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 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 condition
  \[ \frac{U_{o}/V_{oc}}{V_{max}/U_{i}} \leq \frac{I_{o}/I_{sc}}{I_{max}/I_{i}} \leq \frac{P_{o}}{I_{max} \cdot I_{i}} \leq \frac{P_{i} \cdot C_{i}}{C_{a} \cdot L_{a}} \]
  
  \[ \frac{C_{i} + C_{cable} \cdot L_{i} + L_{cable}}{C_{a} + L_{a}} \]
- 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 \( V_{oc} \leq V_{max}, C_{a} \geq C_{i} + C_{cable}, L_{a} \geq L_{i} + L_{cable} \).
Temperature range
Ta -20°C ... +60°C

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 ABCDEF

Power supply
U ≤ 24...230 V AC/DC (-20%/+10%) 50/60 Hz
Terminal LI+, LI-, PE

Output circuit limit relays
Umax ≤ 250 VAC
Terminals R12, R11, R13 or R22, R21, R23

CDI interface for device configuration
Impulse or Current output
0/4...20 mA

Output collector
Um ≤ 250 V

2-wire transmitter power supply:
Voc ≤ 27.3 V
Isc ≤ 96.5 mA
Po = 659 mW
Cl = 8nF
Li = 75µH
Group A, B resp. IIC
Group C, D resp. IIB, IIA

Voltage input:
Voc ≤ 27.3 V
Isc ≤ 5 mA
Po = 34.2 mW
Cl = 8nF
Li = 75µH
Group A, B resp. IIC
Group C, D resp. IIB, IIA

Voltage input:
Voc ≤ 27.3 V
Isc ≤ 5 mA
Po = 34.2 mW
Cl = 8nF
Li = 75µH
Group A, B resp. IIC
Group C, D resp. IIB, IIA

4-wire transmitter power supply:
Voc ≤ 27.3 V
Iscc 91.1 mA
Po = 622 mW
Cl = 8nF
Li = 75µH

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

4-wire transmitter power supply:
Voc ≤ 27.3 V
Iscc 5 mA
Po = 34.2 mW
Cl = 8nF
Li = 75µH

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

4-wire transmitter power supply:
Voc ≤ 27.3 V
Iscc 5 mA
Po = 34.2 mW
Cl = 8nF
Li = 75µH

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

Voltage input:
Voc ≤ 27.3 V
Isc 5 mA
Po = 34.2 mW
Cl = 8nF
Li = 75µH

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

Voltage input:
Voc ≤ 27.3 V
Isc 5 mA
Po = 34.2 mW
Cl = 8nF
Li = 75µH
Group A, B resp. IIC
Group C, D resp. IIB, IIA

4-wire transmitter power supply:
Voc ≤ 27.3 V
Iscc 5 mA
Po = 34.2 mW
Cl = 8nF
Li = 75µH

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

Temperature range
Ta -20°C ... +60°C