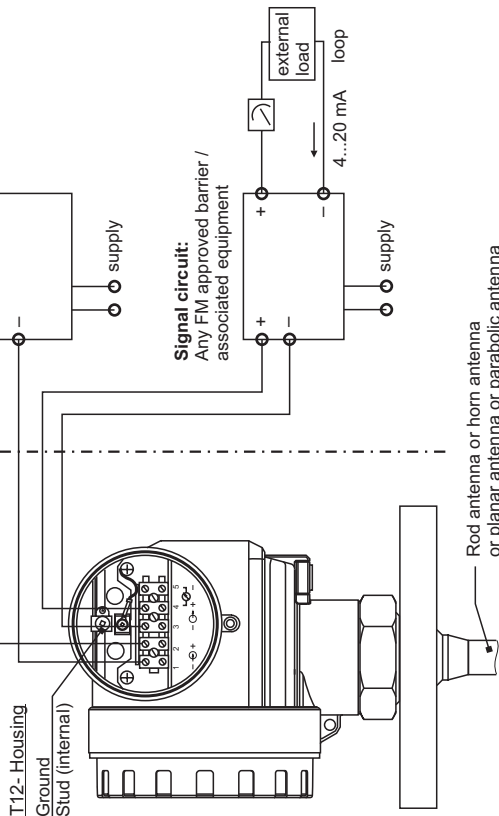


HAZARDOUS AREA

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



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- FMR532- FMR533-
T6	+ 80 °C + 60 °C	+50 °C +55 °C	+50 °C +55 °C +50 °C +55 °C
T5	+ 95 °C + 70 °C	+65 °C +70 °C	+65 °C +70 °C +65 °C +70 °C
T4	+130 °C	+70 °C	+70 °C +70 °C
T4A	+ 80 °C	+80 °C	+80 °C +80 °C
T3C	+150 °C	+70 °C	+70 °C +70 °C
T3	+195 °C	+65 °C	-
T2	+295 °C	-	-
T1	+350 °C +400 °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 250V_{max}. ANSI/ISA RP12.06.01.
- Installation should be in accordance with the National Electrical Code NFPA 70 (NEC) and

3. Warning: Substitution of components may impair intrinsic safety.

- Use FM Approvals Entity-Approved intrinsic safety barrier with $U_0/V_{oc} \leq U/V_{max}$, $I_0/I_{sc} \leq I/I_{max}$, $C_0/C_s \geq C + C_{cable}$, $L_0/L_s \geq L + L_{cable}$. 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_0/V_{max} [V]	I_0/I_{sc} [mA]	P/P_{max} [W]	C_0 [nF]	L_0 [µH]
30	300	1.0	≤ 18.5	13

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

U_0/V_{max} [V]	I_0/I_{sc} [mA]	P/P_{max} [W]	C_0 [nF]	L_0 [µH]
30	300	1.0	≤ 20.7	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:

- 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_0 , C_0 or $C_s \geq C + C_{cable}$, L_0 or $L_s \geq L + L_{cable}$. Transmitter non incendive field wiring parameters for these current controlled circuits are as follows:
 Supply circuit: $V_{max} = 30V$, $C_s \leq 18.5nF$, $L_s = 13\mu H$, $I_{sc} \leq 300mA$, *see note 3
 Signal circuit: $V_{max} = 30V$, $C_s \leq 20.7nF$, $L_s = 0\mu H$, $I_{sc} \leq 300mA$, *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.

