CERTIFICATE

(1) Type Examination

(2) **Product intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) Type Examination Certificate Number: **DEKRA 15ATEX0003X** Issue Number: **5**

(4) Product: **Magnetic Flow Meter System Model 8750W**

(5) Manufacturer: **Emerson – Rosemount, Micro Motion Inc.**

(6) Address: **12001 Technology Drive, Eden Prairie, MN 55344, United States of America**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential test report no. NL/DEK/ExTR15.0001/04.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0 : 2018 **EN 60079-7 : 2015 + A1 : 2018** **EN 60079-11 : 2012**
EN 60079-15 : 2010 **EN 60079-31 : 2014**

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This Type Examination Certificate relates only to the design and construction of the specified product and not to the manufacturing process and its monitoring.

(12) The marking of the product shall include the following:

II 3 G Ex nA [ic] IIC T4 Gc
II 3 G Ex ec [ic] IIC T4 Gc
II 3 G Ex nA ic IIC T5…T4 Gc
II 3 G Ex ec ic IIC T5…T4 Gc
II 3 G Ex nA ic [ic] IIC T4 Gc
II 3 G Ex ec ic [ic] IIC T4 Gc
II 3 D Ex tc IIIC T80 °C Dc
II 3 D Ex tc IIIC T80 °C…T130 °C Dc
II 3 D Ex tc [ic] IIIC T80 °C Dc
II 3 D Ex tc [ic] IIIC T80 °C…T130 °C Dc

Date of certification: 19 September 2024

DEKRA Certification B.V.

R. Schuller
Certification Manager

Throughout this document, a point is used as the decimal separator.

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(13) # SCHEDULE

(14) **to Type Examination Certificate DEKRA 15ATEX0003X** Issue No. **5**

(15) **Description**

Magnetic Flow Meter System Model 8750W

The Magnetic Flow Meter System Model 8750W comprises a Magnetic Flow Transmitter and Magnetic Flow Tube.

Magnetic Flow Transmitter Models 8750W…R and 8750W…T
The Magnetic Flow Transmitter Models 8750W…R and 8750W…T may be remote mounted from the Magnetic Flow Tubes or integral mounted on the Magnetic Flow Tubes respectively.

The 8750W…R and 8750W…T Transmitters comprises a termination compartment in type of protection Ex nA or Ex ec or Ex tc for connecting power and output signal (optionally intrinsically safe Ex ic for Fieldbus and Profibus options only).
The main compartment of the enclosure in types of protection Ex nA or Ex ec or Ex tc includes the electronics, optional Local Operator Interface (LOI) or display, intrinsically safe Ex ic supplies for the flow sensor and optionally intrinsically safe Ex ic output signal for Fieldbus and Profibus options only. Optional EtherNet output signal available for Ex tc.

For connection to the Magnetic Flow Tubes, the transmitter comprises a current limiting circuit.

Connection to the Remote Mount Magnetic Flow Tube terminals for the field coils and electrode wiring (intrinsically safe Ex ic) are provided in the Remote Junction Box compartment in types of protection Ex nA, Ex ec or Ex tc.

Degree of protection, per EN IEC 60079-0 and EN 60529:		IP66
Ambient temperature range:	EtherNet/IP output	$-20\ °C \leq T_{amb} \leq +60\ °C$
	All other outputs	$-29\ °C \leq T_{amb} \leq +60\ °C$

Magnetic Flow Transmitter Model 8750W…W
The Magnetic Flow Transmitter Model 8750W…W is remote mounted from the Magnetic Flow Tube Model 8750W.

The main compartment of the enclosure in types of protection Ex ec or Ex nA or Ex tc includes the electronics, optional Local Operator Interface (LOI), optional intrinsically safe Ex ic supplies for the flow sensor. The optional keypad for the LOI is in type of protection Ex ic.

The 8750W…W Transmitter comprises a termination compartment in types of protection Ex ec or Ex nA or Ex tb for connecting power and output signal.

Connections to the Magnetic Flow Tubes, terminals are provided for the optional intrinsically safe Ex ic field coils and electrode wiring.

For connection to the Magnetic Flow Tubes, the transmitter comprises a current limiting circuit.

Degree of protection, per EN IEC 60079-0 and EN 60529:	IP66
Degree of protection, per ISO 20653:	IP69K

Ambient temperature range: $-40\ °C \leq T_{amb} \leq +60\ °C$

(13) # SCHEDULE

(14) **to Type Examination Certificate DEKRA 15ATEX0003X** Issue No. **5**

Description (continued)

Magnetic Flow Tube Model 8750W
The Magnetic Flow Tube of the Magnetic Flow Meter System Model 8750W is designed for use with Magnetic Flow Transmitter of that same system.

The Remote Mount Flow Tube comprises a Remote Junction Box in types of protection Ex nA or Ex ec or Ex tc for the connection of the field coils and electrode wiring (intrinsically safe Ex ic) to the Remote Mount Magnetic Flow Transmitter.

The field coils are mounted in a welded compartment in types of protection Ex nA or Ex ec or Ex tc.

The electrodes (intrinsically safe Ex ic) are mounted in the same welded compartment as the field coils but protrude into the process medium.

When utilized as EPL Dc equipment, EPL Dc does not apply to the process.

Degree of protection, per EN IEC 60079-0 and EN 60529:	IP66, IP68 (10m, 48h)
Degree of protection, per ISO 20653:	IP69K
Ambient temperature range:	$-29\ °C \leq T_{amb} \leq +60\ °C$

For nomenclature, thermal data, product ratings, electrical data and description of system elements see Annex 1 to NL/DEK/ExTR15.0001/04.

Installation instructions

The manufacturers instructions shall be followed in detail to assure safe operation.

(16) **Report Number**

NL/DEK/ExTR15.0001/04.

(17) **Specific conditions of use**

Terminals for the output signals of the Magnetic Flow Transmitters, cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection. This must be taken into account upon installation.

When utilizing the keypad of Magnetic Flow Transmitter Model 8750W…W, instructions for safe use regarding potential electrostatic charging hazard have to be followed.

Models marked with ESD warning label, do not rub surface with a dry cloth or clean with solvents to avoid electrostatic charge build-up.

Conduit entries must be installed to maintain the enclosure ingress rating of IP66 (Transmitter and Flow Tube), IP68 (Flow Tube) or IP69K (Flow Tube or 8750W…W transmitter) as applicable.

(13) # SCHEDULE

(14) **to Type Examination Certificate DEKRA 15ATEX0003X** Issue No. **5**

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/DEK/ExTR15.0001/04.

Annex 1 to: Report No. NL/DEK/ExTR15.0001/04
IECEx DEK 15.0001X

Note: In this document [.] is used as decimal separator.

Nomenclature Magnetic Flow Meter System Model 8750W and electrical data

8750W	…	R	1	A	2	…	F	005	…	Z1	…	M4	…	AX	…	V1	…	R50
I		II	III	IV	V		VI	VII		VIII		IX		X		XI		IX

Desig-nation	Explanation	Value	Explanation
I	Model	8750W	Flow Meter System Model 8750W
II	Transmitter Mount	R T W	Remote Mount Integral Mount Wall Mount
III	Transmitter Power Supply	1 2	AC (90 - 250 Vac, 50 / 60 Hz), not for Ex nA or Ex ec DC (12 - 42 Vdc)
IV	Transmitter Outputs	A M F P E 0	4 - 20 mA with digital HART Protocol & Scalable Pulse Output Modbus RS-485 Intrinsically Safe Fieldbus / FISCO and Intrinsically Safe Scalable Pulse Output Intrinsically Safe Profibus and Intrinsically Safe Scalable Pulse Output Non-Intrinsically Safe EtherNet/IP and Pulse Output (Safety Approvals ND/NF (Ex tc)) Spare Flow Tube, no Transmitter
V	Conduit Entries	1 2 4 5	½-14 NPT female CM20, M20 female ½-14 NPT female, 8750W…R / T only CM20, M20 female, 8750W…R / T only
VI	Electrode Type	A, B, E, F 0	Seal of electrodes comply with IEC 61010-1. Spare Transmitter, No Flow Tube
VII	Line Size	005 to 480 000	½” NPS (15 mm) to 48” NPS (1200 mm) Spare Transmitter, no Flow Tube
VIII	Safety Approvals	Z1 ATEX	Transmitter Models 8750W…R and 8750W…T: Ⓔx II 3 G Ex nA [ic] IIC T4 Gc * Ⓔx II 3 G Ex ec [ic] IIC T4 Gc * Ⓔx II 3 D Ex tc IIIC T80 °C…T130 °C Dc ** Ⓔx II 3 G Ex nA [ic] IIC T4 Gc * Ⓔx II 3 G Ex ec [ic] IIC T4 Gc * Ⓔx II 3 D Ex tc [ic] IIIC T80 °C…T130 °C Dc **/*** Transmitter Model 8750W…W: Ⓔx II 3 G Ex nA ic [ic] IIC T4 Gc ** Ⓔx II 3 G Ex ec ic [ic] IIC T4 Gc ** Ⓔx II 3 D Ex tc IIIC T80 °C Dc ** Ⓔx II 3 G Ex nA ic [ic] IIC T4 Gc ** Ⓔx II 3 G Ex ec ic [ic] IIC T4 Gc ** Ⓔx II 3 D Ex tc [ic] IIIC T80 °C Dc **/*** Flow Tube: Ⓔx II 3 G Ex nA ic IIC T5…T4 Gc Ⓔx II 3 G Ex ec ic IIC T5…T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C…T130 °C Dc

Note: In this document [.] is used as decimal separator.

Nomenclature Magnetic Flow Meter System Model 8750W and electrical data (continued)

VIII	Safety Approvals	Z7 IECEx	Transmitter Models 8750W…R and 8750W…T: Ex nA [ic] IIC T4 Gc * Ex ec [ic] IIC T4 Gc * Ex tc IIIC T80 °C…T130 °C Dc **
			Ex nA [ic] IIC T4 Gc * Ex ec [ic] IIC T4 Gc * Ex tc [ic] IIIC T80 °C…T130 °C Dc **/***
			Transmitter Model 8750W…W: Ex nA ic [ic] IIC T4 Gc ***** Ex ec ic [ic] IIC T4 Gc ***** Ex tc IIIC T80 °C Dc **
			Ex nA ic [ic] IIC T4 Gc ***** Ex ec ic [ic] IIC T4 Gc ***** Ex tc [ic] IIIC T80 °C Dc **/***
			Flow Tube: Ex nA ic IIC T5…T4 Gc Ex ec ic IIC T5…T4 Gc Ex tc IIIC T80 °C…T130 °C Dc
		Z9 IECEx	Transmitter Models 8750W…R and 8750W…T: Ex nA [ic] IIC T4 Gc * Ex ec [ic] IIC T4 Gc * Ex tc IIIC T80 °C…T130 °C Dc **
			Ex nA [ic] IIC T4 Gc * Ex ec [ic] IIC T4 Gc * Ex tc [ic] IIIC T80 °C…T130 °C Dc **/***
			Transmitter Model 8750W…W: Ex nA ic [ic] IIC T4 Gc ***** Ex ec ic [ic] IIC T4 Gc ***** Ex tc IIIC T80 °C Dc **
			Ex nA ic [ic] IIC T4 Gc ***** Ex ec ic [ic] IIC T4 Gc ***** Ex tc [ic] IIIC T80 °C Dc **/***
			Flow Tube: Ex nA ic IIC T5…T4 Gc Ex ec ic IIC T5…T4 Gc Ex tc IIIC T80 °C…T130 °C Dc
		ND ATEX	Transmitter Models 8750W…R and 8750W…T: Ⓔx II 3 D Ex tc IIIC T80 °C…T130 °C Dc **
			Ⓔx II 3 D Ex tc [ic] IIIC T80 °C…T130 °C Dc **/***
			Transmitter Model 8750W…W: Ⓔx II 3 D Ex tc IIIC T80 °C Dc **
			Ⓔx II 3 D Ex tc [ic] IIIC T80 °C Dc **/***
			Flow Tube: Ⓔx II 3 D Ex tc IIIC T80 °C…T130 °C Dc **
		NF IECEx	Transmitter Models 8750W…R and 8750W…T: Ex tc IIIC T80 °C…T130 °C Dc **
			Ex tc [ic] IIIC T80 °C…T130 °C Dc **
			Transmitter Model 8750W…W: Ex tc IIIC T80 °C Dc **
			Ex tc [ic] IIIC T80 °CDc **
			Flow Tube: Ex tc IIIC T80 °C…T130 °C Dc **
		NOTE: ** ***	* Model 8750W Transmitter DC Power Supply only Model 8750W Transmitter AC and DC Power Supply Intrinsically Safe Output (see IV) options F or P

Note: In this document [.] is used as decimal separator.

Nomenclature Magnetic Flow Meter System Model 8750W and electrical data (continued)

Desig-nation	Explanation	Value	Explanation
IX	Transmitter Display	-- M4 M5	Without LOI and keypad LOI (+ keypad for Transmitter Model 8750W…W only) Display
X	Transmitter Discrete Input/Output	AX	Two Discrete Channels (DI/DO 1, DO 2)
XI	Specials Paint	Vx	Special Paint Systems ***
		NOTE:	*** Subject to special conditions for safe use.
XII	Remote Cable	Rxx ****	Standard Temperature Component
		NOTE:	**** Length = xx x 10 ft, max. 500 ft

Thermal data

Temperature class and specified maximum surface temperature "T"

Magnetic Flow Transmitter Models 8750W…R and 8750W…T

Remote Mount	Temperature class:	T4
	Maximum surface temperature "T":	T80 °C
Integral Mount	See Temperature class and specified maximum surface temperature "T" of Flow Tube on which the transmitter is mounted.	

Magnetic Flow Transmitter Model 8750W…W

Remote Mount	Temperature class:	T4
	Maximum surface temperature "T":	T80 °C

Magnetic Flow Tube

Line Size [NPS]	Max. Process Temperature	Type of protect.	Transmitter Mounting	T-class	Type of protect.	Transmitter Mounting	Maximum surface temperature "T"
All	60 °C	Ex ec Ex nA	Integral	T4	Ex tc	Integral	T80 °C
	60 °C		Remote	T5		Remote	T80 °C
	90 °C		Integral/Remote	T4		Integral/Remote	T100 °C
	120 °C		Remote	T4		Remote	T130 °C

Electrical data

Magnetic Flow Transmitter Models 8750W…R and 8750W…T

Supply circuit (terminals 9 and 10):	AC power supply	90-250 Vac; 50/60 Hz; 40 VA; U_m = 250 V
Supply circuit (terminals 9 and 10):	DC power supply	12-42 Vdc; 15 W; U_m = 250 V
Dissipated power:	AC or DC	32 VA (w. Flow Tube connected)

Data circuit (terminals 5, 6, 7 and 8): Digital I/O signals U_m = 250 V

Note: In this document [.] is used as decimal separator.

Electrical data (continued)

Output Signals

Profibus, Foundation Fieldbus:
Output circuit (terminals 1 and 2):
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 30 V; I_i = 380 mA; P_i = 2.85 W; C_i = 924 pF; L_i = 0 µH.

Output circuit (terminals 3 and 4): Pulse
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 28 V; I_i = 100 mA; P_i = 1.0 W; C_i = 4.5 nF; L_i = 0.0 µH.

FISCO:
Output circuit (terminals 1 and 2):
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit or a circuit in accordance with FISCO, with the following maximum values:
U_i = 30 V; I_i = 380 mA; P_i = 5.32 W; C_i = 924 pF; L_i = 0 µH.

Output circuit (terminals 3 and 4): Pulse
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 28 V; I_i = 100 mA; P_i = 1.0 W; C_i = 4.5 nF; L_i = 0.0 µH.

RS-485 Modbus digital Output & Scalable Pulse Output:

Output circuit (terminals 1 and 2):	Modbus	U_m = 250 V
Output circuit (terminals 3 and 4):	Pulse	U_m = 250 V

4 - 20 mA with digital HART Protocol & Scalable Pulse Output:

Output circuit (terminals 1 and 2):	4-20 mA	U_m = 250 V
Output circuit (terminals 3 and 4):	Pulse	U_m = 250 V

EtherNet/IP Output & Scalable Pulse Output:

Output circuit (RJ45 Receptacle):	Ethernet/IP	U_m = 250 V
Output circuit (terminals 3 and 4):	Pulse	U_m = 250 V

Transmitter Remote Mount Junction Box, Flow Tube connection
Output circuit (terminals 1, 2 and 3): Coil drive 500 mA; 40 Vmax.; 9 Wmax.

For explosive gas or vapor atmospheres (Category 3 G or EPL Gc):
Output circuit (terminals 17, 18, 19): Electrode circuit
In types of protection intrinsic safety Ex ic IIC, with the following maximum values:
U_o = 28.56 V; I_o = 5.77 mA; P_o = 165 mW; C_o = 61.7 nF; L_o = 1.0 H.

For combustible dust atmospheres (Category 3 D or EPL Dc):
Output circuit (terminals 17, 18, 19): Electrode circuit 5 V; 200 µA; 1 mW

Magnetic Flow Transmitter Model 8750W…W

Supply circuit (terminals L1 and N/L2):	AC power supply	90-250 Vac; 50/60 Hz; 40 VA; U_m = 250 V
Supply circuit (terminals DC+ and DC-):	DC power supply	12-42 Vdc; 15 W; U_m = 250 V
Dissipated power:	AC or DC	32 VA (w. Flow Tube connected)

Data circuit (terminals 9, 10, 11 and 12): Digital I/O signals U_m = 250 V

Note: In this document [.] is used as decimal separator.

Electrical data (continued)

Output Signals

Profibus, Foundation Fieldbus:
Output circuit (terminals 7 and 8):
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 30 V; I_i = 380 mA; P_i = 2.85 W; C_i = 924 pF; L_i = 0 µH.

Output circuit (terminals 5 and 6): Pulse
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 28 V; I_i = 100 mA; P_i = 1.0 W; C_i = 4.5 nF; L_i = 0.0 µH.

FISCO:
Output circuit (terminals 7 and 8):
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit or a circuit in accordance with FISCO, with the following maximum values:
U_i = 30 V; I_i = 380 mA; P_i = 5.32 W; C_i = 924 pF; L_i = 0 µH.

Output circuit (terminals 5 and 6): Pulse
In type of protection intrinsic safety Ex ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 28 V; I_i = 100 mA; P_i = 1.0 W; C_i = 4.5 nF; L_i = 0.0 µH.

RS-485 Modbus digital Output & Scalable Pulse Output:

Output circuit (terminals 7 and 8):	Modbus	U_m = 250 V
Output circuit (terminals 5 and 6):	Pulse	U_m = 250 V

4 - 20 mA with digital HART Protocol & Scalable Pulse Output:

Output circuit (terminals 7 and 8):	4-20 mA	U_m = 250 V
Output circuit (terminals 5 and 6):	Pulse	U_m = 250 V

Flow Tube connection
Output circuit (terminals 1, 2 and 3): Coil drive 500 mA; 40 Vmax.; 9 Wmax.

For explosive gas or vapor atmospheres (Category 3 G or EPL Gc):
Output circuit (terminals 17, 18, 19): Electrode circuit
In types of protection intrinsic safety Ex ic IIC, with the following maximum values:
U_o = 28.56 V; I_o = 5.77 mA; P_o = 165 mW; C_o = 61.7 nF; L_o = 1.0 H.

For combustible dust atmospheres (Category 3 D or EPL Dc):
Output circuit (terminals 17, 18, 19): Electrode circuit 5 V; 200 µA; 1 mW

Flow Tube

Flow Tube Remote Mount Junction Box, Transmitter connection
Input circuit (terminals 1, 2 and 3): Coil drive 500 mA; 40 Vmax; 20 Wmax.

For explosive gas or vapor atmospheres (Category 3 G or EPL Gc):
Input circuit (terminals 17, 18 and 19): Electrode circuit
In type of protection intrinsic safety Ex ic IIC, with the following maximum values:
U_i = 30 V; I_i = 50 mA; P_i = 1.0 W; C_i = 1.9 nF; L_i = 630 µH.

For combustible dust atmospheres (Category 3 D or EPL Dc):
Input circuit (terminals 17, 18 and 19): Electrode circuit 5 V; 200 µA; 1 mW