



71354318

## Hazardous location

Class I, Div. 1, Groups A, B, C, D  
Class I, Zone 0, IIC  
Class II, Div. 1, Groups E, F, G  
Class III

## Non-hazardous location

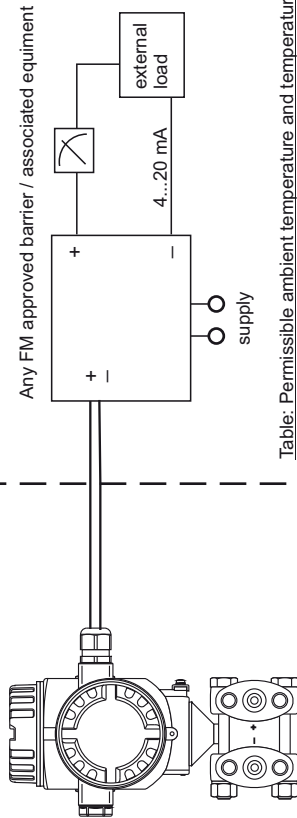


Table: Permissible ambient temperature and temperature code:

| Temperature code | Permissible ambient temperature, electronic compartment |
|------------------|---------------------------------------------------------|
| T6               | -40°C...+40°C                                           |
| T4               | -40°C...+70°C                                           |

option for T<sub>a,min</sub>: -50°C

The devices are FM Certified as Single Seal devices per ANSI/ISA 12.27.01 as tabulated below; therefore installation of external secondary seals is not required.

| Single Seal | Model                  | Limited to:        |                       |
|-------------|------------------------|--------------------|-----------------------|
|             |                        | MWP*               | Process Temperature** |
|             | PMD75, FMD77 and FMD78 | 420 bar (6091 psi) | -40°C...+100°C        |

\* Limitations of the Maximum Working Pressure (MWP) are marked on the nameplate and must be considered!

\*\* Limitations of the process temperature range depending on the used version are specified in the applicable technical information of the manufacturer and must be considered!

FMD77: FMD78 allows higher process temperatures depending on the used diaphragm seal. This is allowable provided the above specified process temperatures are guaranteed at the sensor close to the enclosure (location of primary seal) for these types.

This device is suitable to be installed in accordance with the wiring methodes of Division 1/ Zone 0 for intrinsic safety (as defined above) and for Division 1/ Zone 1 for explosion proof protection or dust ignition proof and Division 2 for type of protection nonincendive.

For installations in accordance with the requirements of explosion proof protection the device is suitable for:

XP, CII, Div.1, Gp. ABCD

Conduit seal must be installed within 18 inches of enclosure.

Max. supply voltage: 45 VDC.

Ambient temperature range: -40°C...75°C (optional T<sub>a,min</sub> -50°C).

Warning: Changing the type of protection after first installation may impair the explosion protection.

Intrinsically safe (entity), Class I, Div.1, Groups A, B, C, D, Class II, III, Div.1, Groups E, F, G for approval ordercodes „E“ or „F“; Intrinsically safe (entity), Class I, Div.1, Groups A, B, C, D, Hazardous Location Installations

- Control room equipment may not use or generate over 250 V.
- Use FM Approval Entity-approved intrinsic safety barrier with  $V_{oc}$  or  $V_t \leq V_{max}$ ,  $I_{sc}$  or  $I_t \leq I_{max}$ ,  $C_a \geq C_i$ ,  $L_a \geq L_i$ .  
Barrier must be incapable of delivering more than 1 Watt to a matched load.  
Transmitter entity parameters are as follows:  $V_{max} = 30$  VDC  
 $I_{max} = 200$  mA  
 $C_i \leq 11.8$  nF  
 $L_i \leq 225$   $\mu$ H ('electronic' option code A, B, C) or  
 $L_i = 0$  ('electronic' option code D, E, F)  
 $P_{max} = 1$  W  
for T-code see table
- 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).
- Warning: Substitution of Components may impair intrinsic safety.
- Intrinsic safety barrier manufacturer's installation drawing must be followed, when installing this equipment: The configuration of the intrinsic safety barrier(s) must be FM Approvals approved.
- Use supply wires suitable for 5°C above surrounding ambient.
- Avoid electrostatic charge of plastic surfaces, plastic process connections or coatings.

DIP for Class II and III, Div.1, Groups E, F, G Hazardous Location Installation  
Nonincendive Class I, Div.2, Groups A, B, C, D Hazardous Location Installation  
(not for approval ordercode „E“ or „F“)

- Depending on location install per National Electrical Code (NEC) using wiring methods described in Article 500 through 510.  
Intrinsic safety barrier not required.  
Max. supply voltage 45 VDC.
- DIP installations: A dust tight seal must be used at the conduit entry when the transmitter is used in a Class II & III location.
- Warning: Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non hazardous.
- Nonincendive field wiring installation:  
The Nonincendive Field Wiring Circuit Concept allows interconnection of nonincendive field wiring apparatus with associated nonincendive field wiring apparatus or associated apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when  $V_{max} \geq V_{oc}$  or  $V_t$ ,  $C_a \geq C_i$  + Ccable,  $L_a \geq L_i$  + Lcable.  
Transmitter parameters are as follows:  
 $V_{max} = 45$  VDC;  $C_i \leq 11.8$  nF;  $L_i \leq 225$   $\mu$ H;  $I_{max} =$  see note 5.
- For these current controlled circuit, the parameter  $I_{max}$  is not required and need not to be aligned with parameter  $I_{sc}$  and it of the associated nonincendive field wiring apparatus or associated apparatus.

