XA02841C/07/EN/01.21-00
71560785
2021-11-16

Safety Instructions
Memosens COS22E
Memosens COS51E

UK Ex II 1G Ex ia IIC T6... T4 Ga

Safety instructions for electrical apparatus in explosion-hazardous areas

Endress+Hauser
People for Process Automation

Memosens COS22E
Memosens COS51E

UK Ex II 1G Ex ia IIC T6... T4 Ga

Table of contents

Associated documentation

This document is an integral part of the Memosens COS22E Operating Instructions BA02145C.

This document is an integral part of the Memosens COS51E Operating Instructions BA02146C.

Supplementary documentation

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

Manufacturer's certificate

UK Declaration of conformity

UK_00275

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

► Compare the information on the nameplate with the order.

Ex-approval

UKCA Ex

Ex II 1G Ex ia IIC T6... T4 Ga

Notified body

Eurofins E&E CML Limited (UK)

Safety instructions

The Memosens COS22E and COS51E oxygen sensors are suitable for use in hazardous areas in accordance with:
UK type-examination certificate **CML 21UKEX2588X**

- A maximum ambient temperature of 90 °C (194 °F) must not be exceeded at the sensor head.
- Oxygen sensors for use in hazardous areas have a special conductive O-ring. The electrical connection of the metallic sensor shaft to the conductive mounting location (such as a metallic assembly) is via the O-ring.
- Appropriate measures must be taken to connect the assembly or the mounting location to ground in accordance with the Ex guidelines.
- The plastic housing may only be cleaned with a damp cloth.
- Hazardous area versions of digital sensors with Memosens technology are marked by an orange/red ring on the plug-in head.
- The maximum permitted cable length between the sensor and transmitter is 100 m (330 ft).
- This device has been developed and manufactured in accordance with SI 2016 No. 1107 dated 2016 and also complies with the following standards:
  - EN IEC 60079-0:2018 Explosive atmospheres - Part 0: Equipment - General requirements
  - EN 60079-11:2012 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
- When using devices and sensors, observe the regulations for electrical systems in hazardous areas (EN/ IEC 60079-14).

Only Memosens COS22E:

- Oxygen sensors for use in hazardous areas have a special conductive O-ring. The electrical connection of the metallic sensor shaft to the conductive mounting location (such as a metallic assembly) is via the O-ring.
- Sensors containing parts made of titanium or other light metals must be protected against impact.
- The sensors must not be operated under electrostatically critical process conditions. Avoid strong steam or dust currents that act directly on the connection system.

Only Memosens COS51E:

- The sensors may not be operated under electrostatically critical process conditions in which electrostatic charging of the sensor and the connection system is likely to occur.
- Use of the sensor for its intended purpose in liquids with a conductivity of at least 10 nS/cm can be classified as electrostatically safe.

Type code

Memosens	COS22E-aabbccdde+g	
	aa	Approval (no ex-relevance) **UA** II 1G Ex ia IIC T6 ... T4 Ga
	bb	Measuring range (no ex-relevance)
	cc	Cap characteristics AA = Stainless steel BA = Titanium CA = Alloy C22 YY = Special version
	dd	Sensor length (no ex-relevance) max. 600 mm
	e	Material of O-ring (in the cap) (no ex-relevance)
	g	Optional = one or more characters determining optional features (no ex-relevance), e.g. test or other certificates/ declarations

Memosens	COS51E-aabbcc+g	
	aa	Approval (no ex-relevance) **UA** II 1G Ex ia IIC T6 ... T4 Ga
	bb	Measuring range (no ex-relevance)
	cc	Cap characteristics TF = Response time T90, 0.5 minutes TN = Response time T90, 3 minutes YY = Special version
	g	Optional = one or more characters determining optional features (no ex-relevance), e.g. test or other certificates/ declarations

Temperature tables

Connection

Ex specification

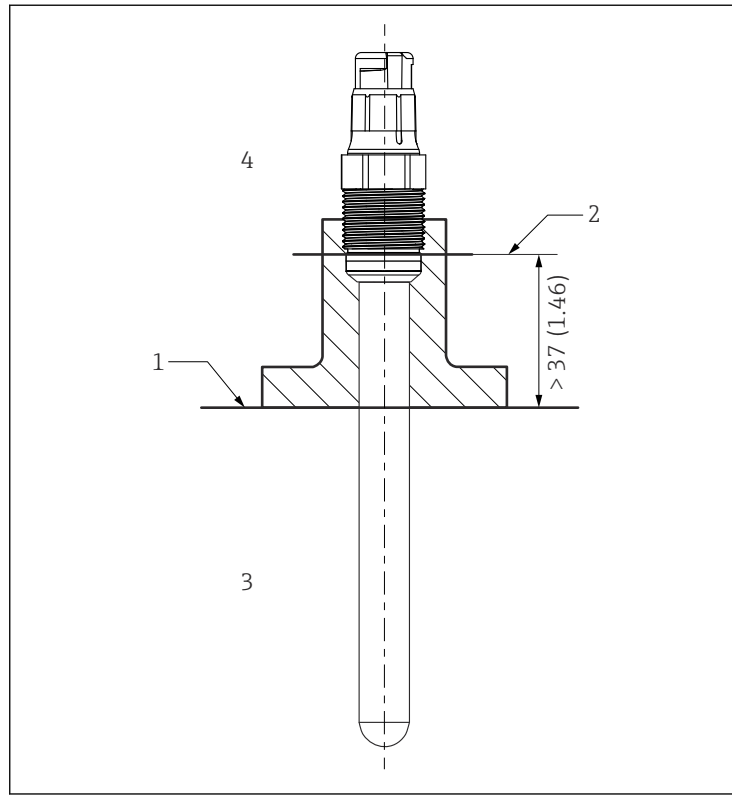
- The Memosens COS22E and Memosens COS51E oxygen sensors are approved in accordance with the UK type-examination certificate CML 21UKEX2588X and suitable for use in hazardous environments.
- The approved Memosens COS22E and Memosens COS51E digital oxygen sensors have an intrinsically safe input with the following parameter set:

Parameter	Value
P_i	180 mW

The approved Memosens COS22E and Memosens COS51E digital oxygen sensors must be connected to a Memosens cable or cable transmitter with intrinsically safe output with the following parameter:

Parameter	Value
P_o	max. 180 mW

Installation conditions



1 Installation conditions

1 Limit
2 Distance between plug-in head (lower edge) and process medium, without ring and thrust collar
3 Process temperature range T_p
4 Ambient temperature range T_a

www.addresses.endress.com

Endress+Hauser

People for Process Automation