Safety Instructions

**Memosens CLS15E, CLS16E, CLS21E, CLS82E**

EAC Ex 0Ex ia IIC T3/T4/T6 Ga X

Safety instructions for electrical apparatus in explosion-hazardous areas
Memosens CLS15E, CLS16E, CLS21E, CLS82E

EAC Ex 0Ex ia IIC T3/T4/T6 Ga X

Table of contents
Associated documentation .................................................. 4
Supplementary documentation .......................................... 4
Certificate ................................................................. 4
Identification ............................................................. 4
Safety instructions ........................................................ 5
Temperature tables ......................................................... 5
Connection ................................................................. 5
Installation conditions ................................................... 6
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

Certificate

EAC certificate, certificate number: EАЭС RU C-DE.AA87.B.00833/21

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Version</th>
<th>**</th>
<th>**</th>
<th>a</th>
<th>***</th>
<th>+*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLS15E</td>
<td>- GA</td>
<td>**</td>
<td>**</td>
<td>a</td>
<td>***</td>
<td>+*</td>
</tr>
<tr>
<td>CLS16E</td>
<td>- GA</td>
<td>**</td>
<td>**</td>
<td>***</td>
<td>+*</td>
<td></td>
</tr>
<tr>
<td>CLS21E</td>
<td>- GA</td>
<td>**</td>
<td>**</td>
<td>***</td>
<td>+*</td>
<td></td>
</tr>
<tr>
<td>CLS82E</td>
<td>- GA</td>
<td>**</td>
<td>**</td>
<td>***</td>
<td>+*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EAC Ex 0Ex ia IIC T3/T4/T6 Ga X</td>
<td>No Ex relevance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) a = A, B

Certificates and approvals

- EAC Ex, 0Ex ia IIC T3/T4/T6 Ga X
- Zone 0
- The product has been certified in accordance with Directive TR CU 012/2011 valid within the Eurasian Economic Area (EAEU). The EAC conformity mark has been affixed to the product.

Certification Body

ООО "НАНИО ЦСВЭ"
Russian Federation
Safety instructions

- 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.
- The electrical connection information provided in the Operating Instructions must be adhered to.
- 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.
- When using devices and sensors, the regulations for electrical systems in explosion-hazardous areas must be observed (EN/IEC 60079-14).

Temperature tables

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>T-Class</th>
<th>$T_p$ (process)</th>
<th>$T_a$ (ambient)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>min.</td>
<td>max.</td>
</tr>
<tr>
<td>CLS15E-**<em><em><strong>A</strong></em>+</em></td>
<td>T3</td>
<td>-20 °C</td>
<td>135 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T4 -20 °C</td>
<td>120 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T6 -20 °C</td>
<td>70 °C</td>
</tr>
<tr>
<td>CLS15E-**<em><em><strong>B</strong></em>+</em></td>
<td>T3</td>
<td>-20 °C</td>
<td>135 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T4 -20 °C</td>
<td>100 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T6 -20 °C</td>
<td>50 °C</td>
</tr>
<tr>
<td>CLS16E-********+*</td>
<td>T3</td>
<td>-5 °C</td>
<td>135 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T4 -5 °C</td>
<td>115 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T6 -5 °C</td>
<td>65 °C</td>
</tr>
<tr>
<td>CLS21E-********+*</td>
<td>T3</td>
<td>-20 °C</td>
<td>135 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T4 -20 °C</td>
<td>115 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T6 -20 °C</td>
<td>65 °C</td>
</tr>
<tr>
<td>CLS82E-********+*</td>
<td>T3</td>
<td>-20 °C</td>
<td>140 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T4 -20 °C</td>
<td>120 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T6 -20 °C</td>
<td>70 °C</td>
</tr>
</tbody>
</table>

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 $T_a$.

Connection

Ex specification

- The approved CLSxxE-type digital conductivity sensors have an intrinsically safe input with the following parameter set:
  $P_i = 180 \text{ mW}$
- 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:
  $P_o \text{ max.} = 180 \text{ mW}$
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 $T_a$