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Safety Instructions
Memosens data cable CYK10

Safety instructions for electrical apparatus in explosion-hazardous areas

Endress+Hauser
People for Process Automation

Memosens data cable CYK10

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Associated documentation

This document is an integral part of Operating Instructions BA00118C.

Supplementary documentation

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

Certificates

JPN type-examination certificate, certificate number: CML 19JPN2069X

Identification

The nameplate provides you with the following information on your device:
- Manufacturer identification
- Order code
- 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			
CYK10	P X Z	**	*	***
	P = Ex ia IIC T3/T4/T6 (pH/ORP) X = Ex ia IIC T3/T4/T6 (conductivity) Z = Ex ia IIC T3/T4/T6 (oxygen)	No Ex relevance		

Certificates and approvals

Ex approval

The product meets the requirements of the Regulation on the Testing of Machinery and other Instruments set down by the Ministry of Health, Labor and Welfare in Japan.

CYK10:

Ex ia IIC T3/T4/T6 Ga

Safety instructions

- It is not permitted to operate the sensor under electrostatically critical process conditions. Significant vapor and dust clouds, which have a direct impact on the connection system, must be avoided.
- The terminal head of the Memosens data cable CYK10 must be protected against electrostatic charging if it is installed in the areas EPL Ga (Zone 0) or EPL Gb (Zone 1).
- If the cable is connected to certified intrinsically safe circuits of category Ex ib IIC/IIB, the type of protection changes to Ex ib IIC and Ex ib IIB.
- The maximum permitted cable length is 100 m (328.1 ft).
- The following regulations must be observed when installing the devices and sensors:
  - Electrical installations in hazardous areas (EN/IEC 60079-14)
  - User's guide for explosive atmosphere facilities in general industry (JNIOSH-TR-44)
- This device was developed, manufactured and assessed in accordance with the following standards:
  - JNIOSH-TR-46-1:2015 "Equipment – General requirements"
  - JNIOSH-TR-46-6:2015 "Equipment protection by intrinsic safety “i” "

Temperature tables

Cable type		Ambient temperature range T_a		
		T3	T4	T6
CYK10-P****** CYK10-X****** CYK10-Z******	Measuring cable	-15 °C to 135 °C (5 °F to 275 °F)	-15 °C to 120 °C (5 °F to 248 °F)	-15 °C to 70 °C (5 °C to 158 °F)

If the ambient temperatures specified above are not exceeded, there are no invalid temperatures at the sensor according to the temperature class.

Connection

Ex specification

The Memosens data cable CYK10 is used to connect to the JPN-Ex-approved intrinsically safe sensor output circuits of the Liquiline CM42 transmitter. The cable can alternatively be used with devices certified with a JPN Ex approval. These must have an intrinsically safe Memosens sensor output specified with the following maximum values. In particular, the certified intrinsically safe sensor output may not

exceed the effective inner inductance and capacitance of the values indicated below:

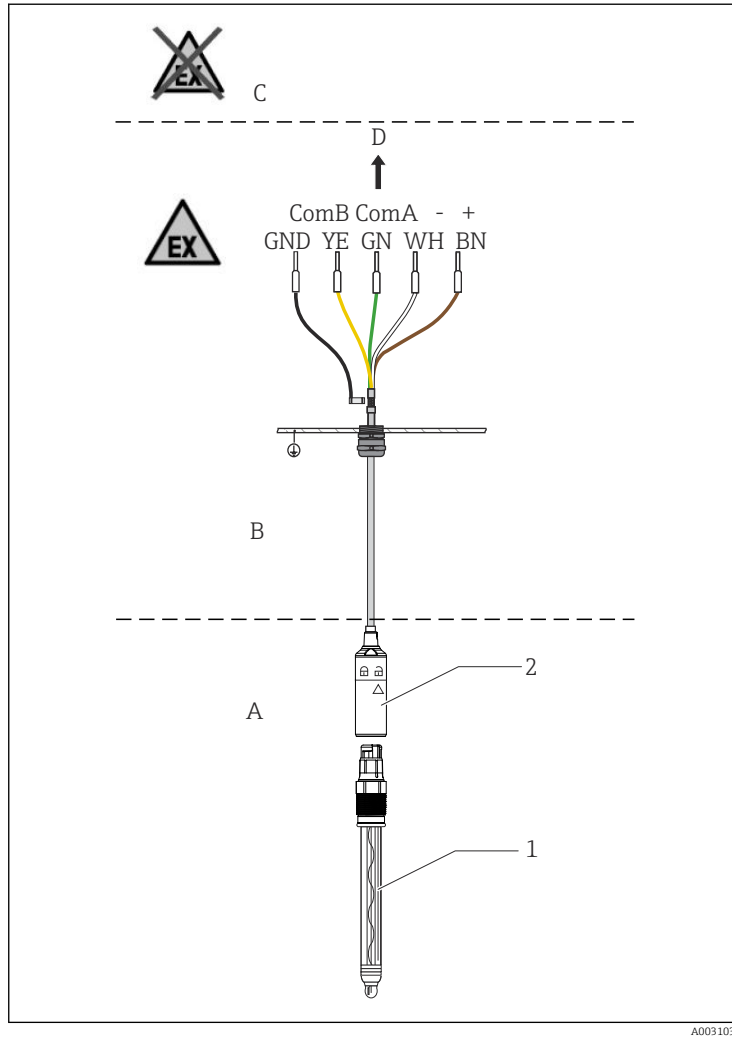
1. Entity parameter set	2. Entity parameter set
U_0 = 5.1 V	U_0 = 5.04 V
I_0 = 130 mA	I_0 = 80 mA
P_0 = 166 mW (linear output curve)	P_0 = 112 mW (trapezoid output curve)
C_i = 15 µF	C_i = 14.1 µF
L_i = 95 µH	L_i = 237.2 µH

The connection of energy-limited Memosens sensors (with a defined P_i) to the energy-limited Memosens data cable CYK10 by means of inductive coupling is permitted, taking into consideration the following value:

Maximum output power P_0	178 mW

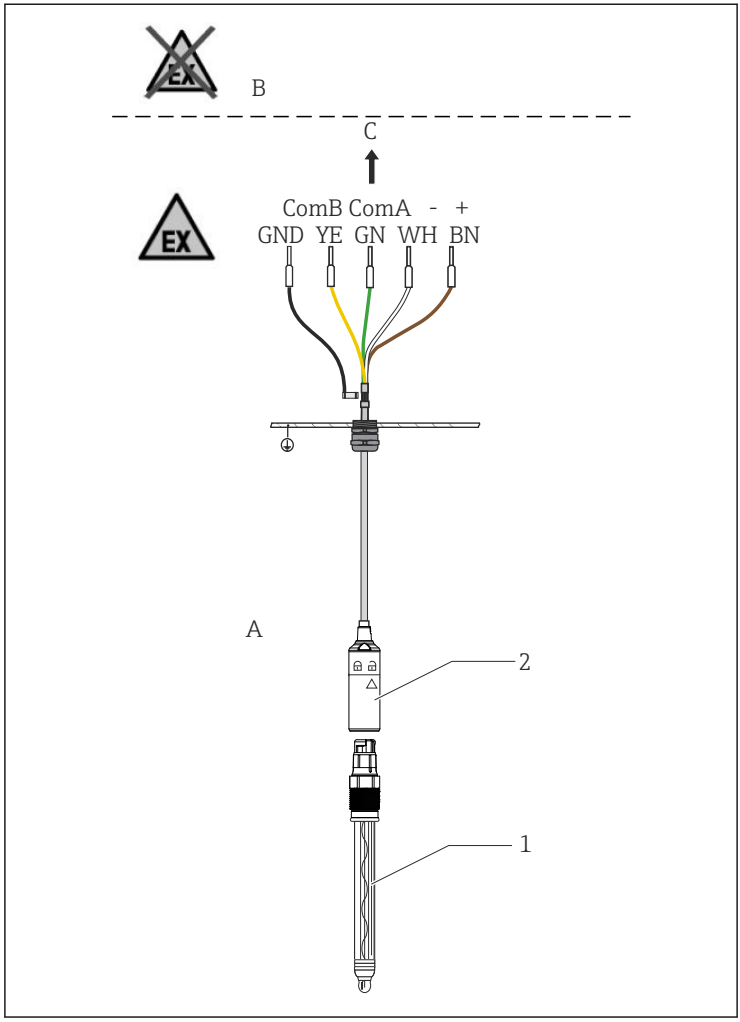
The electrical connection must be performed in accordance with the Operating Instructions.

Installation conditions



1 *Memosens data cable in Zone 0*

A Hazardous area Zone 0
B Hazardous area Zone 1
C Non-hazardous area
D JPN-Ex-certified transmitter CM42 or transmitter with an intrinsically safe output power → 5
1 Certified Memosens sensor
2 CYK10, P_0 = 178 mW



2 *Memosens data cable in Zone 1*

A Hazardous area Zone 1
B Non-hazardous area
C JPN-Ex-certified transmitter CM42 or transmitter with an intrinsically safe output power → 5
1 Certified Memosens sensor
2 CYK10, P_0 = 178 mW

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