CERTIFICATE OF CONFORMITY



HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS 1.

2. **Certificate No:**

3. **Equipment:** (Type Reference and Name)

4. Name of Listing Company:

Address of Listing Company: 5.

FM19US0180X

Prosonic M, FMU40, FMU41, FMU42, FMU43 and FMU44 Ultrasonic Level Detection Instruments

Endress+Hauser SE+Co KG

Hauptstrasse 1

Postfach 1261 Maulburg D79689 Germany

The examination and test results are recorded in confidential report number: 6.

3012692 dated 5th September 2002

FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3610:2018, FM Class 3611:2018, FM Class 3615:2018, FM Class 3810: 2018, ANSI/ISA 12.12.01:2017, ANSI/ISA 60079-0:2013, ANSI/ISA 60079-1:2013, ANSI/ISA 60079-11: 2014, ANSI/UL 60079-26: 2017, ANSI/UL 61010-1: 2012, ANSI/NEMA 250:1991, ANSI/IEC 60529:2004

- If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
- This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

Certificate issued by:

J/E. Marguedant

VP, Manager - Electrical Systems

24 October 2019

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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10. Equipment Ratings:

Intriniscally Safe Version

Intrinsically Safe Apparatus for Class I, II & III, Division 1, Groups A, B, C, D, E, F & G; Class I, Zone 0, AEx ia IIC in accordance with FM Control Drawing 960006274, 960006275, 960006277, 960006285, 960006286 or 960006287; Dust-Ignitionproof for Class II, Division 1, Groups E, F & G; Class III; Nonincendive for Class I, Division 2, Groups A, B, C & D hazardous (classified) outdoor (Type 4X & 6P; IP68) locations (temperature codes per applicable control drawings).

Explosionproof Version

Endress+Hauser SE+Co KG requested Approval of the apparatus listed in Section 1.3 for compliance with the standards listed in Section 1.3.1 as Explosionproof Apparatus with Intrinsically Safe sensor; transmitter and sensor for Class I, Division 1, Groups A, B, C & D; transmitter for Class I, Zone 1, AEx d IIC with an Intrinsically Safe output to Class I, Zone 0 Group IIC; sensor for Class I, Zone 0 AEx ia IIC when installed per FM Control Drawing 960006276; Dust-Ignitionproof for Class II, Division 1, Groups E, F & G; Class III; Nonincendive for Class I, Division 2, Groups A, B, C & D; Associated Intrinsically Safe for connection to Class I, II & III, Division 1, Groups A, B, C, D, E, F & G hazardous (classified) outdoor (Type 4X & 6P; IP68) locations.

Nonincendive Version

Nonincendive for Class I, Division 2, Groups A, B, C & D; Dust-Ignitionproof Apparatus for Class II, Division 1, Groups E, F & G; Class III hazardous (classified) outdoor (Type 4X & 6P; IP68) locations.

11. The marking of the equipment shall include:

IS Class I, II, III, Division 1, Groups A, B, C, D, E, F, G

Class I, Division 2, Groups A, B, C, D

Class I, Zone 0, AEx ia IIC T6...T4 Ga

Class I, Zone 0/1, AEx ia/d [ia Ga] IIC T6...T4 Ga/Gb

XP-IS Class I, Division 1, Groups A, B, C, D

DIP Class II, Division 1, Groups E, F, G; Class III

AIS Class I, II, III, Division 1, Groups A, B, C, D, E, F, G

Type 4X/6P; IP68; T-Class dependent on enclosure type and protection type. See below:

Enclosure:	F12 / F23*	F12 / F23*	T12	T12
Type of protection:	Ex ia resp IS	Ex ia resp	Exia	Ex d
	HART	IS PA/FF	(with surge protection)	Resp XP
Model FMU4x- <i>abcdefg</i>	where a = C or 1 c = B,J,P e = A,Y	where a = C or 1 c = D,F,K,L,Q,R e = A,Y	where a = C or 1 c = B,D,F,J,K,L,P,Q,R e = D	where a = D or 4 c = all e = C or D
T6	-40 °C to +60 °C	-40 °C to +60 °C	-40 °C to +60 °C	-40 °C to +60 °C
T5	-40 °C to +80 °C	-40 °C to +75 °C	-40 °C to +75 °C	-40 °C to +60 °C
T4	-40 °C to +80 °C	-40 °C to +80 °C	-40 °C to +80 °C	-40 °C to +60 °C
Model FMU43-Mbcdefg	T5, Ta = -40°C +80°C, where c=D, F, K, L, Q, R		T4A, Ta = -40 °C to +80 °C, where c=G, H, M, N, S, T	

^{*} F23 temperature derating applies for both enclosures based on maximum values determined by measurements.

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12. Description of Equipment:

The compact ultrasonic level transmitter Prosonic M FMU 4x is mainly used for continuous non-contact measurement of liquids and solids. The compact instrument combines the sensor and the electronics. The sensor sends short ultrasonic pulses and receives the echo reflected by the surface of the media. The electronics analyzes the signal and computes the level data based on the time of flight principle and converts the data into a 4...20 mA signal (2-wire loop or 4-wire) or communicates it via digital protocols like HART, Profibus PA or Foundation Fieldbus. The data can also be visualized by an optional LCD module. Programming and calibration can be done using remote communication as well as on site using the LCD module.

Operation Temperature Ranges:

The ambient operating temperature range of the Prosonic M, FMU4* is -40°C to 80°C.

FMU 40-Sbcdef. Prosonic M Level Instrument.

 $IS/I,II,III/1/ABCDEFG/T^*$; 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FISCO, e = A or Y), 960006286 (PA/FF, FISCO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

I/O AEx ia IIC T^* ; 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FISCO, e = A or Y), 960006286 (PA/FF, FISCO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68

 $NI/I/2/ABCD/T^*$; NIFW 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FNICO, e = A or Y), 960006286 (PA/FF, FNICO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

Entity parameters:

For c = B,J,P (4-20 mA HART): $Vmax/U_i = 30$ VDC, $Imax/I_i = 300$ mA, Pi = 1 W, Ci = 13 nF, Li = 0 For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

FISCO installation, Vmax/ U_i = 17.5 VDC, Imax/ I_i = 500 mA, Pi= 5. 5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, Vmax/ U_i = 24 VDC, Imax/ I_i = 250 mA, Pi= 1. 2 W, Ci = 5 nF, Li = 10 uH

NIFW parameters:

For c = B,J,P (4-20 mA HART): Vmax = 30 VDC, Pi= 1 W, Ci = 13 nF, Li = 0

For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

FNICO installation, Vmax = 17.5 VDC, Pi= 5. 5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, Vmax = 24 VDC, Pi= 1. 2 W, Ci = 5 nF, Li = 10 uH

b = Process connection; any single letter or number.

- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display), 3 (prepared for connection of external display).
- e = Enclosure: A (aluminum, F12 housing), D (aluminum, T12 housing), Y (stainless steel, F23 housing).
- f = Cable entry: 2 (M20 x 1. 5), 3 (G ½"), 4 (NPT ½"), 5 (M12 PA plug), 6 (7/8" FF plug) or any other single letter or number (special version, not relevant for safety).

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Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006274, 960006275, 960006285, 960006286 or 960006287.

FMU 41-Sbcdef. Prosonic M Level Instrument.

 $IS/I,II,III/1/ABCDEFG/T^*$; 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FISCO, e = A or Y), 960006286 (PA/FF, FISCO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

I/O AEx ia IIC T*; 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FISCO, e = A or Y), 960006286 (PA/FF, FISCO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68

 $NI/I/2/ABCD/T^*$; NIFW 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FNICO, e = A or Y), 960006286 (PA/FF, FNICO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

Entity parameters:

For c = B,J,P (4-20 mA HART): Vmax/U_i = 30 VDC, Imax/I_i = 300 mA, Pi= 1 W, Ci = 13 nF, Li = 0 For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

FISCO installation, $Vmax/U_i = 17.5 \text{ VDC}$, $Imax/I_i = 500 \text{ mA}$, Pi = 5.5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, $Vmax/U_i = 24 \text{ VDC}$, $Imax/I_i = 250 \text{ mA}$, Pi = 1.2 W, Ci = 5 nF, Li = 10 uH

NIFW parameters:

For c = B,J,P (4-20 mA HART): Vmax = 30 VDC, Pi = 1 W, Ci = 13 nF, Li = 0

For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

FNICO installation, Vmax = 17.5 VDC, Pi= 5. 5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, Vmax = 24 VDC, Pi= 1. 2 W, Ci = 5 nF, Li = 10 uH

- b = Process connection; any single letter or number.
- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display), 3 (prepared for connection of external display).
- e = Enclosure: A (aluminum, F12 housing), D (aluminum, T12 housing), Y (stainless steel, F23 housing).
- f = Cable entry: 2 (M20 x 1. 5), 3 (G ½"), 4 (NPT ½"), 5 (M12 PA plug), 6 (7/8" FF plug) or any other single letter or number (special version, not relevant for safety).

Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006274, 960006275, 960006285, 960006286 or 960006287.

FMU 42-Sbcdefg. Prosonic M Level Instrument.

 $IS/I,II,III/1/ABCDEFG/T^*$; 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FISCO, e = A or Y), 960006286 (PA/FF, FISCO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

 $\label{eq:locality} I/0~AEx~ia~IIC~T^*;~960006274~(4-20mA,~e=A~or~Y),~960006285~(4-20~mA,~e=D);~960006275~(PA/FF,~FISCO,~e=A~or~Y),~960006286~(PA/FF,~FISCO,~e=D);~960006277~(PA/FF,~Entity,~e=A~or~Y),~960006287~(PA/FF,~Entity,~e=A~o$

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e = D); Type 4X / 6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68

 $NI/I/2/ABCD/T^*$; NIFW 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FNICO, e = A or Y), 960006286 (PA/FF, FNICO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

Entity parameters:

For c = B,J,P (4-20 mA HART): Vmax/U_i = 30 VDC, Imax/I_i = 300 mA, Pi= 1 W, Ci = 13 nF, Li = 0 For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

FISCO installation, $Vmax/U_i = 17.5 \text{ VDC}$, $Imax/I_i = 500 \text{ mA}$, Pi = 5.5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, $Vmax/U_i = 24 \text{ VDC}$, $Imax/I_i = 250 \text{ mA}$, Pi = 1.2 W, Ci = 5 nF, Li = 10 uH

NIFW parameters:

For c = B, J, P (4-20 mA HART): Vmax = 30 VDC, Pi = 1 W, Ci = 13 nF, Li = 0

For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

FNICO installation, Vmax = 17.5 VDC, Pi= 5. 5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, Vmax = 24 VDC, Pi= 1. 2 W, Ci = 5 nF, Li = 10 uH

- b = Process connection; any single letter or number.
- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display), 3 (prepared for connection of external display).
- e = Enclosure: A (aluminum, F12 housing), D (aluminum, T12 housing), Y (stainless steel, F23 housing).
- f = Cable entry 2 (M20 x 1. 5), 3 (G ½"), 4 (NPT ½"), 5 (M12 PA plug), 6 (7/8" FF plug) or any other single letter or number (special version, not relevant for safety).
- g = Sealing of process connection: 2 (VITON Flat sealing), 3 (EPM flat sealing) or any other single letter or number (special version, not relevant for safety).

Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006274, 960006275, 960006287, 960006285, 960006286 or 960006287.

FMU 44-Sbcdefg. Prosonic M Level Instrument.

 $IS/I, II, III/1/ABCDEFG/T^*; 960006274 (4-20mA, e = A or Y), 960006285 (4-20mA, e = D); 960006275 (PA/FF, FISCO, e = A or Y), 960006286 (PA/FF, FISCO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type <math>4X / 6P$; IP68

I/O AEx ia IIC T^* ; 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FISCO, e = A or Y), 960006286 (PA/FF, FISCO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68

 $NI/I/2/ABCD/T^*$; NIFW 960006274 (4-20mA, e = A or Y), 960006285 (4-20 mA, e = D); 960006275 (PA/FF, FNICO, e = A or Y), 960006286 (PA/FF, FNICO, e = D); 960006277 (PA/FF, Entity, e = A or Y), 960006287 (PA/FF, Entity, e = D); Type 4X / 6P; IP68

Entity parameters:

For c = B,J,P (4-20 mA HART): $Vmax/U_i = 30$ VDC, $Imax/I_i = 300$ mA, Pi = 1 W, Ci = 13 nF, Li = 0 For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

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FISCO installation, $Vmax/U_i = 17.5 \text{ VDC}$, $Imax/I_i = 500 \text{ mA}$, Pi = 5.5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, $Vmax/U_i = 24 \text{ VDC}$, $Imax/I_i = 250 \text{ mA}$, Pi = 1.2 W, Ci = 5 nF, Li = 10 uH

NIFW parameters:

For c = B,J,P (4-20 mA HART): Vmax = 30 VDC, Pi = 1 W, Ci = 13 nF, Li = 0

For c = D,K,Q (Profibus PA), F,L,R (Foundation Fieldbus):

FNICO installation, Vmax = 17.5 VDC, Pi= 5. 5 W, Ci = 5 nF, Li = 10 uH; or ENTITY installation, Vmax = 24 VDC, Pi= 1. 2 W, Ci = 5 nF, Li = 10 uH

- b = Process connection; any single letter or number.
- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display), 3 (prepared for connection of external display).
- e = Enclosure: A (aluminum, F12 housing), D (aluminum, T12 housing), Y (stainless steel, F23 housing).
- f = Cable entry 2 (M20 x 1. 5), 3 (G ½"), 4 (NPT ½"), 5 (M12 PA plug), 6 (7/8" FF plug) or any other single letter or number (special version, not relevant for safety).
- g = Sealing of process connection: 2 (VITON Flat sealing), 3 (EPM flat sealing) or any other single letter or number (special version, not relevant for safety).

Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006274, 960006275, 960006285, 960006286 or 960006287.

FMU 40-TbcdCf. Prosonic M Level Instrument.

XP-IS/I/1/ABCD/T*; Type 4X / 6P; IP68

I/ 0/1 AEx ia/d [ia Ga] IIC T* Ga/Gb; 960006276; Type 4X/6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68 NI/I/2/ABCD/T*; Type 4X / 6P; IP68

AIS/I, II, II/ABCDEFG; 960006276; Type 4X/6P; IP68

- b = Process connection; any single letter or number.
- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display).
- $f = Cable entry: 4 (NPT \frac{1}{2})$

Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006276.

FMU 41-TbcdCf. Prosonic M Level Instrument.

XP-IS/I/1/ABCD/T*; Type 4X / 6P; IP68

I/ 0/1 AEx ia/d [ia Ga] IIC T* Ga/Gb; 960006276; Type 4X/6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68 NI/I/2/ABCD/T*; Type 4X / 6P; IP68

AIS/I, II, II/ABCDEFG; 960006276; Type 4X/6P; IP68

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- b = Process connection; any single letter or number.
- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display).
- $f = Cable entry: 4 (NPT \frac{1}{2})$

Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006276.

FMU 42-TbcdCfg. Prosonic M Level Instrument.

XP-IS/I/1/ABCD/T*; Type 4X / 6P; IP68

I/ 0/1 AEx ia/d [ia Ga] IIC T* Ga/Gb; 960006276; Type 4X/6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68 NI/I/2/ABCD/T*; Type 4X / 6P; IP68

AIS/I, II, II/ABCDEFG; 960006276; Type 4X/6P; IP68

- b = Process connection; any single letter or number.
- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display).
- f = Cable entry: 4 (NPT ½")
- g = Sealing of process connection: 2 (VITON Flat sealing), 3 (EPM flat sealing) or any other single letter or number (special version, not relevant for safety).

Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006276.

FMU 44-TbcdCfg. Prosonic M Level Instrument.

XP-IS/I/1/ABCD/T*; Type 4X / 6P; IP68

I/ 0/1 AEx ia/d [ia Ga] IIC T* Ga/Gb; 960006276; Type 4X/6P; IP68

DIP/II,III/1/EFG/T*; Type 4X / 6P; IP68 NI/I/2/ABCD/T*; Type 4X / 6P; IP68

AIS/I, II, II/ABCDEFG; 960006276; Type 4X/6P; IP68

- b = Process connection; any single letter or number.
- c = Output and operation: B,J,P (4-20 mA HART); D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus).
- d = Display: 1 (without display), 2 (with integral display).
- $f = Cable entry: 4 (NPT <math>\frac{1}{2}$ ")
- g = Sealing of process connection: 2 (VITON Flat sealing), 3 (EPM flat sealing) or any other single letter or number (special version, not relevant for safety).

Specific conditions of use:

1. For installation instructions and the Temperature Class (*) which applies to specific models, ambient temperatures (Ta), and process medium temperatures (Tmed), refer to control drawings 960006276.

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FMU 43-Mbcdef. Prosonic M Level Instrument.

DIP/II,III/1/EFG/T* Ta = -40 $^{\circ}$ C to 80 $^{\circ}$ C;Type 4X / 6P; IP68 NI/I/2/ABCD/T* Ta = -40 $^{\circ}$ C to 80 $^{\circ}$ C; Type 4X / 6P; IP68

- b = Process connection: any single letter or number.
- c = Output and operation: D,K,Q (Profibus PA); F,L,R (Foundation Fieldbus); G,M,S (90-253 Vac, 4-20 mA HART), H,N,T (10.5-32 VDC, 4-20 mA HART).
- d = Display: 1 (without display), 2 (with integral display).
- e = Enclosure: A (Aluminum F12 housing), Y (stainless steel F23 housing).
- f = Cable entry: 4 (NPT 1/2")

Specific Conditions of Use:

1. Temperature Class (*) is T5 where c = D, F, K, L, Q, R and T4A where c = G, H, M, N, S, T

13. Specific Conditions of Use:

 See individual Equipment Descriptions above for Specific Conditions of Use which are applicable to each model.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
5 th September 2002	Original Issue.
24 th October 2019	Supplement 4: Report Reference: – PR454354 dated 24 th October 2019. Description of the Change: 1) Component updates 2) Internal Display update 3) Update of Standards to latest editions. Addition of ANSI/ISA 12.12.01, ANSI/ISA 60079-0:2013, ANSI/ISA 60079-1:2013, ANSI/ISA 60079-1: 2014, ANSI/UL 60079-26: 2017 and ANSI/UL 61010-1: 2012 to assessment 4) Certificate updated to latest format

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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