

Safety Instructions

Memosens CYK10

Measuring cable CYK10

Supplement to BA00118C
Safety instructions for electrical apparatus for
explosion-hazardous areas
ATEX II 1G Ex ia IIC T3/T4/T6 Ga
IECEX Ex ia IIC T3/T4/T6 Ga



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Related 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

The certificates and declarations of conformity are available in the Downloads area of the Endress+Hauser website:

www.endress.com/download

EU Declaration of Conformity

EC_00830

EU-Type examination certificate

BVS 04 ATEX E 121 X

IECEX certificate

IECEX BVS 11.0052X

Identification

The following information on the device can be found on the nameplate:

- Manufacturer identification
- Order code
- Extended order code
- Serial number
- Safety information and warnings
- Ex markings
- Certificate number

► Compare the information on the nameplate with the order.

Type code

ATEX

Type	Version			
CYK10	E	**	*	***
	II 1G Ex ia IIC T3/T4/T6	No Ex relevance		

Combined certificates

Type	Version			
CYK10	G	**	*	***
	II 1G Ex ia IIC T3/T4/T6 Ga	No Ex relevance		

IECEX

Type	Version			
CYK10	I	**	*	***
	Ex ia IIC T3/T4/T6 Ga	No Ex relevance		

Certificates and approvals

Ex approval

CYK10:

⊕ ATEX/NEPSI II 1G Ex ia IIC T3/T4/T6 Ga

CYK10:

Ex ia IIC T3/T4/T6 Ga

Notified body

DEKRA Testing and Certification GmbH

Bochum

Safety instructions

IECEX and ATEX

The Memosens inductive sensor cable connection system, consisting of:

- IECEX-/ATEX-approved sensors
- Measuring cable CYK10

is approved for measuring applications in explosive atmospheres.

- The sensors and cables must not be operated under electrostatically critical process conditions. Avoid strong steam or dust currents that act directly on the connection system.
- The Memosens measuring cable CYK10 and its plug-in head must be protected against electrostatic charges if they pass through Ex zone 2.
- Hazardous area versions of Memosens cables have an orange/red ring.
- The maximum permitted cable length is 100 m (328.1 ft).

- To ensure that the explosion protection of the device is maintained/guaranteed, the operator is not permitted to change the configuration. Any change could compromise the safety of the device.
- Overvoltage category specification: I (power supply via limited energy circuit)
- Compliance with the regulations for electrical installations in hazardous areas (including EN/IEC 60079-14) is mandatory when using devices and sensors.



Pay attention to the ex-related safety instructions of the transmitter and sensors when cabling.

Temperature tables

Cable	Ambient temperature range T_a		
	T3	T4	T6
CYK10 E/G/I**a, a = 1, 2	$-15\text{ °C (5 °F)} \leq T_a \leq 135\text{ °C (275 °F)}$	$-15\text{ °C (5 °F)} \leq T_a \leq 120\text{ °C (248 °F)}$	$-15\text{ °C (5 °F)} \leq T_a \leq 70\text{ °C (158 °F)}$

If ambient temperatures do not fall outside the ambient temperatures shown above, no invalid temperatures for the particular temperature class will occur at the cable.

Connection

Ex specification

The approved CYK10 cable is used to connect to the ATEX/IECEx-approved intrinsically safe sensor output circuits of the Liquiline CM42 transmitter (e.g. with sensor module FSDG1), Liquiline CM44 (e.g. with communication module 2DS Ex-i) or the digital sensor interface (Memosens) of the CM42B. The cable may alternatively be used with devices that are certified with ATEX/IECEx- 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
$U_0 = 5.1\text{ V}$	$U_0 = 5.04\text{ V}$
$I_0 = 130\text{ mA}$	$I_0 = 80\text{ mA}$
$P_0 = 166\text{ mW}$ (linear output curve)	$P_0 = 112\text{ mW}$ (trapezoid output curve)
$C_1 = 15\text{ }\mu\text{F}$	$C_1 = 14.1\text{ }\mu\text{F}$
$L_1 = 95\text{ }\mu\text{H}$	$L_1 = 237.2\text{ }\mu\text{H}$

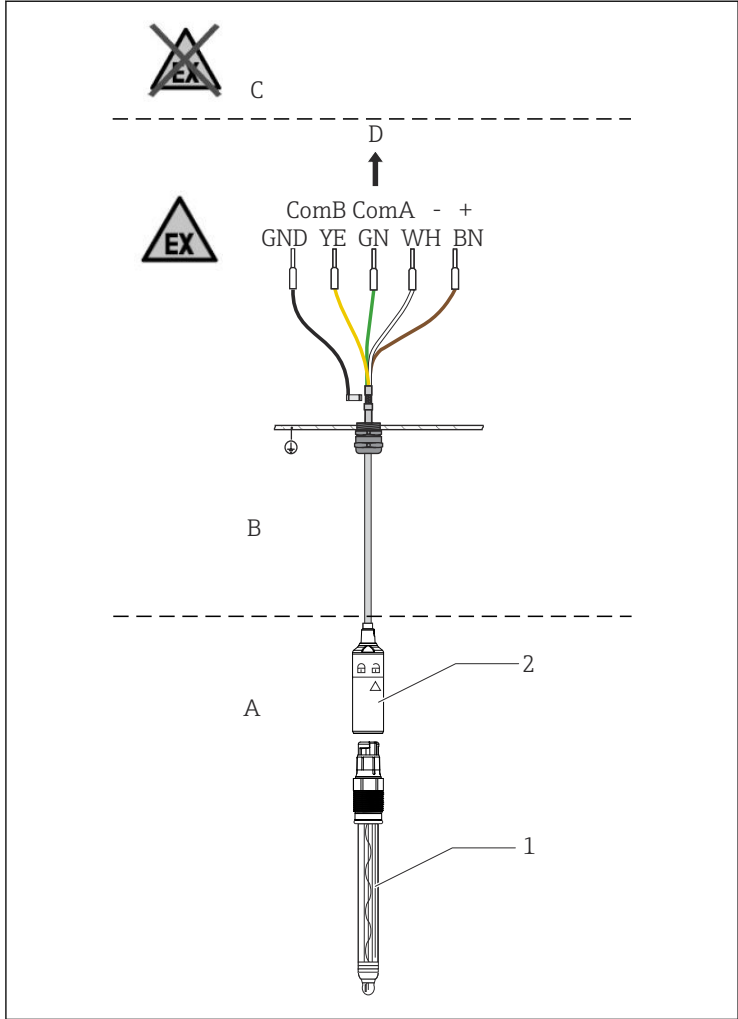
The connection of energy-limited Memosens sensors (with a defined P_1) to the energy-limited Memosens data cable CYK10 by means of

inductive coupling is permitted, taking into consideration the following value:

Maximum output power P_0	178 mW
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The electrical connection must be performed in accordance with the Operating Instructions.

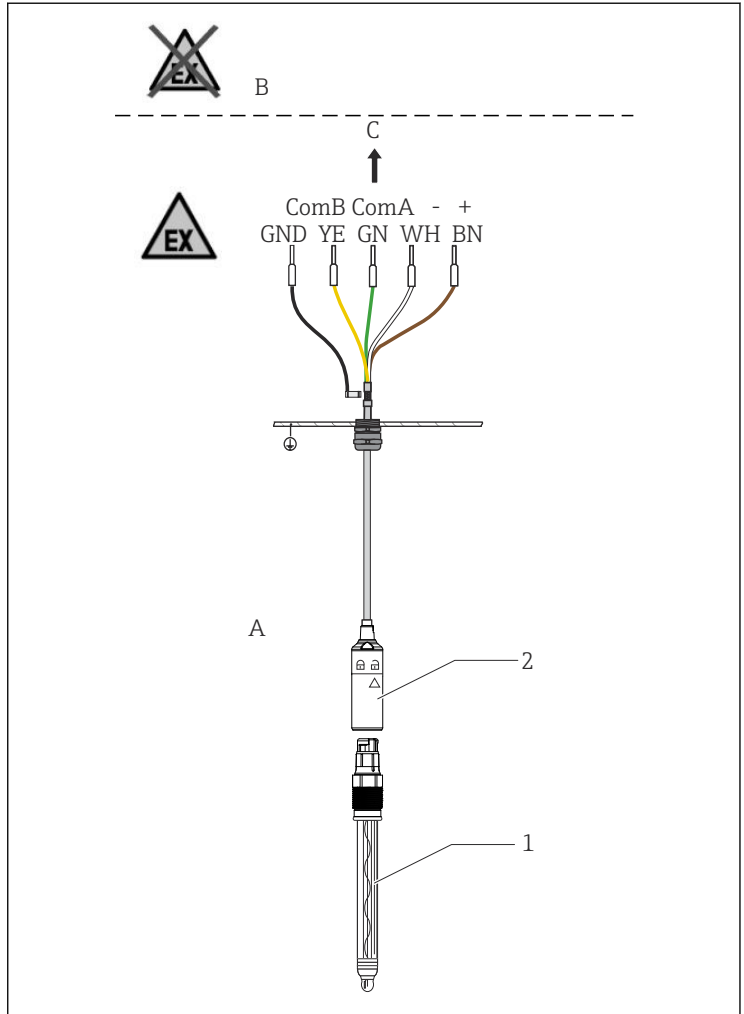
Installation conditions



A0031034

1 Memosens data cable in Zone 0

- A Hazardous area Zone 0
- B Hazardous area Zone 1
- C Non-hazardous area
- D Ex-certified transmitter CM42 or transmitter with an intrinsically safe output power → 6
- 1 Ex-certified Memosens sensor
- 2 CYK10



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2 Memosens data cable in Zone 1

A Hazardous area Zone 1

B Non-hazardous area

C Ex-certified transmitter CM42 or transmitter with an intrinsically safe output power → **6**

1 Ex-certified Memosens sensor

2 CYK10



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