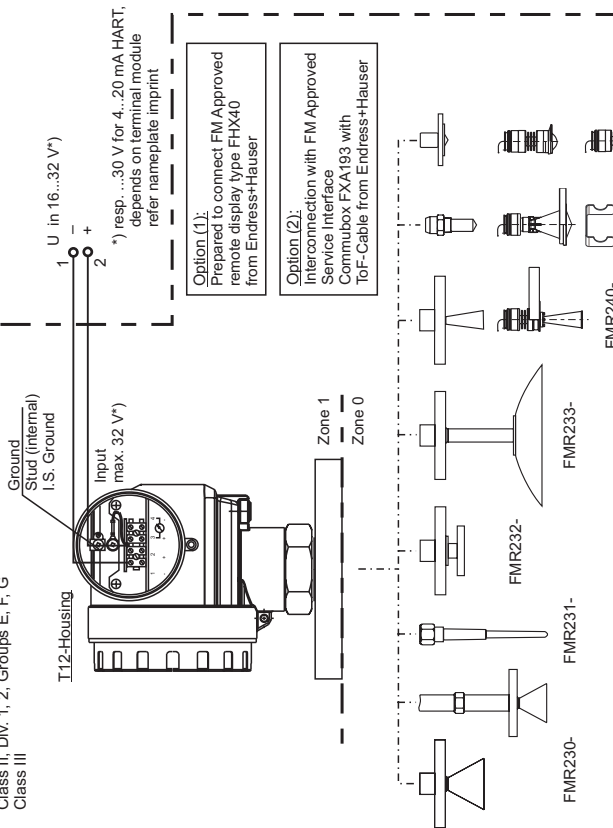


HAZARDOUS LOCATION

- Class I, Div. 1, 2, Groups A, B, C, D
- T12 Housing: Class I, Zone 1, IIC
- Antenna: Class I, Zone 0, IIC TX
- Class II, Div. 1, 2, Groups E, F, G
- Class III



NON HAZARDOUS LOCATION

Notes.

Division 1 Installation
EXPLOSION PROOF

Class I, Div. 1, Groups A, B, C, D or AEx d ia IIC; Class II Div. 1, Groups E, F, G; Class III, Hazardous Location Installation.

1. Install per National Electrical Code (NEC).
2. Supply wires shall be installed in conduit in accordance with the NEC.
3. Control room equipment may not use or generate over 250 Vrms.
4. Terminal compartment:
Warning: Keep cover tight when circuit is alive or the area is known to be non-hazardous.
For electronic, maximum ambient temperature = 70 °C.
Use supply wires suitable for 5 K above surrounding ambient.
5. Ground stud shall be connected to a grounding electrode by 12 AWG wire or larger insulated conductors.
6. Resistance between ground stud and grounding electrode shall be less than 1 Ohm.
7. Use a dust tight seal at the conduit entry in Class II and III Location.
8. Only for ZONE acc. IEC installation:
In case of use of PTFE rod antenna (white), planar, parabolic, enamelled horn, type 244 or type 245 avoid electrostatic charge at the antenna; (e.g. do not rub with dry cloth; do not install within the filling curtain).
9. Apparatus with faucet: In case of disconnection of Micropilot M from the faucet (e.g. for maintenance) we recommend to secure resp. to close the faucet e.g. with an additional blind flange. The responsibility for applicability of the arrangement behaves exclusive the operator.

Division 2 and Zone 2 installation

Nonincendive, Class I, Div. 2, Groups A, B, C, D, Hazardous Location Installation.

1. Installation shall be in accordance with NEC using threaded conduits or other wiring methods in accordance with Article 500 through Article 510.
Intrinsic safety barrier not required. Max. supply voltage 32 V*. For T-code see table.
2. Warning: Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be Non-Hazardous.
Warning: Substitution of components may impair suitability for Class I, Division 2.

Class II, III installation

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

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

Temperature class with/without display VU331	Permissible max. ambient temperature of the electronic compartment (Ta) (enclosure T12 (XP-IP))										
	FMR230 - .E/V/K/D/H	FMR230 - ..L	FMR230 - ..M	FMR230 - ..F/G	FMR231	FMR232	FMR233	FMR240	FMR240 Wave Guide	FMR244	FMR245
T6	+55/50 °C	+60/55 °C	+60/55 °C	+60/55 °C	+55/55 °C	+55/50 °C	+55/50 °C	+55/50 °C	+60/55 °C	+55/50 °C	+55/50 °C
T5	+60/55 °C	+65/60 °C	+60/55 °C	+60/55 °C	+60/55 °C	+60/55 °C	+60/55 °C	+60/55 °C	+60/55 °C	+60/55 °C	+60/55 °C
T4	+65/60 °C	+70 °C	+65/60 °C	+65/60 °C	+65/60 °C	+65/60 °C	+65/60 °C	+65/60 °C	+65/60 °C	+65/60 °C	+65/60 °C
T3C (functional)	+60 °C	+70 °C	+65 °C	+65 °C	+65 °C	+65 °C	+65 °C	+65 °C	+65 °C	+65 °C	+65 °C
T3	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C
T2B (functional)	+130 °C	+70 °C	+65 °C	+65 °C	+55 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C
T2	+150 °C	+70 °C	+65 °C	+65 °C	+60 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C
T1	+195 °C	+70 °C	+65 °C	+65 °C	+60 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C
T1 (functional)	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C	+70 °C
T1 (functional)	+250 °C	+70 °C	+65 °C	+65 °C	+55 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C
T1 (functional)	+280 °C	+70 °C	+65 °C	+65 °C	+60 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C
T1 (functional)	+290 °C	+70 °C	+65 °C	+65 °C	+60 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C
T1 (functional)	+350 °C	+70 °C	+65 °C	+65 °C	+60 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C
T1 (functional)	+400 °C	+70 °C	+65 °C	+65 °C	+60 °C	+60 °C	+60 °C	+60 °C	+65 °C	+60 °C	+60 °C

Note: the applicable temperature of antenna must be within their specified limits: Tx (functional) means limited through type of antenna; T6 and T5 requires for FF electronic enlarged derating; for ambient, 1st number = HART or PA electronic insert, 2nd number = FF electronic insert e.g. +60/55 °C expression means: Apparatus with HART or PA electronic insert max. ambient at housing = +60 °C; Apparatus with FF electronic insert max. ambient at housing = +55 °C

Area of application:
The compact instruments are suitable for use in areas subject to explosion caused by gases, vapours or mists.

Permissible ambient temperature:
Electronic: T12 enclosure -40...+70 °C resp. -40...+158 °F

Type	Type of antennas	Operation temperature 1)
FMR230 - .F	Horn antenna with PTFE-Konund feeder	-40 °C/-40 °F to +200 °C/392 °F
-..G	HT antenna (lanial gasket)	-40 °C/-40 °F to +350 °C/662 °F
	HT antenna (Graphite gasket)	-60 °C/-76 °F to +400 °C/752 °F
	Horn antenna with scavenger connection	depends on type
-L	XT extended temperature	-60 °C/-76 °F to +280 °C/536 °F
-..M	HT (high temperature)	-60 °C/-76 °F to +400 °C/752 °F
FMR231 -	Rod antenna PPS	-20 °C/-4 °F to +120 °C/250 °F
	Rod antenna PTFE	-40 °C/-40 °F to +150 °C/300 °F
	Rod antenna PTFE cladded	-40 °C/-40 °F to +150 °C/300 °F
	Sanitary (process connection)	-40 °C/-40 °F to +150 °C/300 °F
	PVDF (process connection)	-20 °C/-4 °F to +80 °C/176 °F
FMR232 -	Planar antenna	-40 °C/-40 °F to +150 °C/300 °F
FMR233 -	Parabolic antenna	-40 °C/-40 °F to +200 °C/392 °F
FMR240 -	> 20 GHz horn antenna	-40 °C/-40 °F to +150 °C/300 °F
	Wave guide antenna	-60 °C/-76 °F to +200 °C/392 °F
	Horn compact, extended, special edition	-40 °C/-40 °F to +150 °C/300 °F
FMR244 -	Compact antenna (PTFE capsuled)	-40 °C/-40 °F to +130 °C/266 °F
	80 mm/3", PP cladded (type 4)	-40 °C/-40 °F to +80 °C/176 °F
FMR245 -	Compact antenna (types 3, 4)	-40 °C/-40 °F to +150 °C/302 °F
	DN50 + DN80 (types B, C, F, G)	-40 °C/-40 °F to +200 °C/392 °F

1) Note: take care to specific temperature ranges of antenna versions



FM Control Drawing
960402-1067 H

Micropilot M
FMR230/231/232/233/240/244/245
(T12 / XP)

