

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

Nonhazardous Locations



Installation Notes RIA45

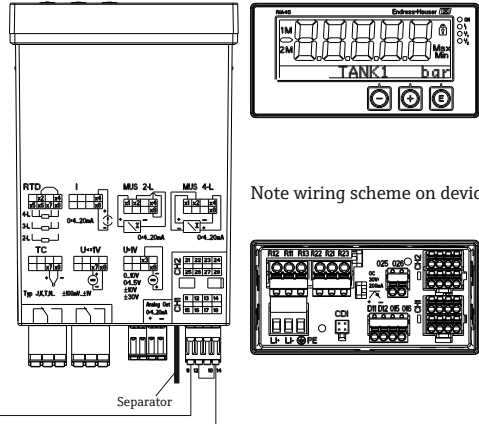
- CSA Approved Apparatus must be installed in accordance with manufacturer's instructions.
- Depending on location install per National Electrical Code (CEC) using wiring methods.
- Use supply wires suitable for 5°C above surroundings.
- For Non-hazardous area install the device of Protection Ratings of least NEMA 1, Type 1

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;

- The device is an Associated intrinsically safe equipment and must be installed in 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
 $U_o/V_o \leq V_{max}/U_i$ $I_o/I_s \leq I_{max}/I_i$ $P_o \leq P_i$ $C_o/C_a \geq C_i + C_{cable}$ $L_o/L_a \geq L_i + L_{cable}$
- 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.



CSA approved intrinsically safe apparatus

Temperature range

Ta -20°C ... +60°C

	Approved Pfanzelt	Date (yyyy-mm-dd) 2009-05-12	Drawing No. 12 03 00 112	Dwg.rev. B	Revision no. W26123	Revision date (yyyy-mm-dd) 2024-11-07	Name MP	Material 71765450 XA02311R/09/EN/02.26-00	Endress+Hauser
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2009-05-11	Unit RIA45	Scale 1:1	Title CONTROL DRAWING CSA AIS, NIFW		Serie		
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No. -	Format A4	Objekt version	Sheet 1 of 2	Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany		



Power supply $U \leq 24...230 \text{ V AC/DC } (-20\%/+10\%) 50/60 \text{ Hz}$
 Terminal L / +, L / -, PE

Output circuit limit relays $U_{max} \leq 250 \text{ VAC}$ $I_{max} \leq 3A$
 Terminal R12, R11, R13 or $U_{max} \leq 30 \text{ DC}$ $I_{max} \leq 3A$
 R22, R21, R23

CDI interface for device configuration

Impulse or Current output $0/4...20 \text{ mA}$
 Terminal O15, O16 or O25, O26 $U_m \leq 250 \text{ V}$

Output collector $I_{max} \leq 200 \text{ mA}$
 Terminal D11, D12 $U_m \leq 30 \text{ VDC}$

ASSOCIATED INTRINSICALLY SAFE

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

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

ASSOCIATED NONINCENDIVE FIELD WIRING

I,II,III/2/ABCDEFG

$V_{oc} \leq V_{max}$ $Ca \geq C_i + C_{cable}$ $La \geq L_i + L_{cable}$

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

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

Group A, B resp. IIC $Ca = 80 \text{ nF}$ $La = 4.125 \text{ mH}$
 Group C, D resp. IIB, IIA $Ca = 675 \text{ nF}$ $La = 17.025 \text{ mH}$

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

Group A, B resp. IIC $Ca = 80 \text{ nF}$ $La = 4.625 \text{ mH}$
 Group C, D resp. IIB, IIA $Ca = 675 \text{ nF}$ $La = 19.125 \text{ mH}$

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

Group A, B resp. IIC $Ca = 80 \text{ nF}$ $La = 1.525 \text{ H}$
 Group C, D resp. IIB, IIA $Ca = 675 \text{ nF}$ $La = 6.325 \text{ H}$

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

Group A, B resp. IIC $Ca = 80 \text{ nF}$ $La = 81.725 \text{ mH}$
 Group C, D resp. IIB, IIA $Ca = 675 \text{ nF}$ $La = 327.425 \text{ mH}$

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

Group A, B resp. IIC $Ca = 80 \text{ nF}$ $La = 1.525 \text{ H}$
 Group C, D resp. IIB, IIA $Ca = 675 \text{ nF}$ $La = 6.325 \text{ H}$

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

Group A, B resp. IIC $Ca = 80 \text{ nF}$ $La = 1.525 \text{ H}$
 Group C, D resp. IIB, IIA $Ca = 675 \text{ nF}$ $La = 6.325 \text{ H}$

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