

Instructions

Pressure Transmitter

LHCR-51, LHCS-51

4 mA ... 20 mA HART, PROFIBUS PA

Ex ia IIC T6...T4 Ga/Gb

Ex ia IIC T6...T4 Gb

IECEX DEK 13.0056



SI004780-B

Safety instructions for electrical apparatus for explosion-hazardous areas according to IEC standards





Pressure Transmitter LHCR-51, LHCS-51

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Associated Documentation	This document is an integral part of the following operating instructions: BA00382O. The operating instructions which are supplied and correspond to the device type apply.			
Supplementary Documentation	Explosion protection manual			
Designation	Explanation of the labelling and type of protection can be found in the explosion protection manual.			
	Designation according to IECEx Equipment protection level (EPL)	Ga/Gb Gb		
	Designation of type of protection/ level of protection	Ex ia IIC T6...T4 Ex ia IIC T6...T4	Ga/Gb Gb	
Applied standards	IEC 60079-0:2011 IEC 60079-11:2011 IEC 60079-26:2006			

Safety instructions:
Installation

EN

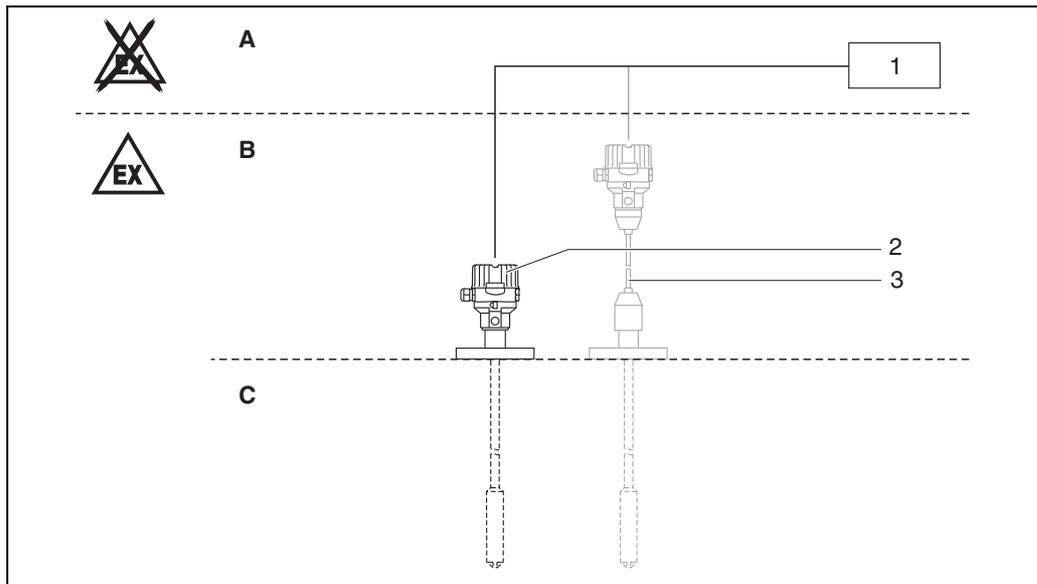


Figure 1

II 1/2 G

- A Power supply
- B Zone 1, Electronic
- C Zone 0, Process
- 1 Certified associated apparatus
- 2 LHCR-51 or LHCS-51
- 3 Option: Separate housing

II 2 G

- A Power supply
- B Zone 1, Electronic
- C Zone 1, Process
- 1 Certified associated apparatus
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- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations.
- Only install the devices in media for which the wetted materials have sufficient durability.
- Avoid electrostatic charging of the plastic surfaces, for plastic process connections or plastic coatings.
- When the device is connected to an intrinsically safe circuit Ex ib, the level of protection changes to Ex ib. Do not operate intrinsically safe circuits Ex ib in zone 0.
- When the device is connected to an intrinsically safe circuit Ex ic, the level of protection changes to Ex ic. Do not operate intrinsically safe circuits Ex ic in zone 0 or zone 1.
- The intrinsically safe input power circuit of the device is isolated from ground potential and has a dielectric strength of at least 500 V_{rms} with respect to it.
- Avoid impact or friction sparks for light metal flanges or flange faces (e. g. titanium, zirconium).
- In case of additional or alternative special varnishing of the enclosure or other metallic parts the danger of an electrostatic charging must be observed. Do not rub surfaces with dry cloth.

LHCR-51

- Mechanically fix rod probes which are more than 3 m (e. g. using guy ropes).

LHCS-51

- Avoid electrostatic charging of the cable.
- Secure probes against swinging.

Safety instructions:
Zone 0

- Only operate devices in potentially explosive vapour/air mixtures under atmospheric conditions:
 - $-20\text{ °C} \leq T \leq +60\text{ °C}$
 - $0.8\text{ bar} \leq p \leq 1.1\text{ bar}$
- If no potentially explosive mixtures are present, or if additional protective measures have been taken, according to EN 1127-1, the transmitters may be operated under other atmospheric conditions in accordance with the manufacturer's specifications.
- Associated apparatus with galvanic isolation between the intrinsically safe and non-intrinsically safe circuits are preferred.

Temperature tables

Type	Type of protection/ level of protection	Temperature class	Process temperature	Ambient temperature (housing)
LHCR-51	Ex ia IIC T6...T4 Ga/Gb, Ex ia IIC T6...T4 Gb	T6	$\leq 80\text{ °C}$	$-40\text{ °C} \leq T_a \leq +40\text{ °C}$
		T4	$\leq 85\text{ °C}$	$-40\text{ °C} \leq T_a \leq +70\text{ °C}$

The process temperatures refer to the temperature at the rod
(do not exceed the max. ambient temperature at the housing).

Type	Type of protection/ level of protection	Temperature class	Process temperature	Ambient temperature (housing)
LHCS-51	Ex ia IIC T6...T4 Ga/Gb, Ex ia IIC T6...T4 Gb	T6	$\leq 80\text{ °C}$	$-40\text{ °C} \leq T_a \leq +40\text{ °C}$
		T4	$\leq 80\text{ °C}$	$-40\text{ °C} \leq T_a \leq +70\text{ °C}$

The process temperatures refer to the temperature at the cable
(do not exceed the max. ambient temperature at the housing).

Connection data

Electronic insert	Electrical data
4 mA ... 20 mA HART	$U_i \leq 30\text{ V DC}$ $I_i \leq 300\text{ mA}$ $P_i \leq 1\text{ W}$ $C_i \leq 10\text{ nF}$ $L_i = 0$
PROFIBUS PA	$U_i \leq 24\text{ V DC}$ $I_i \leq 250\text{ mA}$ $P_i \leq 1.2\text{ W}$ $C_i \leq 5\text{ nF}$ $L_i \leq 10\text{ }\mu\text{H}$



With regard to the supply of products, the current issue of the following document is applicable: The General Terms of Delivery for Products and Services of the Electrical Industry, published by the Central Association of the "Elektrotechnik und Elektroindustrie (ZVEI) e.V." including the supplementary clause: "Erweiterter Eigentumsvorbehalt".

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