

Certificate of Compliance

Certificate: 1730129

Master Contract: 160686

Project: 2462546

Date Issued: November 25, 2011

Issued to: Endress + Hauser Flowtec AG

**Kagenstrasse 7
Reinach, Basel Land 4153
Switzerland
Attention: Marita Paetzold**

The products listed below are eligible to bear the CSA Mark shown



Eshwar Kashyap

Issued by: Eshwar Kashyap

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Class I, Zone 2, Group IIC: Class I, Division 2, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III:

- Prosonic Flow 91W aa-bcdefgRiklmn Flowmeters consisting of a Transmitter (Type 4X Enclosure) with Remote Sensors Prosonic 91W**-2/P/S***** (Type 4X and 6P Enclosure) and Prosonic 91W**-1/A/B/R***** (Type 4X and 6P Enclosure). Supply rated 85 - 250Vac 50/60Hz 12VA, 20 - 28Vac 50/60Hz 7VA or 11 - 40Vdc 5W. Hart Current Output 4 – 20mA, 30V or Pulse Output 30V, 250mA. Temperature Codes and Ambient Temperatures per Control Drawing No. FES0095B.

Notes:

1. “a, b, c, d, e, f, g, i, k, l, m and n” in the Flow 91W Series Flowmeter Model Number may be represented as follows:

Prosonic Flow 91W aa - b c d e f g h i k l m n

aa = Mounting type (double number and/or letter)

b = Flow Sensor

1 = DN15...65, -20°C...80°C, 6MHz

2 = DN15...65, 0°C...130°C, 6MHz

A = DN100...4000, -20°C...80°C, 1MHz



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B = DN50...300, -20°C...80°C, 2MHz

R = DN300...4000, -20°C...80°C, 0.5MHz

P = DN100...4000, 0°C...130°C, 1MHz

S = DN50...300, 0°C...130°C, 2MHz

c = Sensor holder (any single number or letter)

d = Installation set (any single number or letter)

e = Sensor cable (any single number or letter)

f = Cable entry (any single number or letter)

g = Calibration (any single number or letter)

h = Approval

R = FM/CSA Cl. I Div. 2

i = Housing (any single number or letter)

k = Cable entry (any single number or letter)

l = Power supply, Display

0 = 85-250V, without display

1 = 20-28V, with display

4 = 85-250V, with display

5 = 20-28V, with display

X = sensor only

m = software (any single number or letter)

n = output/input

A = 4-20mA HART + Impulse passive

X = sensor only



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APPLICABLE REQUIREMENTS

- CAN/CSA-C22.2 No. 0-M91 - General Requirements – Canadian Electrical Code, Part II
- CSA Std C22.2 No. 25-1966 Locations - Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
- CAN/CSA-C22.2 No. 94-M91 - Special Purpose Enclosures
- CAN/CSA-C22.2 No. 1010.1-2004 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
- CSA Std C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations



Supplement to Certificate of Compliance

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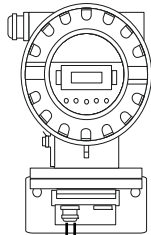
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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

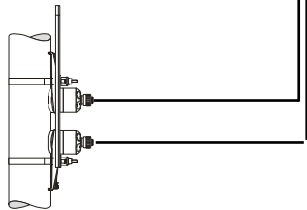
Product Certification History

Project	Date	Description
2462546	November 25, 2011	Update to Report 1730129 to cover minor alternative constructions and to include accepted sensors D15-DN65.
History		
1730129	Dec. 27, 2005	Original CSA Certification for Prosonic Flow 91W

Hazardous Locations
 Class I Div. 2 Groups ABCD
 Class I Zone 2 Group IIC
 and Class II and III Division 1 Groups EFG



Transmitter
 Prosonic Flow 91W



Sensor Prosonic Flow 91W

PROSONIC FLOW 91

Notes:

- Control room equipment shall not use or generate more than 250 V rms.
- Caution: Use supply wires suitable for 10 °C / 18°F above ambient temperature, but at least for 70 °C / 158°F.
- Class II Group G: The surface temperature of the apparatus cannot exceed 165 °C / 329°F.
- Install using conduit per Canadian Electrical Code Part I
- Sensor circuits are Nonincendive
- WARNING: EXPLOSION HAZARD! DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS
- WARNING: SUBSTITUTION OF COMPONENTS MY IMPAIR SUITABILITY FOR CL. I, DIV. 2
- Temperature table of remote version

Sensor:

	Medium temperature minimum	Max. medium temperature depending temperature classes			
		T6	T5	T4A	T4 ... T1
91W**-1/A/B/R*****	-20°C / -4°F	80°C / 176°F	80°C / 176°F	80°C / 176°F	80°C / 176°F
91W**-2/P/S*****	0°C / -4°F	80°C / 176°F	95°C / 203°F	115°C / 239°F	130°C / 266°F

Range of ambient temperature: -20°C ... 60°C

Transmitter:

Temperature class for transmitter in remote version is T4 to T1 (Class I Division 2) or T4 to T1 (Class I Zone 2) at 60°C / 140°F ambient temperature.

The minimum ambient temperature is -25°C / -13°F

9. Functional Rating

These ratings do not supersede Hazardous Location values.

Terminals 26 and 27, Hart current output

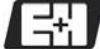
$U_{nom} \leq 35V$ $I_{nom} = 4...20mA$

Terminals 24 and 25, Pulse output

$U_{nom} \leq 35V$ $I_{nom} \leq 250mA$

Aenderungen:	A	F	Ersteller: FES / ID 1156 FILE: M:\ZEICHNG\FES0095\051107C.DOC		
	B	27.05.2011 / PAM	G		
	C		H		
	D		J		
	E		K		

CSA Control Drawing Class I Division 2 / Class I Zone 2 PROSONIC FLOW 91	Gezeichnet	27.05.11	PAM
	Geprüft		
	Ex-geprüft	27.05.11	PAM
	Gesehen		

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