Installation Notes RIA45

- FM Approved Apparatus must be installed in accordance with manufacturer's instructions and the control drawing.
- Depending on location install per National Electrical Code (NEC) using wiring methods described in Article 500 through Article 510.
- Use supply wires suitable for 5°C above surroundings.
- For Non-hazardous area install the device of Protection Ratings of least IP20, NEMA 1, Type 1.

INTRINSICALLY SAFE CONNECTION TO Class I, II, III / Div. 1+2 / Groups ABCDEFG
- The device is an Associated intrinsically safe equipment and must be installed in Division 2 or nonhazardous locations only.
- Installation should be in accordance with ANSI/ISA RP 12.06.01 “Installation of Intrinsically safe systems for Hazardous (classified) locations” and the National Electrical Code (ANSI/NFPA 70).
- For entity installations use certified equipment that satisfy the following conditions:
  - $U_o/V_o \leq V_{max}/U_i$
  - $I_o/I_{sc} \leq I_{max}/I_i$
  - $P_o \leq P_i$
  - $C_o/C_a \geq C_i + C_{cable}$
  - $L_o/L_a \geq L_i + L_{cable}$
- The Terminal of the intrinsically safe circuit must be placed at a distances of least 50mm from terminals of the non intrinsically safe circuits, or adequate separators (e.g. ground metal partitions) must be used.

NONINCENDIVE Field Wiring Connection To Class I, II, III / Div. 2 / Groups ABCDEFG
- The device is an Associated Nonincendive safe equipment and must be installed in Division 2 or nonhazardous locations only.
- The Nonincendive Field Wiring Circuit Concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Intrinsically Safe Apparatus or Associated Apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when $V_o \leq V_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.

Rating of enclosure at least NEMA 4X or Type 4X when installed in Division 2

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<th>Volume (mm³)</th>
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<th>Drawing No</th>
<th>Dwg.rev</th>
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<td>12 03 00 111</td>
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<td>CONTROL DRAWING FM approval AIS, ANI</td>
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### Title Page

- **Object version**: Pfanzelt
- **Drawing No.**: 12 03 00 111
- **Page**: 1 of 2
- **Material**: ZD 071R/09/en/09.09
- **Control Drawing**: Referring to protection notice

### Temperature Range

- **Ta**: -20°C ... +60°C

### Electrical Specifications

- **AIS**
  - **Class**: I, II, III, Div. 1+2, Groups ABCD
  - **Cl. I, Zone 0 [AEx ia] IIC**
- **ANI**
  - **Class**: I, II, III, Div. 2, Groups ABCDEFi
- **NI**
  - **Class**: I, Div. 2, Groups ABCD

#### Power Supply

- **U**: ≤ 24...230 V AC/DC (-20%/+10%) 50/60 Hz
- **Terminal Li+, Li-, PE**: Output circuit limit relays
- **Terminal R12, R11, R13 or R22, R21, R23**: Output collector

#### Control Drawer

- **FM approval**: AIS, ANI

### Technical Details

- **Volume (mm³)**: 71102412
- **Weight (kg)**: ZD 071R/09/en/09.09
- **Endress+Hauser**: GmbH+Co. KG

### Electrical Connections

#### 4-Wire Transmitter Power Supply

- **Terminal 11, 12, 21, 22**:
  - **Voc**: ≤ 27.3 V
  - **Isc**: ≤ 91.1 mA
  - **Po**: = 622 mW
  - **Cl**: = 8nF
  - **Li**: = 75µH

- **Terminal 14, 18, 24, 28**:
  - **Voc**: ≤ 27.3 V
  - **Isc**: ≤ 5 mA
  - **Po**: = 34.2 mW
  - **Cl**: = 8nF
  - **Li**: = 75µH

#### 2-Wire Transmitter Power Supply

- **Terminal 11, 14, 12, 18**:
  - **Voc**: ≤ 27.3 V
  - **Isc**: ≤ 96.5 mA
  - **Po**: = 659 mW
  - **Cl**: = 8nF
  - **Li**: = 75µH

#### Current Input

- **Terminal 15, 16, 17, 18**:
  - **Voc**: ≤ 27.3 V
  - **Isc**: ≤ 22.1 mA
  - **Po**: = 151 mW
  - **Cl**: = 8nF
  - **Li**: = 75µH

#### Voltage Input

- **Terminal 17, 18, 13, 18**:
  - **Voc**: ≤ 27.3 V
  - **Isc**: ≤ 5 mA
  - **Po**: = 34.2 mW
  - **Cl**: = 8nF
  - **Li**: = 75µH

### Notes

- **Group A, B resp. IIC**
- **Group C, D resp. IIB, IIA**

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**Endress+Hauser**

GmbH+Co. KG

Nesselwang / Germany