J.L)****J	J)*I**** in .U)*I****	cl. CIC	A4 with 22	00S trar	nsmitter. e	except ty	pe		
6.1	Inp Vol Cur Pov Inte	ut circu tage rent wer ernal ca ernal in	nits (ten apacita ductar	minal Ince Ice	ls 1 - 2)					Ui Ii Pi Ci Li	D	C 28 120 0.84 2200 45	V mA W pF µH
6.2	The acc	e classi ount th	fication le max	n into imum	a tempe i operatin	rature cl ig tempe	lass depen erature of ti	ds on th he sens	e temperation or and are	ature of e shown	the mediur in the follo	m taking into wing graph:	
6.2.1	-								-				
		Senso type	pr		CMF010		CMF100		СМF200/3	300		B	
		CMF0 CMF0 CMF1 CMF2 CMF2 CMF2 CMF3 CMF3	10**** 25**** 50**** 00**** 00**** 00**** 00**** 00****	*(J.U) *(J.U) *(J.U) *(J.U) *(J.U) *(J.U) *(J.U) *(J.U) *(J.U)	* **** * **** * **** * **** CI(* **** CI(*7*** * **** CI(*]**** CI(*7***	C A3 C A4 C A3 C A3 C A4				(IIC) (IIC) (IIC) (IIC) (IIC) (IIC) (IIC) (IIC) (IIC)	With int	egral 2200S	
	MAX AMRIENT TEMP (°C)	80 70 60 50 40 30 20 10 0 -10 -20 -30 -40	_ <u>46</u>		 T4	4 53		T3	DE-RATE S -0.093°C A PER °C FLU	LOPE: MBIENT IID 	ī		
		-4	10 -20	0	20 4	0 60	80 100	120 14	0 160 1	80 200			
					9	SENSOR	FLUID TEM	P (°C)					
	Not tem	e: Use peratu	the at re.	oveç	graph to o	determir	ne the temp	perature	class for	a given	fluid and a	mbient	
	Am	bient te	empera	ature	range					Та	-40 °	C up to +60 °	°C





Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 38 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 39 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 40 of 46







Certificate No.:

Γ

IECEx BVS 04.0007 X issue 9 Annex

Page 41 of 46

Sensor type			P
CMF200(A.B)****J*I**	**	(IIB)	With integral 2200S
CMF200(A,B)****J*I**	** CIC A4		
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		
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)	



Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex Page 42 of 46







Certificate No.:

Г

IECEx BVS 04.0007 X issue 9 Annex

Page 43 of 46

Sensor type	L U		
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*/	**** CIC A6	(IIC)	
	*** 010 4 4	(IIB)	
	*** CIC A4		
UNFHC4(C,E)****J*/	CIC A6	(IIC)	





Certificate No.:

IECEx BVS 04,0007 X issue 9 Annex Page 44 of 46







Certificate No.:

IECEx BVS 04.0007 X issue 9 Annex

Page 45 of 46

Transmitter type	CMFHC3*****(J.U)*7**** CMFHC4*****(J.U)*1**** CIC A4 CMFHC4*****(J.U)*7**** CMFHC*Y****(J.U)*7**** CMF200(A.B.C.E)****J*1**** CIC A4 CMF200(A.B.C.E)****J*7**** CMF200(A.B.C.E)****J*7**** CMF200(A.B.C.E)****J*7**** CMF300(A.B.C.E)****J*7**** CMF300(A.B.C.E)****J*7**** CMF300(A.B.C.E)****J*7**** CMF300(A.B.C.E)****J*7**** CMF350(A.B.C.E)****J*7**** CMF350(A.B.C.E)****J*7**** CMF350(A.B.C.E)****J*7**** CMF350(A.B.C.E)****J*7**** CMF350(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMF400(A.B.C.E)****J*7**** CMFHC2(A.B.C.E)****J*7**** CMFHC2(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC3(A.B.C.E)****J*7**** CMFHC4(A.B.C.E)****J*7**** CMFH	CMF400(A.B.C.E)****J* **** CIC A5 CMFHC2(A.B.C.E)****J* **** CMFHC2(A.B.C.E)****J* **** CIC A6 CMFHC3(A.B.C.E)****J* **** CIC A6 CMFHC4(A.B.C.E)****J* **** CIC A6 CMFHC4(A.B.C.E)****J* **** CIC A6 CMFHC4(A.B.C.E)****J* **** CIC A6
hansmiller type		
2200S***1*I****		
By mounting t unit will be mo	the sensor type CMF******C***** directly odified according to the following:	to the transmitter *700******** the use of the
		Sensor type
Transmitter type	CMF200(A.B.C.E)****C*I**** CIC A4 CMF200(A.B.C.E)****C*T**** CMF200(A.B.C.E)****C*T**** CMF200(A.B.C.E)****C*T**** CIC A7 CMF300(A.B.C.E)****C*T**** CIC A4 CMF300(A.B.C.E)****C*T**** CIC A7 CMF350(A.B.C.E)****C*T**** CIC A7 CMF350(A.B.C.E)****C*T**** CIC A4 CMF350(A.B.C.E)****C*T**** CIC A7 CMF400(A.B.C.E)****C*T**** CIC A7 CMF400(A.B.C.E)****C*T**** CIC A4 CMF400(A.B.C.E)****C*T**** CMF400(A.B.C.E)****C*T**** CMF400(A.B.C.E)****C*T**** CMF400(A.B.C.E)****C*T**** CMF400(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T**** CMFHC2(A.B.C.E)****C*T****CIC A4	CMF200(A.B.C.E)****C* **** CMF200(A.B.C.E)****C* **** CMF300(A.B.C.E)****C* **** CMF300(A.B.C.E)****C* **** CMF350(A.B.C.E)****C* **** CMF350(A.B.C.E)****C* **** CMF400(A.B.C.E)****C* **** CMF400(A.B.C.E)****C* **** CMF400(A.B.C.E)****C* **** CMFHC2(A.B.C.E)****C* **** CMFHC2(A.B.C.E)****C* **** CMFHC3(A.B.C.E)****C* **** CMFHC3(A.B.C.E)****C* **** CMFHC3(A.B.C.E)****C* **** CMFHC3(A.B.C.E)****C* **** CMFHC4(A.B.C.E)****C* **** CMFHC4(A.B.C.E)****C* ****





IECEx BVS 04.0007 X issue 9 Annex

Page 46 of 46

	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	