**Installation Notes RIA46**

- 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.

**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 non-hazardous 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 condition:
  \[
  U_o/V_o \leq V_{max}/U_i \quad I_o/I_{sc} \leq I_{max}/I_i \quad P_o \leq P_i \quad C_o/C_a \geq C_i + C_{cable} \quad L_o/L_i \geq L_i + L_{cable}
  \]
- The Terminal of the intrinsically safe circuit must be placed at least a distance of 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 non-hazardous 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:
  \[
  V_o \leq V_{max}, \quad C_a \geq C_i + C_{cable}, \quad L_o \geq L_i + L_{cable}
  \]
**Temperature range**

Ta $\quad$ -20°C ... +60°C

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**AIS**

Class I, II, III, Div. 1+2, Groups ABCDEFG
Cl. I, Zone 0 [AEx ia] IIC

**ANI**

Class I, II, III, Div. 2, Groups ABCDEFG

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**Power supply**

$U \leq 24\ldots230$ V AC/DC (-20%/+10%) 50/60 Hz

**Terminal**

$LI^+\cdot LI^-, PE$

**Output circuit limit relays**

$U_{\text{max}} \leq 250$ VAC  $I_{\text{max}} \leq 3$ A

$U_{\text{max}} \leq 30$ DC  $I_{\text{max}} \leq 3$ A

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**CDI interface for device configuration**

**Impulse or Current output**

$U_{\text{max}} \leq 250$ V

**Output collector**

$I_{\text{max}} \leq 200$ A

$U_{\text{max}} \leq 30$ V

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**2-wire transmitter power supply**

$Voc \leq 27.3$ V  

Terminal 11, 12, 18, 28  

$I_{\text{sc}} \leq 96.5$ mA  

$Po = 659$ mW  

$Cl = 8$nF  

$Li = 75$µH

Group A, B resp. IIC

$Ca = 88$ nF  

$La = 4.2$ mH

Group C, D resp. IIB, IIA

$Ca = 683$ nF  

$La = 17.1$ mH

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**4-wire transmitter power supply**

$Voc \leq 27.3$ V  

Terminal 11, 12, 21, 22  

$I_{\text{sc}} \leq 91.1$ mA  

$Po = 622$ mW  

$Cl = 8$nF  

$Li = 75$µH

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**Temperature input**

$Voc \leq 27.3$ V  

Terminal 15, 16, 17, 18  

$I_{\text{sc}} \leq 22.1$ mA  

$Po = 151$ mW  

$Cl = 8$nF  

$Li = 75$µH

Group A, B resp. IIC

$Ca = 88$ nF  

$La = 81.8$ mH

Group C, D resp. IIB, IIA

$Ca = 683$ nF  

$La = 327.5$ mH

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**Current input**

$Voc \leq 27.3$ V  

Terminal 14, 18, 24, 28  

$I_{\text{sc}} \leq 5$ mA  

$Po = 34.2$ mW  

$Cl = 8$nF  

$Li = 75$µH

Group A, B resp. IIC

$Ca = 88$ nF  

$La = 1.6$ H

Group C, D resp. IIB, IIA

$Ca = 683$ nF  

$La = 6.4$ H

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**Voltage input**

$Voc \leq 27.3$ V  

Terminal 17, 18, 13, 18  

$I_{\text{sc}} \leq 5$ mA  

$Po = 34.2$ mW  

$Cl = 8$nF  

$Li = 75$µH

Group A, B resp. IIC

$Ca = 88$ nF  

$La = 1.6$ H

Group C, D resp. IIB, IIA

$Ca = 683$ nF  

$La = 6.4$ H