Safety Instructions
RIA14, RIA16

Field Indicator

Ex ib IIC T4...T6 Gb
Ex db IIC T4...T6 Gb
RIA14, RIA16

Field Indicator

Table of contents

Associated documentation ........................................... 4
Supplementary documentation .................................. 4
Certificates and declarations .................................... 4
Certificate holder .................................................. 4
Safety instructions ................................................ 5
Safety instructions: Installation .................................... 7
Safety instructions: Specific conditions of use ............... 7
Temperature tables ................................................ 7
Electrical connection data ........................................ 7
To commission the device, please observe the Operating Instructions pertaining to the device: www.endress.com/<product code>, e.g. RIA14

Explosion protection brochure: CP00021Z
The explosion protection brochure is available on the Internet: www.endress.com/Downloads

NEPSI certificate
Certificate number: GYJ20.1355X
Affixing the certificate number certifies conformity with the following standards (depending on the device version)
- GB 3836.1-2010
- GB 3836.2-2010
- GB 3836.4-2010
- GB 3836.20-2010

CCC certificate
Certificate number: 2020322309002711, 2020322309002714
Affixing the certificate number certifies conformity with the following standards (depending on the device version)
- GB/T 3836.1-2021
- GB/T 3836.2-2021
- GB/T 3836.4-2021

Please refer to NEPSI/CCC certificates for conditions of safe use.

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1 Installation of the field indicator

**RIA14**

<table>
<thead>
<tr>
<th>Explosive hazardous area zone 0, 1, 2</th>
<th>Explosive hazardous area zone 1, 2</th>
<th>Non-hazardous area</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPL Ga, Gb, Gc</td>
<td>EPL Gb, Gc</td>
<td></td>
</tr>
</tbody>
</table>

**Active configuration**

Terminal 2 and 3
Open Collector

Connecting a active current source
e. g. a certified sensor with own power supply and active current output

**Passive configuration**

Terminal 2 and 3
Open Collector

Connecting a passive current source
e. g. certified 2-wire transmitter with additional loop power supply

Associated intrinsically safe apparatus with max. electrical connection values (see tables)
**RIA16**

Explosive hazardous area zone 0, 1, 2 EPL Ga, Gb, Gc  
Explosive hazardous area zone 1, 2 EPL Gb, Gc  
Non-hazardous area

Associated intrinsically safe apparatus with max. electrical connection values (see tables)

<table>
<thead>
<tr>
<th>e.g. Process transmitter</th>
</tr>
</thead>
</table>

Local potential equalization

**Active configuration**

Terminals 2 and 3
Open Collector

Connecting an active current source e.g. a certified sensor with its own power supply and active current output

**Passive configuration**

Terminals 2 and 3
Open Collector

Connecting a passive current source e.g. certified 2-wire transmitter with additional loop power supply

![Diagram](image)

2  *Installation of the field indicator*
Safety instructions: Installation

- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations (e.g. EN/IEC 60079-14).
- The indicator housing must be connected to the potential matching line.
- The type of protection changes as follows when the devices are connected to certified intrinsically safe circuits of Category ib: Ex ib IIC.
- When connecting an intrinsically safe ib circuit, do not operate the process transmitter at Zone 0.
- The indicator must be installed so, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
- The circuits of indicator are isolated from its enclosure in conformance with EN/IEC 60079-11 chapter 6.3.13.

Safety instructions: Specific conditions of use

When the enclosure is provided with an non-conductive coating, electrostatic charges on the equipment enclosure shall be avoided. For more details see safety instructions.

Temperature tables

<table>
<thead>
<tr>
<th>Type</th>
<th>Temperature class</th>
<th>Ambient temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIA14</td>
<td>T6</td>
<td>–40 °C ≤ Ta ≤ +50 °C</td>
</tr>
<tr>
<td>RIA16</td>
<td>T5</td>
<td>–40 °C ≤ Ta ≤ +60 °C</td>
</tr>
<tr>
<td></td>
<td>T4</td>
<td>–40 °C ≤ Ta ≤ +85 °C</td>
</tr>
</tbody>
</table>

Electrical connection data

<table>
<thead>
<tr>
<th>Type</th>
<th>Electrical data</th>
<th>Electrical data</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIA14</td>
<td>Power supply</td>
<td>Ui = 30 V&lt;sub&gt;DC&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>(Terminals + and -, + and 1)</td>
<td>I&lt;sub&gt;i&lt;/sub&gt; = 100 mA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P&lt;sub&gt;i&lt;/sub&gt; = 750 mW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L&lt;sub&gt;i&lt;/sub&gt; = 0 mH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C&lt;sub&gt;i&lt;/sub&gt; = 15.2 nF</td>
</tr>
<tr>
<td>RIA16</td>
<td>Open Collector</td>
<td>Ui = 30 V&lt;sub&gt;DC&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>(Terminals 2 and 3)</td>
<td>I&lt;sub&gt;i&lt;/sub&gt; = 100 mA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P&lt;sub&gt;i&lt;/sub&gt; = 375 mW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L&lt;sub&gt;i&lt;/sub&gt; = 0 mH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C&lt;sub&gt;i&lt;/sub&gt; = 0 nF</td>
</tr>
</tbody>
</table>