Safety Instructions

RN221N

[Ex ia Ga]IIC

Document: XA02242K
Safety instructions for electrical apparatus for explosion-hazardous areas → 3
RN221N

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Associated documentation

This document is an integral part of the following Operating Instructions:
- Operating Instructions: KA00124R/09/
  Operating Instructions with HART® diagnosis: BA00202R/09/
- Technical information: TI00073R/09/

Supplementary documentation

Explosion-protection brochure: CP00021Z/11
The Explosion-protection brochure is available: In the download area of the Endress+Hauser website: www.endress.com → Download → Advanced → Documentation code: CP00021Z

Manufacturer’s certificates

NEPSI Certificate of conformity
Certificate number: GYJ20.1354
Affixing the certificate number certificate's conformity with the following standards (depending on the device version):
GB 3836.1-2010
GB 3836.4-2010
GB 3836.20-2010

Safety instructions

Installation
- Install the device according to the manufacturer’s instructions and any other valid standards and regulations.
- The unit is an associated electrical apparatus and can only be installed outside the hazardous area.
- The unit must be installed in such a way that a minimum ingress protection of IP 20 is achieved.
- When installing the unit care must be taken that there must be a spacing of at least 50 mm (zone radius) to the intrinsically safe terminals.
This product can only be installed at the safe area.

The user shall not change the configuration in order to maintain/ensure the explosion protection performance of the equipment. Any change may impair safety.

For installation, use and maintenance of this product, the end user shall observe the instruction manual and the following standards:

- GB 50257-2014 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”.
- GB/T 3836.15-2017 “Explosive atmospheres- Part 15: Electrical installations design, selection and erection”.
- GB/T 3836.16-2017 “Explosive atmospheres- Part 16: Electrical installations inspection and maintenance”.
- GB/T 3836.18-2017 “Explosive atmospheres-Part 18: Intrinsically safe electrical systems”.

**Electrical connection data**

<table>
<thead>
<tr>
<th>RN221N</th>
<th>[Ex ia Ga]IIC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply set</td>
<td>L/L+</td>
<td>N/L</td>
</tr>
<tr>
<td>Ground cable</td>
<td>PE</td>
<td></td>
</tr>
<tr>
<td>Loop power</td>
<td>I+</td>
<td>I-</td>
</tr>
<tr>
<td>(intrinsically</td>
<td></td>
<td></td>
</tr>
<tr>
<td>safe)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal capacitance</td>
<td>C ≤ negligibly small</td>
<td></td>
</tr>
<tr>
<td>Internal inductance</td>
<td>L = 24 µH</td>
<td></td>
</tr>
<tr>
<td>Max. connection values</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex ia IIC</td>
<td>C ≤ 86 nF</td>
<td>L ≤ 5.2 mH</td>
</tr>
<tr>
<td>Ex ia IIB</td>
<td>C ≤ 683 nF</td>
<td>L ≤ 18.9 mH</td>
</tr>
<tr>
<td>Output</td>
<td>O+</td>
<td>O-</td>
</tr>
<tr>
<td>(HART® communication)</td>
<td>O+H</td>
<td>4 to 20 mA</td>
</tr>
<tr>
<td>Temperature range</td>
<td>T ≤ -20 to +50 °C</td>
<td></td>
</tr>
</tbody>
</table>