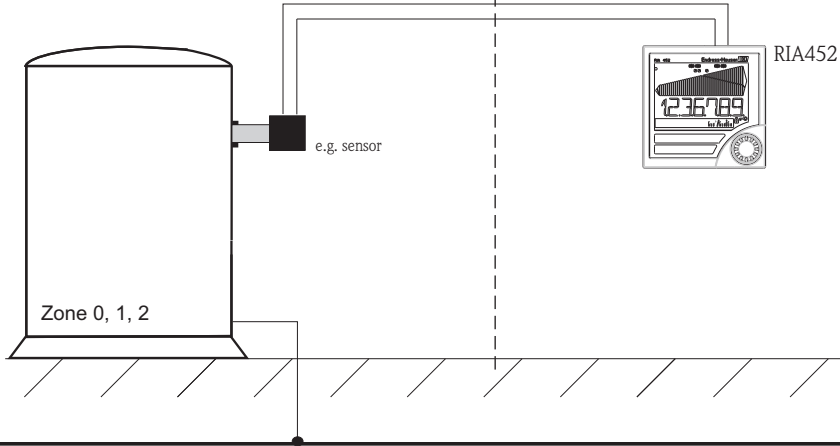


Hazardous (Classified) Locations  
I,II,III/1+2/ABCDEF  
I, Zone 0 IIC



Nonhazardous Locations



### Installation Notes RIA 452

- FM Approved apparatus must be installed in accordance with manufacturer instructions.
- The device is an Associated Intrinsically Safe Apparatus / Associated Nonincendive Apparatus / Associated Nonincendive Field Wiring Apparatus, which must be installed only in nonhazardous locations.
- Install per National Electrical Code using wiring methods described in article 500 through article 510.
- Use supply wires suitable for 5°C above surrounding.
- Degree of protection must be at least IP20, NEMA 1, Type 1.

ASSOCIATED INTRINSICALLY SAFE I,II,III/1,2/ABCDEF Cl. I, Zone 0 [AEx ia] IIC

- 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  
 $U_o/V_{oc} \leq V_{max}/U_i$   $I_o/I_{sc} \leq I_{max}/I_i$   $P_o \leq P_i$   $C_o/C_a \geq C_i + C_{cable}$   $L_o/L_a \geq L_i + L_{cable}$
- The terminals of the intrinsically safe circuit must be placed at a distances of least 50 mm from terminals of the non intrinsically safe circuits, or adequate separators (e.g. ground metal partitions) must be used.

ASSOCIATED NONINCENDIVE I,II,III/2/ABCDEF

- 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  $U_o/V_{oc} \leq V_{max}/U_i$   $C_o/C_a \geq C_i + C_{cable}$   $L_o/L_a \geq L_i + L_{cable}$ .

Temperature range	Ta = -20°C ... +60°C	
Power supply	Um = 90...250 VAC 50/60 Hz	
Terminal L/L+ N/L-	Um = 20...28 VAC 50/60 Hz, 20...36 VDC	
Transmitter supply	U ≤ 24 VDC	± 15%
Terminal 91, 92	I ≤ 250 mA	
Current output	0/4...20 mA, 0...10 V DC	
Terminal 31, 32		
Relays	250 VAC, 3A	
Terminals	41,42,43	44,45,46
	51,52,53	54,55,56
Terminals	141,142,143	144,145,146
(as option)	151,152,153	154,155,156
Digital output	24 V, 200 mA	
Terminal 33, 34		
Digital inputs	Umax = 24.5 V	
Terminal 96, 97, 197, 297, 397		
RS 232 and CDI interface for device configuration		

AIS	I,II,III/1,2/ABCDEF	Cl. I, Zone 0 [AEx ia] IIC
ANI	I,II,III/2/ABCDEF	
Current input active	Uo or Voc or Vt ≤ 27.6 V	Io or Isc ≤ 88.6 mA
Terminal 81, 82	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
Current input passive	Uo or Voc or Vt ≤ 27.6 V	Io or Isc ≤ 0.9 mA
Terminal 11,12	Po = 7 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



	Approved Meroth	Date (yyyy-mm-dd) 2004-11-03	Drawing No. 02 14 00 111	Dwg.rev.	Revision no.	Revision date (yyyy-mm-dd)	Name	Material 510 09751 ZD 034R/09/en/04.05	<b>Endress+Hauser</b>
Volume (mm³)	Designed Meroth	Date (yyyy-mm-dd) 2004-11-03	Unit RIA452	Scale 1:1	Title CONTROL DRAWING FM IS, NI		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 1	Endress + Hauser Wetzlar GmbH+Co. KG Nesselwang / Germany		