

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20160602-E330676  
**Report Reference** E330676-20160531  
**Issue Date** 2016-JUNE-02


**Issued to:** ENDRESS+HAUSER FLOWTEC AG  
KAEGENSTR 7  
CH-4153 REINACH BL1 SWITZERLAND

**This is to certify that representative samples of** COMPONENT - PROCESS CONTROL EQUIPMENT FOR USE IN HAZARDOUS LOCATIONS  
See Addendum

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

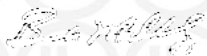
**Standard(s) for Safety:** See Addendum for Standard(s) for Safety  
**Additional Information:** See the UL Online Certifications Directory at [www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark:  may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program  
UL LLC

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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Process control equipment for use in Class I, Division 1, Groups A, B, C and D Hazardous Locations.

Mass flow meter model CNGmass: 8, followed by F, followed by F, followed by 08, 15, or 25, followed by A or C, followed by any three digit number or letter, followed by any single number or letter, followed by any single number or letter, followed by T, followed by A, followed by B, followed by 1, followed by any single number or letter, followed by H or N

## Standard(s) for Safety

Standard No. UL 1203, Explosion-Proof And Dust-Ignition-Proof Electrical Equipment For Use In Hazardous (Classified) Locations

UL 61010-1, Safety Requirement for Electrical Equipment for measurement, control and Laboratory use

UL 50, Enclosures for Electrical Equipment, Non environmental considerations

UL 50E, Enclosures for Electrical Equipment, Environmental considerations

UL 60079-0, Explosive Atmospheres - Part 0: Equipment - General Requirements

UL 60079-11, Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety "i"

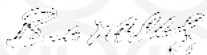
UL 913, Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations

CSA C22.2 NO. 30-M1986, Explosion-Proof Enclosures For Use In Class I Hazardous Locations

CSA C22.2 No 61010.1 -04, Safety Requirement for Electrical Equipment for measurement, control and Laboratory use

CSA C22.2 No. 94.1-07, Enclosures for Electrical Equipment, Non environmental considerations

CSA C22.2 No. 94.2-07, Enclosures for Electrical Equipment, Environmental considerations



Bruce Mahrenholz, Director North American Certification Program

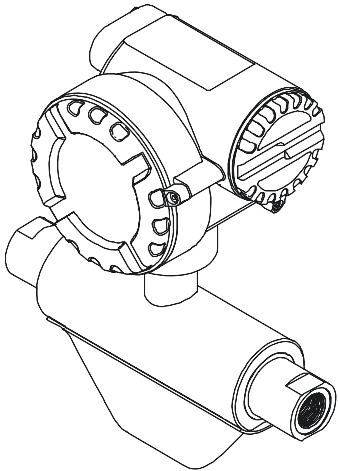
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### Hazardous Locations

Class I Division 1 Groups ABCD  
suitable for Class I, Zone 1 IIC



CNGmass

#### Notes:

1. Installation of transmitter circuit wiring according to Canadian Electrical Code (CEC) resp. National Electrical Code (NEC) ANSI/NFPA 70 using threaded conduit or other wiring methods in accordance with articles 500 to 510..
2. Control room equipment shall not use or generate more than 250 V rms.
3. Caution: Use supply wires suitable for 5 °C above ambient temperature, but at least for 70 °C / 158°F.
4. Class II Group G: The surface temperature of the apparatus cannot exceed 165 °C / 329°F.
5. Transmitter enclosure explosion proof for use in Cl. I Div. 1 Groups A, B, C, D suitable for Class I, Zone 1 IIC
6. Transmitter enclosure is factory sealed for use in Cl. I Div. 1 Groups A, B, C, D, conduit seal not required.
7. CNGmass is rated as Dual Seal Device in accordance with ANSI/ISA-12.27.01-2003.
8. **WARNING: IN EXPLOSIVE ATMOSPHERE KEEP TIGHT WHEN CIRCUIT ALIVE. DO NOT OPEN IN HAZARDOUS AREA.**  
AVERTISSEMENT : GARDER LE COUVERCLE BIEN FERME LORSQUE LES CIRCUITS SONT SOUS TENSION. NE PAS OUVRIR DANS ZONE DANGEREUSE.

Temperature table	max. medium temperature [°C / °F]				
	T5	T4	T3	T2	T1
<b>Ta = 50°C:</b> CNGmass DN08/15/25	95 / 203	125 / 257	125 / 257	125 / 257	125 / 257
<b>Ta = 60°C:</b> CNGmass DN08/15	90 / 194	125 / 257	125 / 257	125 / 257	125 / 257
CNGmass DN25	95 / 203	125 / 257	125 / 257	125 / 257	125 / 257

CNGmass: Tm min. = -50°C / -58 °F Ta min. = -40°C / -40 °F

Connections:

Power:


U = 20 to 28VAC, 10 to 30VDC (Terminal 1(+) and 2(-) )

U<sub>m</sub> = 250V

I/O:

U = 30V (Terminal 22(+)/23(-),24(+)/25(-) and 26(+)/27(-)

**WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.**

Aenderungen:	A	30.06.2016	KLI	F	Alle gesetzlichen Urheberrechte vorbehalten. Diese Zeichnung darf ohne unsere Genehmigung weder vervielfältigt werden noch dritten Personen und Konkurrenzfirmen zugänglich gemacht werden.	Ersteller: FEO
	B			G		
	C			H		
	D			J		
	E			K		
<b>USR / CNR Control Drawing for Class I, Div. 1</b>  Compact Version CNGmass						Massstab Gezeichnet: 30.06.2016, KLI Geprüft: Ex-geprüft: 30.06.2016, KLI Gesehen:
 Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach						<b>FES0250A</b>