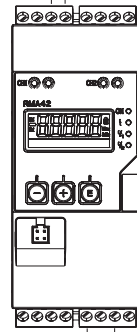


Hazardous (Classified) Locations  
 Class I, Groups ABCD  
 Class II, Groups EFG  
 Class III  
 Class I, Zone 0 Group IIC  
 Class I, Zone 2 Group IIC



Nonhazardous Locations

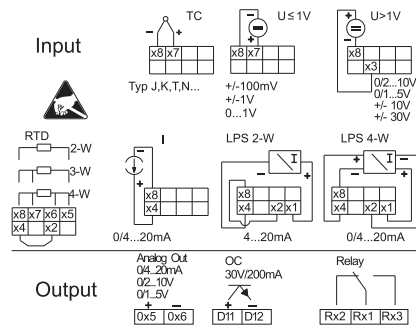
FM approved unit



N/-, L/+

Rating of enclosure at least NEMA 4X or Type 4X when installed in Division 2

Note wiring scheme on device!



### Installation Notes RMA42



- 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.
- For Non-hazardous area install the device of Protection Ratings of least IP20, NEMA 1, Type 1.

### 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  
 $U_0/V_{oc} \leq V_{max}/U_i$     $I_0/I_{sc} \leq I_{max}/I_i$     $P_o \leq P_i$     $C_o/C_a \geq C_i + C_{cable}$     $L_o/L_a \geq L_i + L_{cable}$
- The Terminal of the intrinsically safe circuit must be placed at 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  $V_{oc} \leq V_{max}$ ,  $C_a \geq C_i + C_{cable}$ ,  $L_a \geq L_i + L_{cable}$ .

	Approved Pfanzelt	Date (yyyy-mm-dd) 2009-10-21	Drawing No. 12 01 00 111	Dwg.rev.	Revision no.	Revision date (yyyy-mm-dd)	Name	Material 71114415 ZD 082R/09/en/04.10	<b>Endress+Hauser</b>
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2009-10-20	Unit RMA42	Scale 1:1	Title CONTROL DRAWING FM approval AIS, ANI			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 Wetzlar GmbH+Co. KG Nesselwang / Germany		



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  
Class I, Div. 2, Groups ABCD**

**NI**

T4 -20°C ... +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 ≤ 3A  
Terminal R12, R11, R13 or Umax ≤ 30 DC Imax ≤ 3A  
R22, R21, R23

CDI interface for device configuration

Impulse or Current output 0/4...20 mA, 0...10 VDC  
Terminal O15, O16 or O25, O26

Output collector Imax ≤ 200 mA  
Terminal D11, D12 Um ≤ 30 VDC

2-wire transmitter power supply: Voc ≤ 27.3 V  
Terminal 11, 14, 12, 18 Isc ≤ 96.5 mA  
21, 24, 22, 28 Po = 659 mW

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

4-wire transmitter power supply: Voc ≤ 27.3 V  
Terminal 11, 12 or Isc ≤ 91.1 mA  
Terminal 21, 22 Po = 622 mW

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

4-wire transmitter power supply: Voc ≤ 27.3 V  
Terminal 14, 18 or Isc ≤ 5 mA  
Terminal 24, 28 Po = 34.2 mW

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

temperature input (RTD, TC): Voc ≤ 27.3 V  
Terminal 15, 16, 17, 18 and 12, 14 or Isc ≤ 22.1 mA  
Terminal 25, 26, 27, 28 and 22, 24 Po = 151 mW

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

Current input: Voc ≤ 27.3 V  
Terminal 14, 18 or Isc ≤ 5 mA  
Terminal 24, 28 Po = 34.2 mW

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

Voltage input: Voc ≤ 27.3 V  
Terminal 17, 18 and 13, 18 or Isc ≤ 5 mA  
Terminal 27, 28 and 23, 28 Po = 34.2 mW

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

	Approved Pfanzelt	Date (yyyy-mm-dd) 2010-10-21	Drawing No. 12 01 00 111	Dwg.rev.	Revision no.	Revision date (yyyy-mm-dd)	Name	Material 71114415 ZD 082R/09/en/04.10	<b>Endress+Hauser</b>
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2010-10-20	Unit RMA42	Scale 1:1	<b>CONTROL DRAWING</b> <b>FM approval AIS, ANI</b>			<b>Serie</b>	
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No. -	Format A4				Objekt version	