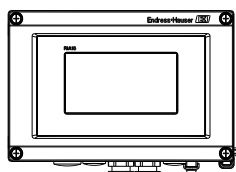
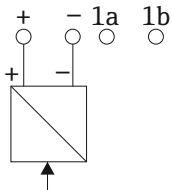
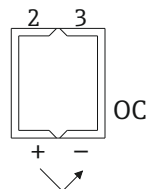


### Nonhazardous Locations

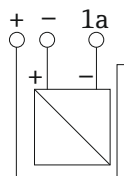
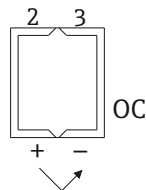


FM approved Associated Apparatus  
or Associated Nonincendive Field  
Wiring Apparatus

See also installation notes  
for using power supply



Terminal 2 and 3  
Open Collector



Passive

loop power supply

See also installation notes  
for using power supply

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

**IS Class I / Div. 1 / Groups ABCD**

NI Class I / Div. 2 / Groups ABCD

| Signal Input     | Vmax | Imax | Pi  | Ci   | Li   |
|------------------|------|------|-----|------|------|
| Terminals        | (V)  | (mA) | (W) | (nF) | (mH) |
| Active (+ and -) | 30   | 100  | 750 | 12.5 | 0    |
| Passive (+, 1b)  | 30   | 100  | 750 | 12.5 | 0    |
| Open Collector   |      |      |     |      |      |
| 2 and 3          | 30   | 100  | 375 | 0    | 0    |

- FM Approved Apparatus must be installed in accordance with manufacturer's instructions.
- Install per National Electrical Code (NFPA 70)
- Use supply wires suitable for 5°C above surroundings.
- Warning: Substitution of components may impair intrinsic safety or suitability for Class I, Division 2.

IS Class I / Div. 1 / Groups ABCD

- $$U_o \leq U_i \quad I_o \leq I_i \quad P_o \leq P_i \quad C_a \geq C_i + C_{\text{cable}} \quad L_a \geq L_i + L_{\text{cable}}$$

Field display entity parameters are as follows:

$$U_i \text{ or } V_{\max} \leq 30 \text{ V DC} \quad C_i = 0$$
$$I_i \text{ or } I_{\max} \leq 100 \text{ mA} \quad I_i = 0$$

Pi &lt; 750 mW

## DIP Class II, III / Div. 1 / Groups EFG

- A dust tight seal must be used for conduit entries when the field indicator is used in a Class II or Class III location.

## NI Class I / Div. 2 / Groups ABCD

- Depending on location install per National Electrical Code (NEC) using wiring methods described in article 500 through article 510. Intrinsic safety barrier not required.  $V_{max} \leq 35$  V DC.
- Warning: Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- Nonincendive field wiring installation  
The Nonincendive Field Wiring Circuit Concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations.

Nonincendive Field Wiring parameters are as follows:

Active Configuration Connection requirements:

(+ and -) terminals

The RIA16 with respect to the supply device:

$V_{max}$  of RIA  $\geq V_{oc}$  of the Associated Nonincendive Field Wiring Apparatus

Imax of RIA  $\geq$  Isc Not relevant

Pi of RIA  $\geq$  Po of the Associated Nonincendive Field Wiring Apparatus

$$C_i \text{ of RIA} + C_{\text{cable}} \leq C_a \text{ of the Associated Nonincendive Field Wiring Apparatus}$$
$$Li \text{ of RIA} + L_{cable} \leq L_a \text{ of the Associated Nonincendive Field}$$

Wiring Apparatus Passive Configuration Connection requirements:

(+, 1, and -) terminals Associated Nonincendive Field Wiring Apparatus with respect to the Both Nonincendive Field Wiring Apparatus


Voc  $\leq$  Vmax of RIA and Vmax of Nonincendive Field Wiring Apparatus

Isc ≤ Imax Not relevant

$$Po \leq Pi \text{ max of RIA and } Pi \text{ of Nonincendive Field Wiring Apparatus}$$
$$Ca \geq Ci \text{ of RIA} + Ci \text{ of Nonincendive Field Wiring Apparatus} + C_{\text{cable}}$$
$$La \geq Li \text{ of RIA} + Li \text{ of Nonincendive Field Wiring Apparatus} + L_{\text{cable}}$$

For these current controlled circuits, the parameter  $I_{max}$  is not required and need not to be aligned with parameter  $I_{sc}$  and  $I_t$  of the Associated Nonincendive Field Wiring Apparatus or Associated Apparatus.

These ratings do not supersede Hazardous Location values  
Unom ≤ 35 DC      Inom ≤ 4 to 20 mA

|   |                                    |  |                             |               |  |  |            |  |  |
|---|------------------------------------|--|-----------------------------|---------------|--|--|------------|--|--|
|   | Approved<br>Pfanzelt               | Date (yyyy-mm-dd)<br>2008-12-08          | Drawing No.<br>12 05 00 111 | Dwg.rev.<br>A | Revision no.<br>W14304                   | Revision date (yyyy-mm-dd)<br>2014-03-04 | Name<br>MP | Material<br>71540224<br>XA02353R/09/EN/01.20 | Endress+Hauser  |
| Volume (mm³)                            | Designed<br>Pfanzelt               | Date (yyyy-mm-dd)<br>2008-12-04          | Unit<br>RIA16               | Scale<br>1:1  | Title<br>CONTROL DRAWING FM<br>IS/NI/DIP |  |            | Series                                       |  |
| Refer to protection notice<br>ISO 16016 | Edge of working parts<br>ISO 13715 | Geometrical tolerancing<br>ISO 2768-mH-E | Part No.<br>-               | Format<br>A4  |  |  |            | Objekt version                               |  |