### 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 at 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:
  - \( U_o/V_{oc} \leq V_{max}/U_i \)
  - \( I_{os} \leq I_{max}/I_i \)
  - \( P_{o} \leq P_{i} \)
  - \( C_{o}/C_{i} + C_{cable}/C_{a} \leq C_{a} \)
  - \( L_{o}/L_{a} \leq L_{a} + L_{cable} \)
- 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 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 not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when \( V_{oc} \leq V_{max}, C_{a} \geq C_{i} + C_{cable}, L_{a} \geq L_{i} + L_{cable} \).
- \( U_o/V_{oc} \leq V_{max}/U_i \)
- \( I_{os} \leq I_{max}/I_i \)
- \( P_{o} \leq P_{i} \)
- \( C_{o}/C_{i} + C_{cable}/C_{a} \leq C_{a} \)
- \( L_{o}/L_{a} \leq L_{a} + L_{cable} \)
- The Terminal of the intrinsically safe circuit must be placed at least a distance of 50mm from terminals of the non-incendive circuits, or adequate separators (e.g. ground metal partitions) must be used.

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<th>Volume (mm³)</th>
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**Drawing Details**

- **Part No.**
- **Format**
- **Endress + Hauser**
- **GmbH & Co. KG Nesselwang / Germany**

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**Diagram Note**: Wiring scheme on device!
Temperature range

T\text{a} \text{ -20°} \text{C .. +60°} \text{C}

\text{AIS}
Class I, II, III, Div. 1+2, Groups ABCDEFG
Cl. I, Zone 0 [AEx ia] IIC

\text{ANI}
Class I, II, III, Div. 2, Groups ABCDEFG

\text{NI}
Class I, Div. 2, Groups ABCD

Power supply

U \leq 24...230 \text{ V AC/DC (-20%/+10%)} 50/60 \text{ Hz}

Terminal L / +, L / -

Output circuit limit relays

U_{\text{max}} \leq 250 \text{ VAC} \quad I_{\text{max}} \leq 3 \text{ A}

Terminal R12, R11, R13 or

U_{\text{max}} \leq 30 \text{ DC} \quad I_{\text{max}} \leq 3 \text{ A}

R22, R21, R23

CDI interface for device configuration

Impulse or Current output

0/4...20 mA, 0...10 \text{ VDC}

Terminal O15, O16 or O25, O26

Output collector

I_{\text{max}} \leq 200 \text{ mA}

Terminal D11, D12

U_{\text{max}} \leq 30 \text{ VDC}

2-wire transmitter power supply:

V_{\text{oc}} \leq 27.3 \text{ V}

Terminal 11, 12 or

I_{\text{sc}} \leq 96.5 \text{ mA}

21, 24, 22, 28

P_{\text{o}} = 659 \text{ mW}

Group A, B resp. IIC

Ca = 80 \text{ nF} \quad La = 4.125 \text{ mH}

Group C, D resp. IIB, IIA

Ca = 675 \text{ nF} \quad La = 17.025 \text{ mH}

4-wire transmitter power supply:

V_{\text{oc}} \leq 27.3 \text{ V}

Terminal 11, 12 or

I_{\text{sc}} \leq 5 \text{ mA}

Terminal 21, 22

P_{\text{o}} = 34.2 \text{ mW}

Group A, B resp. IIC

Ca = 80 \text{ nF} \quad La = 6.325 \text{ mH}

Group C, D resp. IIB, IIA

Ca = 675 \text{ nF} \quad La = 19.125 \text{ mH}

temperature input (RTD, TC):

V_{\text{oc}} \leq 27.3 \text{ V}

Terminal 15, 16, 17, 18 and 12, 14 or

I_{\text{sc}} \leq 22.1 \text{ mA}

Terminal 25, 26, 27, 28 and 22, 24

P_{\text{o}} = 151 \text{ mW}

Group A, B resp. IIC

Ca = 80 \text{ nF} \quad La = 6.325 \text{ mH}

Group C, D resp. IIB, IIA

Ca = 675 \text{ nF} \quad La = 19.125 \text{ mH}

Current input:

V_{\text{oc}} \leq 27.3 \text{ V}

Terminal 14, 18 or

I_{\text{sc}} \leq 5 \text{ mA}

Terminal 24, 28

P_{\text{o}} = 34.2 \text{ mW}

Group A, B resp. IIC

Ca = 80 \text{ nF} \quad La = 6.325 \text{ mH}

Group C, D resp. IIB, IIA

Ca = 675 \text{ nF} \quad La = 19.125 \text{ mH}

Voltage input:

V_{\text{oc}} \leq 27.3 \text{ V}

Terminal 17, 18 and 13, 18 or

I_{\text{sc}} \leq 5 \text{ mA}

Terminal 27, 28 and 23, 28

P_{\text{o}} = 34.2 \text{ mW}

Group A, B resp. IIC

Ca = 80 \text{ nF} \quad La = 6.325 \text{ mH}

Group C, D resp. IIB, IIA

Ca = 675 \text{ nF} \quad La = 19.125 \text{ mH}