XA02725C/07/EN/01.21
71544691
2021-10-31

Safety Instructions
Liquiline M CM42

Supplement to: BA00381C

Safety instructions for electrical apparatus in explosion-hazardous areas
UK Ex II (1)2G Ex ib[ia Ga] IIC T6/T4 Gb

Endress+Hauser
People for Process Automation

Liquiline M CM42

Supplement to: BA00381C

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Associated documentation

This document is an integral part of Operating Instructions BA00381C and BA00382C.

Supplementary documentation

Competence Brochure CP00021Z
- Explosion Protection: Guidelines and General Principles
- www.endress.com

Certificate

UK Type Examination Certificate CML 21UKEX2923X

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			
CM42-	*	L	*	(+*)
	No Ex relevance	UK Ex II (1)2G Ex ib[ia Ga] IIC T6/T4 Gb	No Ex relevance	

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

II (1)2G Ex ib[ia Ga] IIC T6/T4 Gb

Approved Body

Eurofins E&E CML Limited (UK)

Safety instructions

The transmitter meets the fundamental requirements of the applicable standards and is suitable for use in hazardous areas.

- The transmitter is an intrinsically safe electrical apparatus for use in Zone 1 with Gb instrument protection rating.
- You may only connect suitable sensors and must use them as designated according to the Operating Instructions.
- Suitable sensors, which may be arranged in Zone 0, can be connected to the sensor circuits. Suitable sensors bear a red ring.
- The transmitter may only be connected to suitable transmitter power supply units or fieldbus systems according to the FISCO model.
- Pay attention to the information in the Operating Instructions regarding the characteristic values of the input and output circuits.

- Devices with a stainless steel housing must be connected to the local potential equalization system of the place of installation.
- Only genuine spare parts may be used for maintenance or repair measures on the device. These measures may only be performed by service staff or properly trained and authorized technical staff.
- Installation, electrical connection, commissioning, inspection, maintenance and repair may only be performed by qualified specialists trained to work on explosion protected devices in accordance with the applicable standards, e.g. EN 60079-14, -17, -19. Comply with the instructions in the Operating Instructions.
- To avoid electrostatic charge, the device is fitted with a warning label bearing the following information: "Protect against electrostatic charge. Clean the device with a damp cloth only."

Temperature tables

	Temperature class	
	T4	T6
Ambient temperature T_a	–20 to +55 °C	–20 to +50 °C

If the specified process temperatures are complied with, temperatures that are not permitted for the respective temperature class will not occur on the equipment.

Connection data

Ex-specification, current output

Intrinsically safe power supply and signal circuits, passive	
Max. input voltage U_i	30 V
Max. input current I_i	100 mA
Max. input power P_i	
Max. internal inductance L_i	29 µH (output 1) 24 µH (output 2)
Max. internal capacitance C_i	1.2 nF (output 1) 0.2 nF (output 2)

Ex-specification PROFIBUS and FOUNDATION Fieldbus

Suitable for use as a field device in a FISCO system according to EN/IEC 60079-27	
Max. input voltage U_i	17.5 V
Max. input current I_i	380 mA
Max. input power P_i	5.32 W
Max. internal inductance L_i	< 10 µH
Max. internal capacitance C_i	< 5 nF

Connecting Memosens sensors

Intrinsically safe sensor circuit with type of protection:	
Max. output voltage U_o	5.04 V
Max. output current I_o	80 mA
Max. output power P_o	112 mW

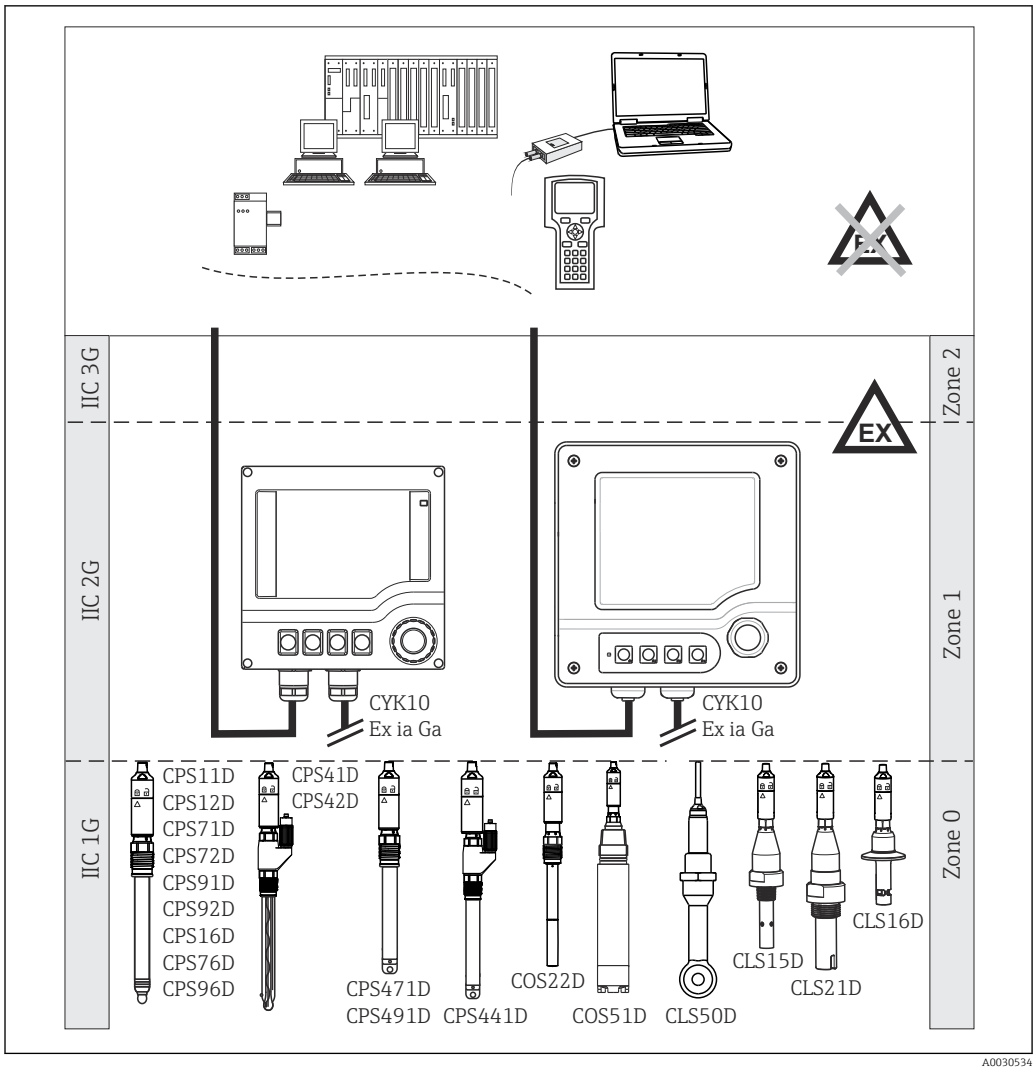
Connecting analog pH/ORP sensors

Intrinsically safe sensor circuit with type of protection:		
	Glass	**ISFET**
Max. output voltage U_o	10.08 V	10.08 V
Max. output current I_o	4.1 mA	50.7 mA
Max. output power P_o	10.2 mW	128 mW
Max. external inductance L_o	1 mH	1 mH
Max. external capacitance C_o	250 nF	250 nF

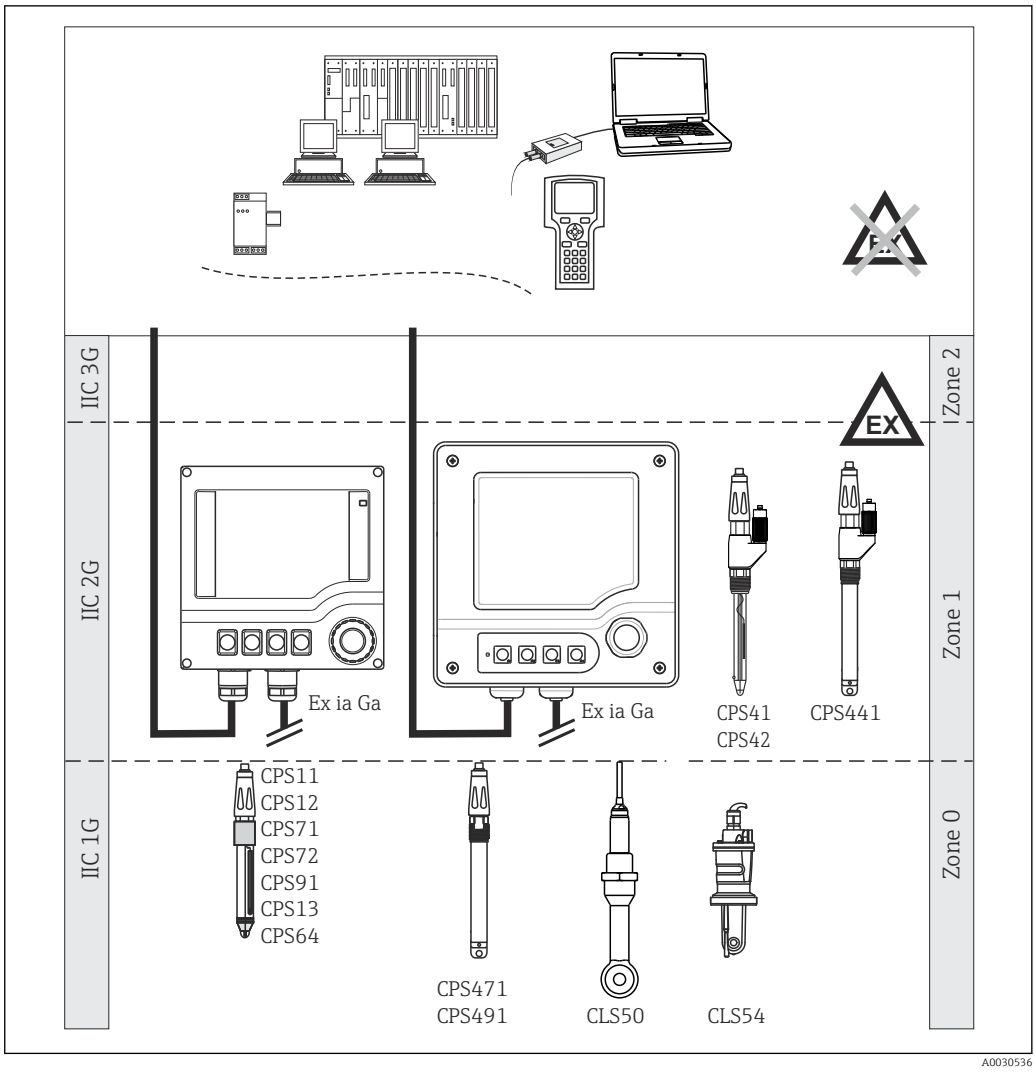
Connecting analog conductivity sensors with inductive measurement of conductivity

Intrinsically safe sensor circuit with type of protection:	
Max. output voltage U_o	10.08 V
Max. output current I_o	64 mA
Max. output power P_o	128 mW
Max. external inductance L_o	0.1 mH
Max. external capacitance C_o	1.8 µF

Connection diagram



1 Memosens sensors



2 *Analog sensors*

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