

Safety Instructions

Condumax CLS12, CLS13

Supplement to: BA01641C

Safety instructions for electrical apparatus in explosion-hazardous areas

UK II 1G Ex ia IIC T6..T3 Ga (CLS12)

UK II 1G Ex ia IIC T6..T2 Ga (CLS13)



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Associated documentation

This document is an integral part of



Operating Instructions for Condumax CLS12/CLS13, BA01641C

Supplementary documentation

Competence Brochure CP00021Z

- Explosion Protection: Guidelines and General Principles
- www.endress.com

Certificate

UK Type Examination Certificate CML 21UKEX2967X

Identification

The nameplate provides you with the following information on your device:

- Manufacturer identification
- Extended order code
- Serial number
- Safety information and warnings
- Ex marking on hazardous area versions

► Compare the information on the nameplate with the order.

Type code

Type	Version			
CLS12-	A/B ¹⁾	**	*	A
CLS13-	A/B ¹⁾	**	*	A

1) Measuring range, cell constant (not Ex-relevant), A: k = 0.01/cm, B: k = 0.1/cm, C: k = 1/cm

Certificates and approvals*UK Declaration of Conformity*

With this declaration of conformity, the manufacturer guarantees that the product conforms to UK statutory requirements:

- The Electromagnetic Compatibility Regulations SI 2016 No. 1091
- The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations SI 2016 No. 1107
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations SI 2012 No. 3032

Compliance is verified by adherence to the standards listed in the Declaration of Conformity.

Hazardous area approvals

UK II 1G Ex ia IIC T3/T4/T6 Ga (CLS12)

UK II 1G Ex ia IIC T2/T3/T4/T6 Ga (CLS13)

Approved Body

Eurofins E&E CML Limited (UK)

Safety instructions

- The electrical connection of the sensors must be carried out in accordance with the Operating Instructions.
- The sensors may only be operated on suitable intrinsically safe circuits. Make sure that the maximum permissible sensor input characteristic values, the maximum permissible inductance L_i and capacitance values C_i in these circuits and the ambient temperature ranges indicated are not exceeded.

- ▶ The maximum permissible cable length is limited by the maximum permissible characteristic values of the transmitter. The total of the maximum permissible inductance L_i and capacitance values C_i for the sensor and measuring cable may not exceed the maximum permissible inductance L_o and capacitance values C_o for the transmitter.
- ▶ The electrical connection must be made according to the wiring diagram of the transmitter.
- ▶ Pay attention to the regulations for electrical installations in explosive atmospheres (EN 60079-14) when using the devices and sensors.
- ▶ The sensor types CLS12 and CLS13 have to be protectively installed against impacts and friction on the cover of the enclosure.
- ▶ The ambient temperature range of the sensor head is $-20\text{ °C} \leq T_a \leq 60\text{ °C}$.
- ▶ Metallic process connection parts must be mounted at the mounting location electrostatically conductive ($< 1\text{ M}\Omega$).

Temperature tables

Type	Temperature class			
	T2	T3	T4	T6
CLS12	- 1)	$-20\text{ °C} \leq T_a \leq 160\text{ °C}$	$-20\text{ °C} \leq T_a \leq 125\text{ °C}$	$-20\text{ °C} \leq T_a \leq 75\text{ °C}$
CLS13	$-20\text{ °C} \leq T_a \leq +250\text{ °C}$	$-20\text{ °C} \leq T_a \leq 190\text{ °C}$	$-20\text{ °C} \leq T_a \leq 125\text{ °C}$	$-20\text{ °C} \leq T_a \leq 75\text{ °C}$

1) not applicable

The temperature table above applies only under the installation conditions, which are described in the Operating Instructions BA01641C. If the installation conditions cannot be met, the maximum process temperature T_p must not exceed the maximum ambient temperature T_a .

Connection

The following connection data refer to safety-related limit values which must not be exceeded.

Associated transmitter

Characteristic	Connection data
Power supply circuit	Intrinsically safe
Maximum output voltage U_o	15 V
Maximum output current I_o	30 mA
Maximum output power P_o	130 mW

Sensor

Characteristic	Connection data
Maximum internal capacitance C_i	Negligible
Maximum internal inductance L_i	Negligible

Cables

Characteristic	Connection data
Maximum internal capacitance C_i	1 nF/m
Maximum internal inductance L_i	6 μ H/m

Installation conditions

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