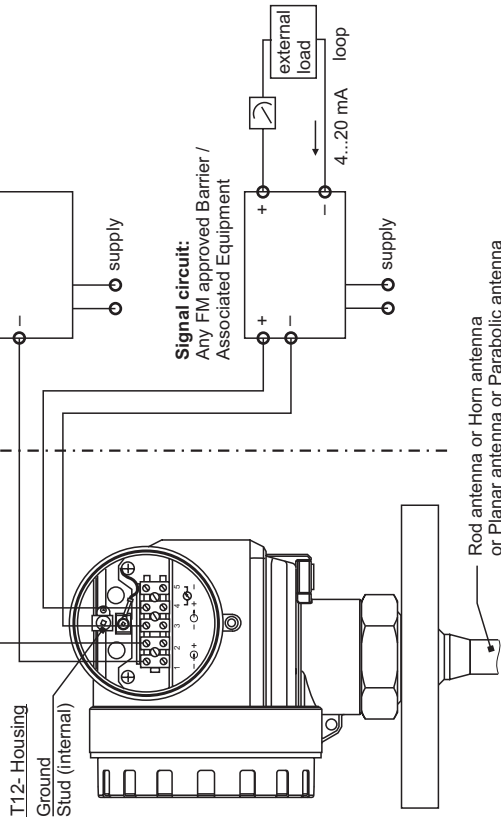


**HAZARDOUS AREA**

Class I, Div. 1, 2, Groups A, B, C, D  
Class I, Zone 0, IIC T\*  
Class II, Div. 1, 2, Groups E, F, G  
Class III



**NON HAZARDOUS AREA**

**Supply circuit:**  
Any FM approved Barrier / Associated Equipment

**Signal circuit:**  
Any FM approved Barrier / Associated Equipment

**Area of application**

The compact instruments are suitable for use in areas subject to explosion caused by gases, vapours or mists.  
Permissible ambient temperature:  
Electronics: Intrinsically safe, T12-enclosure: -40...+80 °C  
Antennas:  
Horn/Parabolic: -40...+200 °C  
High temperature (Horn): -40...+400 °C  
PTFE Rod/Planar: -40...+150 °C

Permissible process / ambient temperature and temperature code:

Temperature code of Micropilot S	Permissible medium temperature (flange)	Permissible ambient temperature of electronics compartment as a function of medium temperature (antennas)	FMR530- High temperature antenna	FMR531- antenna	FMR532- antenna	FMR533- antenna
T6	+ 80 °C + 60 °C	+50 °C +55 °C	+50 °C +55 °C	+50 °C +55 °C	+50 °C +55 °C	+50 °C +55 °C
T5	+ 95 °C + 70 °C	+65 °C +70 °C	+70 °C +75 °C	+65 °C +70 °C	+65 °C +70 °C	+65 °C +70 °C
T4	+ 130 °C	+70 °C	+75 °C	+70 °C	+70 °C	+70 °C
T4A	+ 80 °C	+80 °C	+80 °C	+80 °C	+80 °C	+80 °C
T3C	+150 °C	+70 °C	+75 °C	+70 °C	+70 °C	+70 °C
T3	+195 °C	+65 °C	+70 °C	-	-	+60 °C
T2	+295 °C	-	+65 °C	-	-	-
T1	+350 °C +400 °C	-	+60 °C +55 °C	-	-	-

**Functional ratings**

These ratings do not supersede Hazardous Locations Values  
Supply circuit:  $V_{nom} = 16...30V$ ,  $I_{nom} = 21mA$  ( $I_{nom} \leq 50mA$  during power on)  
Signal circuit:  $V_{nom} = 16...30V$ ,  $I_{nom} = 4...20mA$

**Notes: Intrinsically safe installation**  
Intrinsically safe (entity), Class I, Div. 1, Groups A, B, C, D or Zone 0 IIC Hazardous Location Installation

- Control room equipment may not use or generate over 250 V<sub>max</sub>. ANSI/ISA RP12.06.01.
- Installation should be in accordance with the National Electrical Code NFPA 70 (NEC) and ANSI/ISA RP12.06.01.
- Warning: Substitution of components may impair intrinsic safety.
- Use FM Approvals Entity-Approved intrinsic safety barrier with  $U_0/V_{oc} \leq U/V_{max}$ ,  $I_0/I_{sc} \leq I/I_{max}$ ,  $C_0/C_c \geq C + C_{cable}$ ,  $L_0/L_c \geq L_1 + L_{cable}$ . Barrier must be incapable of delivering more than 1 Watt to a matched load. Transmitter entity parameters are as follows:

Intrinsically safe supply circuit (Terminals: 1, 2):

U <sub>0</sub> /V <sub>max</sub> [V]	I <sub>0</sub> /I <sub>max</sub> [mA]	P <sub>0</sub> /P <sub>max</sub> [W]	C <sub>0</sub> [nF]	L <sub>0</sub> [µH]
30	300	1.0	≤ 16	40

Intrinsically safe signal circuit (Terminals: 3, 4):

U <sub>0</sub> /V <sub>max</sub> [V]	I <sub>0</sub> /I <sub>max</sub> [mA]	P <sub>0</sub> /P <sub>max</sub> [W]	C <sub>0</sub> [nF]	L <sub>0</sub> [µH]
30	300	1.0	≤ 13	9

- Use supply wires suitable for 5 °C above surrounding ambient.
- Intrinsic safety barrier manufacturer's installation drawing must be followed when installing this equipment. The configuration of the intrinsic safety barrier(s) must be approved by FM Approvals.
- In case of use of the planar or parabolic antenna avoid electrostatic charge at the antenna (e.g. do not rub with dry cloth; do not install within the filling curtain).

**Division 2 and Zone 2 installation**  
Nonincendive Class I, Div. 2, Groups A, B, C, D  
Hazardous Location Installation

- Installation shall be in accordance with NEC using threaded metal conduits or other wiring methods in accordance with Article 500 through Article 510. Intrinsic safety barrier not required.  
Max. supply voltage 30 V. For T-code see table.
- Warning: Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.  
Warning: Explosion hazard - substitution of components may impair suitability for Class I, Div. 2. Nonincendive Field Wiring Installation.

Nonincendive Field Wiring Installation:

- Installation shall be in accordance with NEC.
- 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  $V_1$ ,  $C_0$  or  $C_s \geq C + C_{cable}$ ,  $L_0$  or  $L_s \geq L_1 + L_{cable}$ .  
Transmitter non incedive field wiring parameters for these current controlled circuits are as follows:  
Supply circuit:  $V_{max} = 30V$ ,  $C_0 \leq 16nF$ ,  $L_1 = 40 \mu H$ ,  $I_{max}$  \*see note 3  
Signal circuit:  $V_{max} = 30V$ ,  $C_0 \leq 13nF$ ,  $L_1 = 0 \mu H$ ,  $I_{max}$  \*see note 3
- For these current controlled circuits, the parameter  $I_{sc}$  is not required and need not be aligned with parameter  $I_{sc}$  or  $I_0$  of the barrier or associated nonincendive field wiring apparatus.

**Class II, III installation**  
DIP for Class II and III, Div. 1, Groups E, F, G  
Hazardous Location Installation

- Installation shall be in accordance with NEC using threaded metal conduits or other wiring methods in accordance with Article 500 through Article 510.
- Use a dust tight seal at the conduit entry.

