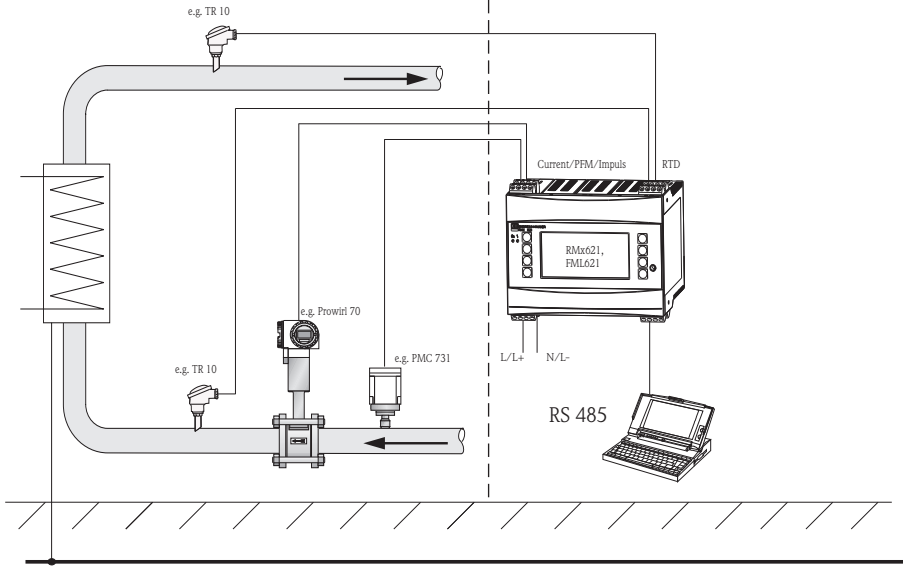




Hazardous (Classified) Locations
 Class I, Groups ABCD
 Class II, Groups EFG
 Class III
 Class I, Zone 0 Group IIC



Nonhazardous Locations



Installation Notes RMC 621, RMM 621 or FML621

- FM Approved Apparatus must be installed in accordance with manufacturer's instructions.
- 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.
- Install the device of Protection Ratings of least IP20, NEMA 1, Type 1.
- The device must be connected to a suitable ground.
- The conductors of each intrinsically safe circuit shall be within a grounded metal shield.

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 only in nonhazardous locations.
- Installation should be in accordance with ANSI/ISA RP 12.6.01 "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
 $U_o/V_o \leq V_{max}/U_i$ $I_o/I_{sc} \leq I_{max}/I_i$ $P_o \leq P_i$ $C_o/C_a \geq C_i + C_{cable}$ $L_o/L_a \geq L_i + L_{cable}$
- The Terminal of the intrinsically safe circuit must be placed at 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 CONNNECTION TO Class I, II, III / Div. 2 / Groups ABCDEFG

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

	Approved Pfanzelt	Date (yyyy-mm-dd) 2004-06-01	Drawing No. 02 05 00 111	Dwg.rev.	Revision no. A(k05806)	Revision date (yyyy-mm-dd) 2005-08-08	Name Pfanzelt	Material 51010401 ZD 040R/09/en/04.05	Endress+Hauser
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2004-06-01	Unit RMC621, RMM621, FML621	Scale 1:1	Title CONTROL DRAWING FM		Series		
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

AIS Class I, II, III, Div. 1+2, Groups ABCDEFG
Cl. I Zone 0 [AEx ia] IIC
ANI Class I, II, III, Div. 2, Groups ABCDEF

Power supply (Terminal L/L+ N/L-)
Um = 90...250 VAC 50/60Hz
Um = 20...28 VAC 50/60 Hz, 20...36 VDC

Intrinsically safe current input active (Terminal 81, 82 or 81, 83 and optional 182, 181 or 183, 181)
Uo or Voc ≤ 27.6 V Io or Isc ≤ 88.6 mA Po ≤ 612 mW
Ci ≈ negligible small Li ≈ negligible small

Group A, B resp. IIC Co or Ca = 86 nF Lo or La = 1.6 mH
Group C, D resp. IIB, IIA Co or Ca = 86 nF Lo or La = 1.6 mH

Intrinsically safe current input active (Terminal 82, 10 or 83, 110 and optional 182, 112 or 183, 113)
Uo or Voc ≤ 27.6 V Io or Isc ≤ 92.3 mA Po ≤ 637 mW
Ci ≈ negligible small Li ≈ negligible small

Group A, B resp. IIC Co or Ca = 86 nF Lo or La = 1.6 mH
Group C, D resp. IIB, IIA Co or Ca = 86 nF Lo or La = 1.6 mH

Intrinsically safe current input passive (Terminal 10, 11 or 110, 11 and optional 112, 111 or 113, 111)
Uo or Voc ≤ 27.6 V Io or Isc ≤ 3.7 mA Po ≤ 26 mW
Ci ≈ negligible small Li ≈ negligible small

Group A, B resp. IIC Co or Ca = 86 nF Lo or La = 100 mH
Group C, D resp. IIB, IIA Co or Ca = 86 nF Lo or La = 100 mH

Ui or Vmax ≤ 30 V li or Imax ≤ 100 mA Pi ≤ 750 mW

Intrinsically safe RTD- input (Terminal 1, 5, 6, 2 or 3, 7, 8, 4 and optional 116, 117, 114, 115 or 120, 121, 118, 119)

Uo or Voc ≤ 9.6 V Io or Isc ≤ 16.2 mA Po ≤ 39 mW

Ci ≈ negligible small Li ≈ negligible small
Group A, B resp. IIC Co or Ca = 3.6 µF Lo or La = 100 mH
Group C, D resp. IIB, IIA Co or Ca = 3.6 µF Lo or La = 100 mH

Pulse and current output (Terminal 131, 132 or 133, 134)
0/4...20mA

External supply (Terminal 91, 92)
U ≤ 24VDC I ≤ 80mA

Relays (Terminal 52, 53 and optional 152, 153 resp. 142, 143)
Umax ≤ 250VAC Imax ≤ 3A
Umax ≤ 250VAC Imax ≤ 3A

RS 485 Interface (Terminal 101, 102, 103, 104)

Temperature range
Ta = -20°C ... +60°C

For RMM621 only


Intrinsically safe digital input (Terminal 81, 83, 85, 82 or 91, 93, 95, 92)
Ui or Vmax ≤ 30 V li or Imax ≤ 100 mA Pi ≤ 750 mW

Ci ≈ negligible small Li ≈ negligible small

Relays (Terminal 145, 146 resp. 155, 156 and 242, 243 resp. 252, 253)
Umax ≤ 250VAC Imax ≤ 3A
Umax ≤ 250VAC Imax ≤ 3A

Intrinsically safe U-I-TC- input (Terminal 122, 123, 125, 127 or 222, 223, 225, 227)
Uo or Voc ≤ 9.6 V Io or Isc ≤ 3 mA Po ≤ 8 mW

Ci ≈ negligible small Li ≈ negligible small
Group A, B resp. IIC Co or Ca = 3.6 µF Lo or La = 100 mH
Group C, D resp. IIB, IIA Co or Ca = 3.6 µF Lo or La = 100 mH

	Approved Pfanzelt	Date (yyyy-mm-dd) 2004-06-01	Drawing No. 02 05 00 111	Dwg.rev.	Revision no. A(k05806)	Revision date (yyyy-mm-dd) 2005-08-08	Name Pfanzelt	Material 51010401 ZD 040R/09/en/04.05	Endress+Hauser 
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