

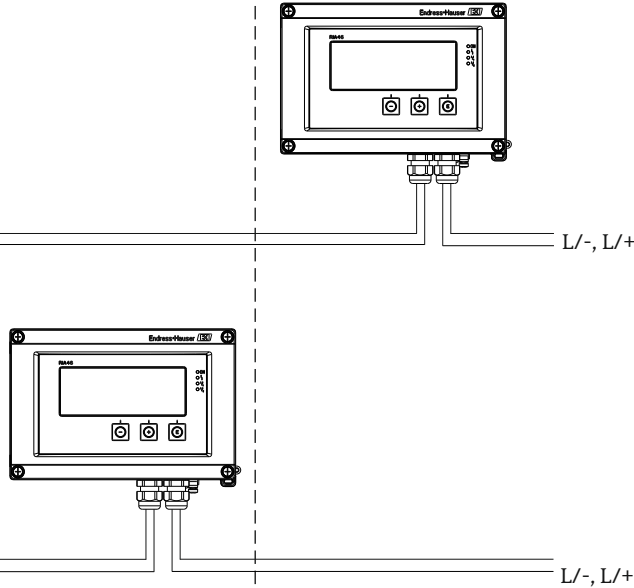
Hazardous (Classified) Locations
I,II,II/1+2/ABCDEF
Class I, Zone 0, IIC

Class I, Division 2, Groups ABCD

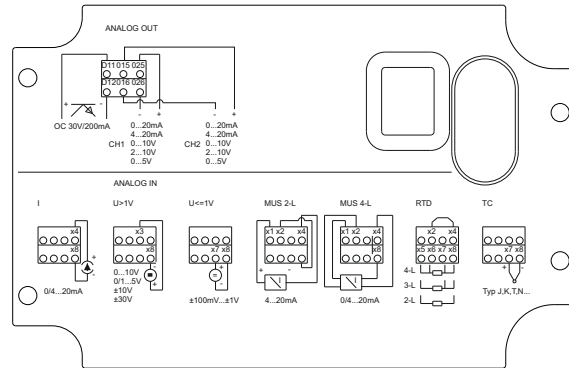
Non-hazardous area

CSA approved intrinsically safe apparatus

CSA approved intrinsically safe apparatus



Note wiring scheme on device!



Installation Notes RIA46



- 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.
- The unit is installed in Class I, Division 2 area with two I.S. output channels (1 & 2), with cables clearance of 2 mm minimum.
- **WARNING - EXPLOSION HAZARD. DO NOT DISCONNECT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS**
VERTISSEMENT - RISQUE D'EXPLOSION. NE PAS DÉCONNECTER TANT QUE LE CIRCUIT EST SOUS TENSION OU À MOINS QUE LA ZONE NE SOIT EXEMPTÉ DE CONCENTRATIONS INFLAMMABLES.

INTRINSICALLY SAFE

[Ex ia Ga] IIC;

Associated Apparatus, providing intrinsically safe output for Class I, Groups A, B, C & D; Class II, Groups E, F & G; Class III;

Class I, Division 2, Group ABCD T4, providing intrinsically safe output for Class I, Groups A, B, C & D; Class II, Groups E, F & G; Class III;

- 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).
- For entity installations use certified equipment that satisfy the following condition
 $U_o/V_o \leq V_{max}/U_i$ $I_o/I_{sc} \leq I_{max}/I_i$ $P_o \leq P_i$ $C_o/C_a \geq C_i + C_{cable}$ $L_o/L_a \geq L_i + L_{cable}$
- The Terminal of the intrinsically safe circuit must be placed at 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 INSTALLATION

- 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 $V_o \leq V_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.
- For entity installations use certified equipment that satisfy the following condition
 $U_o/V_o \leq V_{max}/U_i$ $I_o/I_{sc} \leq I_{max}/I_i$ $P_o \leq P_i$ $C_o/C_a \geq C_i + C_{cable}$ $L_o/L_a \geq L_i + L_{cable}$

Temperature range

Ta -40°C ... +40°C

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|---|------------------------------------|--|-----------------------------|---------------|------------------------------|--|------------|---|--|
| | Approved Pfanzelt | Date (yyyy-mm-dd) 2009-05-12 | Drawing No. 12 04 00 112 | Dwg.rev. B | Revision no. W26123 | Revision date (yyyy-mm-dd) 2024-11-07 | Name MP | Material 71765451 XA02310R/09/EN/02.26-00 | Endress+Hauser |
| Volume (mm³) | Designed Pfanzelt | Date (yyyy-mm-dd) 2009-05-11 | Unit RIA46 | Scale 1:1 | Title CONTROL DRAWING CSA | | | Series | |
| Refer to protection notice ISO 16016 | Edge of working parts ISO 13715 | Geometrical tolerancing ISO 2768-mH-E | Part No. - | Format A4 | Title AIS, NIFW | | | Objekt version Sheet 1 of 2 | Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany |



Power supply $U \leq 24...230$ V AC/DC (-20%/+10%) 50/60 Hz
 Terminal L / +, L / -, PE
 Output circuit limit relays $U_{max} \leq 250$ VAC $I_{max} \leq 3$ A
 Terminal R12, R11, R13 or R22, R21, R23 $U_{max} \leq 30$ DC $I_{max} \leq 3$ A
 CDI interface for device configuration
 Impulse or Current output $0/4...20$ mA
 Terminal O15, O16 or O25, O26 $U_m \leq 250$ V
 Output collector $I_{max} \leq 200$ mA
 Terminal D11, D12 $U_m \leq 30$ VDC

4-wire transmitter power supply:
 Terminal 11, 12 or Terminal 21, 22
 $V_{oc} \leq 27.3$ V
 $I_{sc} \leq 91.1$ mA
 $P_o = 622$ mW

Group A, B resp. IIC $C_a = 80$ nF $L_a = 4.625$ mH
 Group C, D resp. IIB, IIA $C_a = 675$ nF $L_a = 19.125$ mH

4-wire transmitter power supply:
 Terminal 14, 18 or Terminal 24, 28
 $V_{oc} \leq 27.3$ V
 $I_{sc} \leq 5$ mA
 $P_o = 34.2$ mW

Group A, B resp. IIC $C_a = 80$ nF $L_a = 1.525$ H
 Group C, D resp. IIB, IIA $C_a = 675$ nF $L_a = 6.325$ H

temperature input (RTD, TC):
 Terminal 15, 16, 17, 18 and 12, 14 or Terminal 25, 26, 27, 28 and 22, 24
 $V_{oc} \leq 27.3$ V
 $I_{sc} \leq 22.1$ mA
 $P_o = 151$ mW

Group A, B resp. IIC $C_a = 80$ nF $L_a = 81.725$ mH
 Group C, D resp. IIB, IIA $C_a = 675$ nF $L_a = 327.425$ mH

ASSOCIATED INTRINSICALLY SAFE

Cl. I, Gps ABCD
Cl. II, Gps EFG, Cl. III
Cl. I, Zone 0, IIC

$V_{oc} \leq V_{max}$ $I_{sc} \leq I_{max}$ $P_o \leq P_i$
 $C_a \geq C_i + C_{cable}$ $L_a \geq L_i + L_{cable}$

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

$V_{oc} \leq V_{max}$ $C_a \geq C_i + C_{cable}$ $L_a \geq L_i + L_{cable}$

Current input:
 Terminal 14, 18 or Terminal 24, 28
 $V_{oc} \leq 27.3$ V
 $I_{sc} \leq 5$ mA
 $P_o = 34.2$ mW

Group A, B resp. IIC $C_a = 80$ nF $L_a = 1.525$ H
 Group C, D resp. IIB, IIA $C_a = 675$ nF $L_a = 6.325$ H

Voltage input:
 Terminal 17, 18 and 13, 18 or Terminal 27, 28 and 23, 28
 $V_{oc} \leq 27.3$ V
 $I_{sc} \leq 5$ mA
 $P_o = 34.2$ mW

Group A, B resp. IIC $C_a = 80$ nF $L_a = 1.525$ H
 Group C, D resp. IIB, IIA $C_a = 675$ nF $L_a = 6.325$ H

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

2-wire transmitter power supply:
 Terminal 11, 14, 12, 18 or Terminal 21, 24, 22, 28
 $V_{oc} \leq 27.3$ V
 $I_{sc} \leq 96.5$ mA
 $P_o = 659$ mW

Group A, B resp. IIC $C_a = 80$ nF $L_a = 4.125$ mH
 Group C, D resp. IIB, IIA $C_a = 675$ nF $L_a = 17.025$ mH

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|---|------------------------------------|--|-----------------------------|---------------|---|---------------------------------|---|---|----------------|
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