



# Certificate of Compliance

**Certificate:** 70005628

**Master Contract:** 160686

**Project:** 70038866

**Date Issued:** August 19, 2016

**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:** *M.Giusti*  
M.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**

Magnetic-inductive flowmeter model Dosimag 5bHdd – efg hijklrnnop +###, supply rated 20...30Vdc, 4.5W maximum.

Non sparking product for Class I, Division 2 when connected as per drawing No FES0231.

Maximum process pressure 16bar (231psi).

Ambient temperature: -40°C to +60°C

Medium temperature: -20°C to +130°C

Enclosure Type 4X.

Temperature class	T5	T4	T3-T1
Max. ambient temperature Ta [°C]	60	50	45
Max. medium temperature Tmed [°C]	70	105	130

Note: a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p 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-M91: 2011	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.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

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 FEK3562-0000.

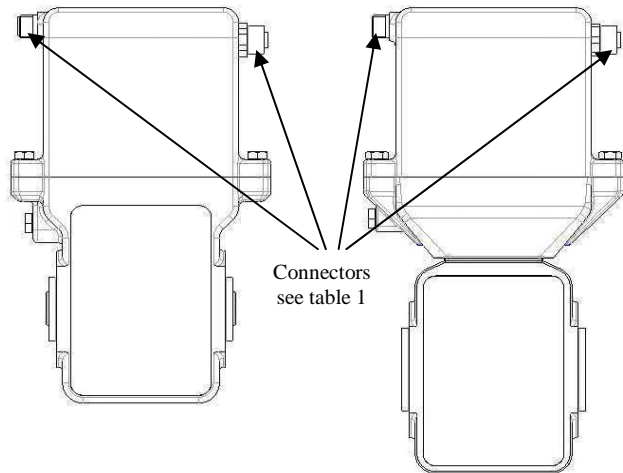
## Hazardous Locations

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

This page applies to extended order code (j=C, p see table 1):

5BH\*\* - \*\*\*\*\*j\*\*\*\*\*p + #\*\*#;  
5RH\*\* - \*\*\*\*\*j\*\*\*\*\*p + #\*\*#;  
5CH\*\* - \*\*\*\*\*j\*\*\*\*\*p + #\*\*#;  
5SH\*\* - \*\*\*\*\*j\*\*\*\*\*p + #\*\*#;  
5DH\*\* - \*\*\*\*\*j\*\*\*\*\*p + #\*\*#

### Transmitter/Sensor:



### Notes:

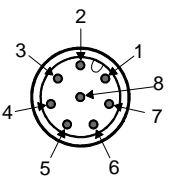
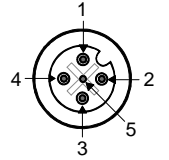
1. Install all per Canadian Electrical Code (CEC) resp. National Electrical Code (NEC) ANSI/NFPA 70.
2. Caution: Use supply wires suitable for 20 °C above ambient temperature, but at least for 80 °C/176 °F.
3. **WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2**  
**AVERTISSEMENT - RISQUE D'EXPLOSION - LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATÉRIEL INACCEPTABLE POUR LES EMPLACEMENTS 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'ÉQUIPEMENT, COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT EST DÉSIGNÉ NON DANGEREUX**

Ambient temperature range: - 40 °C ... +60 °C  
Medium temperature range: - 20 °C ... +130 °C

### Temperature table

Ambient temperature Ta [°C]	Max. medium temperature T <sub>med</sub> [°C]		
	T5	T4	T3-T1
60	70	105	130

**Table 1: Connectors**

Connector	Description	Pule/Frequency/ Status (p=3)	Modbus / 1 Batching I/O (p=4)	Modbus / 2 Batching I/O (p=5)	Modbus / Custody transfer (p=6)
8 Pin Connector (Power connector) 	Power input U ≤ 30V P ≤ 5 W (+500mA per Batch output)	Pin1 (+) Pin4 (-)			
	Service Input (CDI) U ≤ 7.5 V	Pin2 (+RX), Pin3 (+TX), Pin8 (-)			
	Modbus U ≤ 7.5 V	-	Pin6 (A), Pin7 (B), Pin5 = NC		
	PFS U ≤ 30V I ≤ 25mA	Pin5 (+), Pin6(Out1), Pin7(Out2)	-		
5 Pin connector (Batch connector) 	Batch output 1 U ≤ 30 V I ≤ 500 mA	-	Pin 3 (-), 4 (+), Pin 5 = NC		-
	Batch output 2 U ≤ 30 V I ≤ 500 mA	-	-	Pin 3 (-) Pin2 (+)	-
	AUX U ≤ 30V I ≤ 7.5 mA	-	Pin 1(+) and 2 (-)	Pin 1 (+) and 3 (-)	-
	Dongle connection U ≤ 30V I ≤ 7.5 mA	-	-		Pin4(+), Pin5(-) Pin1,2,3 = NC

(NC = not connected)

Aenderungen:

A	24.06.2014/KLI	F
B	02.06.2016/KLI	G
C	15.12.2016/KLI	H
D		J
E		K

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dritten Personen und Konkurrenzfirmen  
zugänglich gemacht werden.

Ersetzt durch:

Ersatz für:  
Ersteller: FES  
FILE:

**cCSA<sub>us</sub> Control Drawing**  
**Class I Division 2 / Class I Zone 2**

**Dosimag**



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

Gezeichnet	15.12.2016	KLI
Geprüft		
Ex-geprüft	15.12.2016	KLI
Gesehen		

FES0231C

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):

- Install per Canadian Electrical Code (CEC) resp. National Electrical Code (NEC) ANSI/NFPA 70.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection. The plastic transport sealing plug does not meet this requirement and must therefore be replaced during installation.
- To guarantee the housing protection, tighten the connector plugs and sealing plugs.
- Use only connectors which fulfill the requirements for usage in Class I, Div. 2.
- In potentially explosive atmospheres, do not remove the electrical connection for the power circuit or the plug connections when energized. Therefore the 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!”
- Final installation shall provide mechanical protection of the plug-in connectors. For custody transfer (5\*H\*\*-\*\*\*\*(M/N/O/P/R)B \*\*\*\*\*(3/6)+##\*\*#) the device shall be installed in an enclosure meeting a minimum ingress protection of IP54 in accordance to IEC 60079-0.

2. 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.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection. The plastic transport sealing plug does not meet this requirement and must therefore be replaced during installation.
- To guarantee the housing protection, tighten the connector plugs and sealing plugs.

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	B	02.06.2016/KLI	G				
	C	15.12.2016/KLI	H				
	D		J				
	E		K				
<b>cCSA<sub>us</sub> Control Drawing</b> <b>Class I Division 2 / Class I Zone 2</b>  <b>Dosimag</b>					Gezeichnet	15.12.2016	KLI
					Geprüft		
					Ex-geprüft	15.12.2016	KLI
					Gesehen		
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