Installation Notes RIA45

- CSA Approved Apparatus must be installed in accordance with manufacturer's instructions.
- Depending on location install per National Electrical Code (CEC) using wiring methods.
- Use supply wires suitable for 5°C above surroundings.
- For Non-hazardous area install the device of Protection Ratings of least NEMA 1, Type 1
- For hazardous area Class I, II install the device of Protection Ratings of least NEMA 4X, Type 4X.
- For Class II keep tight when circuits alive.
- Warning: Substitution of components may impair suitability for Class I, Division 2.

INTRINSICALLY SAFE

Class I / Zone 0 [Ex ia] IIC
- 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 the Canadian Electrical Code (CEC).
- The conductors of each intrinsically safe circuit shall be within a grounded metal shield.
- For entity installations use certified equipment that satisfy the following condition
  \[
  U_o/V_o \leq V_{max}/U_i \quad I_o/I_{sc} \leq I_{max}/I_i \quad P_o \leq P_i \quad C_o/C_{i} \geq C + C_{able} \quad L_o/L_i \geq L + L_{cable}
  \]
- 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 INSTALLATION

Class I / Div. 2 / Groups ABCD
- 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 \( V_o \leq V_{max}, C_o \geq C_{i} + C_{able}, L_o \geq L_i + L_{cable} \).
- For entity installations use certified equipment that satisfy the following condition
  \[
  U_o/V_o \leq V_{max}/U_i \quad I_o/I_{sc} \leq I_{max}/I_i \quad P_o \leq P_i \quad C_o/C_{i} \geq C + C_{able} \quad L_o/L_i \geq L + L_{cable}
  \]

Temperature range

\( T_a \quad -20°C \ldots +60°C \)

ASSOCIATED INTRINSICALLY SAFE

Class I, Zone 0 [Ex ia] IIC
Class I, Zone 2 Ex na[ia] IIC

ASSOCIATED NONINCENDIVE

Class I / Div. 2 / Groups ABCD

T4 \( -20°C \ldots +60°C \)
Power supply  
U ≤ 24...230 V AC/DC (-20%/+10%) 50/60 Hz

Terminal L / +, L / -, PE

Output circuit limit relays  
Umax ≤ 250 VAC  
Imax ≤ 3 A

Terminal R12, R11, R13 or  
Umax ≤ 30 DC  
Imax ≤ 3 A

CDI interface for device configuration

Impulse or Current output  
0/4...20 mA

Terminal O15, O16 or O25, O26  
Umax ≤ 250 V

Output collector  
Imax ≤ 200 mA

Terminal D11, D12  
Umax ≤ 30 VDC

4-wire transmitter power supply:  
Terminal 11, 12 or  
Terminal 21, 22

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

Voc ≤ 27.3 V  
Isc ≤ 91.1 mA  
Po = 622 mW

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

Voc ≤ 27.3 V  
Isc ≤ 5 mA  
Po = 34.2 mW

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

ASSOCIATED NONINCENDIVE FIELD WIRING  
I, II, III/2/ABCDEFG

Voc ≤ Vmax  
Isc ≤ Imax  
Po ≤ Pi  
Ca ≥ Ci + Ccable  
La ≥ Li + Lcable

Current input:  
Voc ≤ 27.3 V  
Isc ≤ 5 mA  
Po = 34.2 mW

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

Voltage input:  
Voc ≤ 27.3 V  
Isc ≤ 5 mA  
Po = 34.2 mW

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

Entity parameters for channel 1&2 – Only one connected at a time:

2-wire transmitter power supply:  
Voc ≤ 27.3 V  
Isc ≤ 96.5 mA  
Po = 659 mW

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

Current input:  
Voc ≤ 27.3 V  
Isc ≤ 5 mA  
Po = 34.2 mW

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

Voltage input:  
Voc ≤ 27.3 V  
Isc ≤ 5 mA  
Po = 34.2 mW

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

Entity parameters for channel 1&2 – Only one connected at a time:

4-wire transmitter power supply:  
Terminal 14, 18 or  
Terminal 24, 28

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

Voc ≤ 27.3 V  
Isc ≤ 5 mA  
Po = 34.2 mW

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

Voltage input:  
Voc ≤ 27.3 V  
Isc ≤ 5 mA  
Po = 34.2 mW

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