

Safety Instructions

Indumax CLS50D, CLS50

ATEX / NEPSI Ex ic IIC T3 T4/T6 Gc

Safety instructions for electrical equipment in explosion-hazardous areas



Indumax CLS50D, CLS50

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Associated documentation

Operating Instructions for Indumax CLS50D/CLS50, BA00182C

Documentation

Competence Brochure CP00021Z

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

Certificates**CLS50D**

- NEPSI certificate GYJ17.1477X
- EU Declaration of Conformity EC_00367

CLS50

- NEPSI certificate GYJ18.1324X
- EU Declaration of Conformity EC_00440

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							
CLS50D	-	BV	a ¹⁾	b ²⁾	c ³⁾	d ⁴⁾	+	e... e ⁵⁾

- 1) Process connection (no Ex relevance)
- 2) Sensor, seal, adapter material; B: PEEK, VITON, PEEK; C: PEEK, Chemraz, PEEK; D: PFA, Chemraz, 1.4571
- 3) Cable length (no Ex relevance), 1: 3 m, 2: 7 m, 3: 15 m, 7: 1 to 50 m, 8: 1 to 164 ft
- 4) Cable connection (no Ex relevance), 1: fixed cable with ferrules, 2: fixed cable with M12 connector
- 5) Additional options (no Ex relevance), calibration, service, other approvals, measuring point identification

Type	Version						
CLS50	-	V	a ¹⁾	b ²⁾	c ³⁾	+	d ⁴⁾

- 1) Process connection (no Ex relevance)
- 2) Sensor, seal, adapter material; B: PEEK, VITON, PEEK; C: PEEK, Chemraz, PEEK
- 3) Cable connection (no Ex relevance), 1: 5 m (125 °C), 2: 10 m (125 °C), 3: 20 m (125 °C), 4: 10 to 55 m (125 °C), 5: 5 m (180 °C), 6: 10 m (180 °C)
- 4) Optional measuring point identification (no Ex relevance)

Certificates and approvals*Ex approvals*

ATEX / NEPSI Ex ic IIC T3 T4/T6 Gc

Safety instructions

- The sensor may be operated in an environment specified as Ex Zone 2 (3G).
- The sensor may only be connected to the following transmitter:
Liquiline type CM42-LV (CLS50D) or CM42-IV (CLS50), EU Declaration of Conformity EC_00143
- Compliance with the specified ambient and medium temperature ranges is a prerequisite for safe use.
- The sensor must be connected and operated in accordance with the Operating Instructions of the sensor and of the transmitter to be connected. All sensor operating data must be observed.

- The sensors may only be used in liquid media with a conductivity >10 nS/cm.
- Avoid electrostatic charge. Metal process connections must be electrostatically connected at the mounting location ($R \leq 1 \text{ M}\Omega$).
- Non-metal process connections must be protected against electrostatic charge.
- In order to avoid electrostatic charge clean the sensor with a damp cloth only.
- Full compliance with regulations for electrical systems in explosive atmospheres (EN/IEC 60079-14) is mandatory when using the devices and sensors.
- Ensure correct installation to maintain the housing protection type. (Use original seal. Fit cable entry properly. Tighten nut).
- The IP68 degree of protection applies only when the flange is mounted.
- When installing, using and maintaining the sensor, the operator must observe the following standards in addition to the Operating Instructions:
 - GB 50257-2014 "Code for construction and acceptance of electric equipment on fire and explosion hazard electrical equipment installation engineering"
 - GB 3836.13-2013 "Explosive atmospheres - Part 13: Equipment repair, overhaul and reclamation"
 - GB/T 3836.15-2017 "Explosive atmospheres - Part 15: Electrical installations design, selection and erection"
 - GB/ T 3836.16-2017 "Explosive atmospheres - Part 16: Electrical installations inspection and maintenance"
 - GB/T 3836.18-2017 "Explosive atmospheres - Part 18: Intrinsically safe electrical systems"
- To ensure that the explosion protection of the device is maintained/guaranteed, the operator is not permitted to change the configuration. Every change can compromise the safety of the device.
- Pay attention to the information on the NEPSI certificates. You can download these from the product page: www.endress.com/cls50d or www.endress.com/cls50.

Temperature tables

Type	Temperature class	
	T4	T6
CLS50D-BV*B** CLS50D-BV*C**	$-20 \text{ }^\circ\text{C} \leq T_a \leq 120 \text{ }^\circ\text{C}$	$-20 \text{ }^\circ\text{C} \leq T_a \leq 70 \text{ }^\circ\text{C}$
CLS50D-BV*D**	$-20 \text{ }^\circ\text{C} \leq T_a \leq 110 \text{ }^\circ\text{C}$	$-20 \text{ }^\circ\text{C} \leq T_a \leq 70 \text{ }^\circ\text{C}$
CLS50-V***	$-20 \text{ }^\circ\text{C} \leq T_a \leq 125 \text{ }^\circ\text{C}$	$-20 \text{ }^\circ\text{C} \leq T_a \leq 75 \text{ }^\circ\text{C}$

The temperature tables apply only under the installation conditions described in the Operating Instructions. If the installation conditions cannot be met, the maximum process temperature T_p must not exceed the maximum ambient temperature T_a .

Connection

Ex specification

- The sensor may only be connected to the following transmitter:
Liquiline type CM42-LV (CLS50D) or CM42-IV (CLS50), EU Declaration of Conformity EC_00143
- Only CLS50-V***: The maximum permitted length of the measuring cable is 55 m (180 ft) here.

Installation conditions



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