XA02553C/07/EN/01.21
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Safety Instructions
Memosens CLS15E, CLS16E, CLS21E, CLS82E

Supplement to: BA02018C, BA02019C, BA02020C and BA02027C

Safety instructions for electrical apparatus in explosion-hazardous areas
UK II 1 G Ex ia IIC T3/T4/T6 Ga

Endress+Hauser
People for Process Automation

UK-Declaration of Conformity

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UK CA
2503

Company **Endress+Hauser Conducta GmbH+Co. KG**
Dieselstraße 24, 70839 Gerlingen, Germany
declares as manufacturer under sole responsibility, that the product

Product Memosens
CLS15E-UA**a***+*** **a= A or B**
CLS16E-UA*****+***
CLS21E-UA*****+***
CLS82E-UA*****+***

Regulations conforms to following 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

Standards applied designated standards:

BS EN 61326-1	(2013)	BS EN IEC 60079-0	(2018)
BS EN 61326-2-3	(2013)	BS EN 60079-11	(2012)
BS EN 61326-2-5	(2013)		
BS EN IEC 63000	(2018)		

Certification

UK Type Examination Certificate No.	CML 21UKEX2130X
issued by Approved Body	Eurofins E&E CML Limited-UK (2503)
Quality assurance	Eurofins E&E CML Limited-UK (2503)

Gerlingen, 10 June 2021
Endress+Hauser Conducta GmbH+Co. KG

i.V. Jörg-Martin Müller
Technology

i.V. Mohamed Algafy
Technology Certifications and Approvals

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Memosens CLS15E, CLS16E, CLS21E, CLS82E

Supplement to: BA02018C, BA02019C, BA02020C and BA02027C

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Associated documentation

This document is an integral part of

Operating Instructions Memosens CLS21E, BA02020C

Operating Instructions Memosens CLS15E, BA02018C

Operating Instructions Memosens CLS16E, BA02019C

Operating Instructions Memosens CLS82E, BA02027C

Supplementary documentation

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

UK Declaration of Conformity

→ 2

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					
xLS15E [1]	-	UA	**	**	a [2]	***	+*
xLS16E	-	UA	**	**	***	+*	
xLS21E	-	UA	**	**	***	+*	
xLS82E	-	UA	**	**	***	+*	
		UK II 1 G Ex ia IIC T3/T4/T6 Ga	No Ex relevance				

1) x=C, O, OC
2) a = A, B

Certificates and approvals

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

UK II 1 G Ex ia IIC T3/T4/T6 Ga

Approved Body

Eurofins E&E CML Limited (UK)

Safety instructions

The CLSxxE-type conductivity sensors are suitable for use in explosion-hazardous areas according to: UK Type Examination Certificate No. CML 21UKEX2130X

The corresponding UK Declaration of Conformity is part of this document.

- It is not permitted to operate the sensor under electrostatically critical process conditions. Considerable steam and dust clouds that act directly on the Memosens sensor head must be avoided at all times.
- Ex-protected digital sensors with Memosens technology are identified by an orange-red ring on the terminal head.
- When using devices and sensors, the regulations for electrical systems in explosion-hazardous areas must be observed (BS EN 60079-14).
- The electrical connection information provided in the Operating Instructions must be adhered to.
- This device has been developed and manufactured according to SI 2016 No. 1107 and also complies with the following standards:
  - BS EN IEC 60079-0 :2018 Electrical apparatus for explosive gas atmospheres
  - BS EN 60079-11:2012 Explosive atmospheres. Equipment protection by intrinsic safety "i"
- The CLS15E-type sensors with non-metal process connections and the CLS21E-type sensors may only be employed for measurement in liquids with a minimum conductivity of 10 nS/cm.

Temperature tables

Sensor	Temperature class	Process temperature T_p	Ambient temperature T_a
CLS15E-******B***+*	T3	-20 °C ≤ T_p ≤ +135 °C	-20 °C ≤ T_a ≤ +70 °C
	T4	-20 °C ≤ T_p ≤ +120 °C	-20 °C ≤ T_a ≤ +75 °C
		-20 °C ≤ T_p ≤ +110 °C	-20 °C ≤ T_a ≤ +80 °C
		-20 °C ≤ T_p ≤ +100 °C	-20 °C ≤ T_a ≤ +85°C
		-20 °C ≤ T_p ≤ +90 °C	-20 °C ≤ T_a ≤ +90 °C
	T6	-20 °C ≤ T_p ≤ +60 °C	-20 °C ≤ T_a ≤ +60 °C
CLS15E-******A***+* CLS21E-*********+*	T3	-20 °C ≤ T_p ≤ +140 °C	-20 °C ≤ T_a ≤ +70 °C
	T4	-20 °C ≤ T_p ≤ +120 °C	-20 °C ≤ T_a ≤ +75 °C
		-20 °C ≤ T_p ≤ +110 °C	-20 °C ≤ T_a ≤ +80 °C
		-20 °C ≤ T_p ≤ +100°C	-20 °C ≤ T_a ≤ +85 °C
		-20 °C ≤ T_p ≤ +90 °C	-20 °C ≤ T_a ≤ +90 °C
	T6	-20 °C ≤ T_p ≤ +70 °C	-20 °C ≤ T_a ≤ +70 °C
CLS16E-*********+*	T3	-5 °C ≤ T_p ≤ +135 °C -5 °C ≤ T_p ≤ +120 °C	-5 °C ≤ T_a ≤ +70 °C -5 °C ≤ T_a ≤ +75 °C
	T4	-5 °C ≤ T_p ≤ +115 °C -5 °C ≤ T_p ≤ +110 °C -5 °C ≤ T_p ≤ +100 °C -5 °C ≤ T_p ≤ +90 °C	-5 °C ≤ T_a ≤ +75 °C -5 °C ≤ T_a ≤ +80 °C -5 °C ≤ T_a ≤ +85 °C -5 °C ≤ T_a ≤ +90 °C
	T6	-5 °C ≤ T_p ≤ +65 °C	-5 °C ≤ T_p ≤ +65 °C
CLS82E-*********+*	T3	-20 °C ≤ T_p ≤ +140 °C -20 °C ≤ T_p ≤ +135 °C -20 °C ≤ T_p ≤ +125 °C	-20 °C ≤ T_p ≤ +65 °C -20 °C ≤ T_p ≤ +70 °C -20 °C ≤ T_p ≤ +75 °C
	T4	-20 °C ≤ T_p ≤ +120 °C -20 °C ≤ T_p ≤ +110 °C -20 °C ≤ T_p ≤ +100 °C -20 °C ≤ T_p ≤ +90 °C	-20 °C ≤ T_p ≤ +75 °C -20 °C ≤ T_p ≤ +80 °C -20 °C ≤ T_p ≤ +85 °C -20 °C ≤ T_p ≤ +90 °C
	T6	-20 °C ≤ T_p ≤ +70 °C	-20 °C ≤ T_p ≤ +70 °C

The above temperature table applies only under the following installation conditions, which are described in the following graphic → 1. If the installation conditions cannot be met, the maximum process temperature T_p must not exceed the maximum ambient temperature T_a.

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 T_p*
4 *Ambient temperature T_a*

Connection

Ex specification

The CLSxxE-type conductivity sensors are approved according to UK type-examination certificate CML 21UKEX2130X and are suitable for use in explosion-hazardous environments. The corresponding UK Declaration of Conformity is an integral part of this document.

- The approved CLSxxE-type digital conductivity sensors have an intrinsically safe input with the following parameter set:
  P_i = 180 mW
- The approved CLSxxE-type digital conductivity sensors may only be connected to a Memosens cable or a compact transmitter with an intrinsically safe output with the following parameter set:
  P_0 max. 180 mW

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