



Certificate of Compliance

Certificate: 70009545

Master Contract: 160686

Project: 70200262

Date Issued: November 12, 2018

Issued to: Endress + Hauser Flowtec AG
Kaegenstrasse 7
CH-4153 Reinach
SWITZERLAND

Attention: Kristian Klie

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



Issued by: E.Giusti
E.Giusti

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations - Certified to US Standards

Class I, Division 2, Groups A, B, C and D; Temperature code Tx:

Mass flowmeter model Dosimass 8bEdd – effghijklmn +#*##, supply rated 20...30Vdc, 3.5W maximum.

Non sparking product for Class I, Division 2 when connected as per drawing No FES0232.

Maximum process pressure 100 bar (1450psi).

Ambient temperature : -40°C to +60°C

Medium temperature: -40°C to +125°C

Enclosure Type 4X.

Ambient temperature Ta (°C)	Max.Medium temperature Tmed (°C)		
	T5	T4	T3-T1
60	90	125	125

Note: a,b,c,d,e,f,g,h,i,j,k,l,m,n in the model number may be any number or letter representing specific options



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APPLICABLE REQUIREMENTS

CSA C22.2 No. 0: 2010	General Requirements- Canadian Electrical Code
CSA C22.2 No. 94.1: 2007	Enclosures for electrical equipment, Non environmental considerations
CSA C22.2 No. 213: M1987 (2013)	Non-Incendive Electrical Equipment for Use in Class 1, Division 2 Hazardous Location
CSA C22.2 No. 61010-1:2012	Safety Requirements for Electrical Equipment for Measurements, Control and Laboratory Use, Part 1; General Requirements
FM 3600: 2011	Electrical Equipment for use in Hazardous (Classified) Locations General Requirements
FM 3810: 2005	Electrical Equipment for Measurement, Control and Laboratory Use
FM 3611:2004	Nonincendive electrical equipment for use in Class I&II, Division 2, and Class III, Division 1 and 2, hazardous (classified) locations.
ANSI/ISA12.12.01: 2013	Nonincendive Electrical Equipment for use in Class I and II, Division 2 and Class III, Division 1 and 2 Hazardous (classified) area locations
UL 50:2007	Enclosures for electrical equipment, Non environmental considerations
UL61010-1: 2012	Safety Requirements for Electrical Equipment for Measurements, Control and Laboratory Use, Part 1; General Requirements

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

Following marking information, laser printed, appears on the product:

- CSA Monogram
- Company name and/or CSA master contract number
- Serial number
- Electrical ratings
- Hazardous locations designation
- Temperature code rating
- Maximum ambient temperature
- Caution re: substitution of components may impair suitability for Class I, Division 2
- Warning: "Do not disconnect when energized"
- AVERTISSEMENT: "NE PAS DECONNECTER SOUS TENSION"

Markings are presented in drawing FEK3563-0000.

Hazardous Locations

Class I, Division 2, Groups ABCD;
Class I, Zone2, IIC

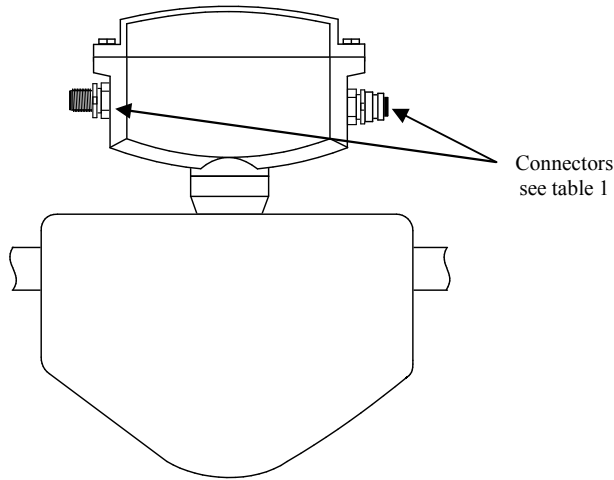
This page applies to ext. order code:

8BE* - ****C*****+###

8PE* - ****C*****+###

8RE* - ****C*****+###

Transmitter/Sensor:



Connectors
see table 1

Notes:

1. Install all per Canadian Electrical Code (CEC) resp. National Electrical Code (NEC) ANSI/NFPA 70.
2. Caution: Use supply wires suitable for 20 °C above ambient temperature, but at least for 80 °C/176 °F.
3. **WARNING** - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2
AVERTISSEMENT - RISQUE D'EXPLOSION - LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATÉRIEL INACCEPTABLE POUR LES EMBLACEMENTS DE CLASSE I, DIVISION 2
4. **WARNING** - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS
AVERTISSEMENT - RISQUE D'EXPLOSION - AVANT DE DÉCONNECTER L'EQUIPMENT, COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT EST DÉSIGNÉ NON DANGEREUX

Ambient temperature range: - 40 °C ... +60 °C

Medium temperature range: - 40 °C ... +125 °C

Temperature table

Ambient temperature Ta [°C]	Max. medium temperature T _{med} [°C]		
	T5	T4	T3-T1
60	90	125	125

Table 1: Connectors

Connector	Description	Pule/Frequency/ Status	Modbus / 1 Batching I/O	Modbus / 2 Batching I/O
8 Pin Connector (Power connector) 	Power input U ≤ 30V P ≤ 5 W (+500mA per Batch output)	Pin 1 (+) Pin 4 (-)	Pin 1 (+) Pin 4 (-)	Pin 1 (+) Pin 4 (-)
	Service Input (CDI) U ≤ 7.5 V	Pin 2(+ RX),3(+ TX) and 8 (-)	Pin 2(+ RX),3(+ TX) and 8 (-)	Pin 2(+ RX),3(+ TX) and 8 (-)
	Modbus U ≤ 7.5 V	-	Pin 6 (A) and 7 (B)	Pin 6 (A) and 7 (B)
	PFS U ≤ 30V I ≤ 25mA	Pin 5 (+),6(- Out1) and 7(- Out2)	-	-
5 Pin connector (Batch connector) 	Batch output 1 U ≤ 30 V I ≤ 500 mA	-	Pin 3 (-) and 4 (+)	Pin 3 (-) and 4 (+)
	Batch output 2 U ≤ 30 V I ≤ 500 mA	-	-	Pin 3 (-) and 2 (+)
	AUX U ≤ 30V I ≤ 7.5 mA	-	Pin 1(+) and 2 (-)	Pin 1 (+) and 3 (-)

Aenderungen:

A	24.06.2014	KLI	F
B			G
C			H
D			J
E			K

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Ersteller: FES
FILE: FES0232A.doc

CSA_{us} Control Drawing
Class I Division 2 / Class I Zone 2

Dosimass



Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach

Gezeichnet	24.06.2014	KLI
Geprüft		
Ex-geprüft	24.06.2014	KLI
Gesehen		

FES0232A

1/2

Hazardous Locations

Class I, Division 2, Groups ABCD;

Class I, Zone2, IIC

Notes:

1. Class I Division 2 Groups ABCD or Class I Zone 2 (Ex nA IIC):


Flow meter with CSA resp. FM approved receptacles (plug-in connector) suitable for Class I, Div. 2 or Class I, Zone 2 installation:

- Install per Canadian Electrical Code (CEC) resp. National Electrical Code (NEC) ANSI/NFPA 70
- Install tool secured guard on the connection to render the connection normally not arcing.
- Final installation shall provide mechanical protection of the plug-in connector.
- Equipment shall be marked in close proximity to the plug-in connection with the following warning:
“Do not disconnect when energized! – Ne pas déconnecter sous tension!”

3. Non-hazardous classified areas:

All of the above described cable entries are suitable for installations in non-hazardous areas:

- Install per Canadian Electrical Code (CEC) resp. National Electrical Code (NEC) ANSI/NFPA 70.

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cCSA_{us} Control Drawing Class I Division 2 / Class I Zone 2 Dosimass						Gezeichnet	24.06.2014	KLI
						Geprüft		
						Ex-geprüft	24.06.2014	KLI
						Gesehen		
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