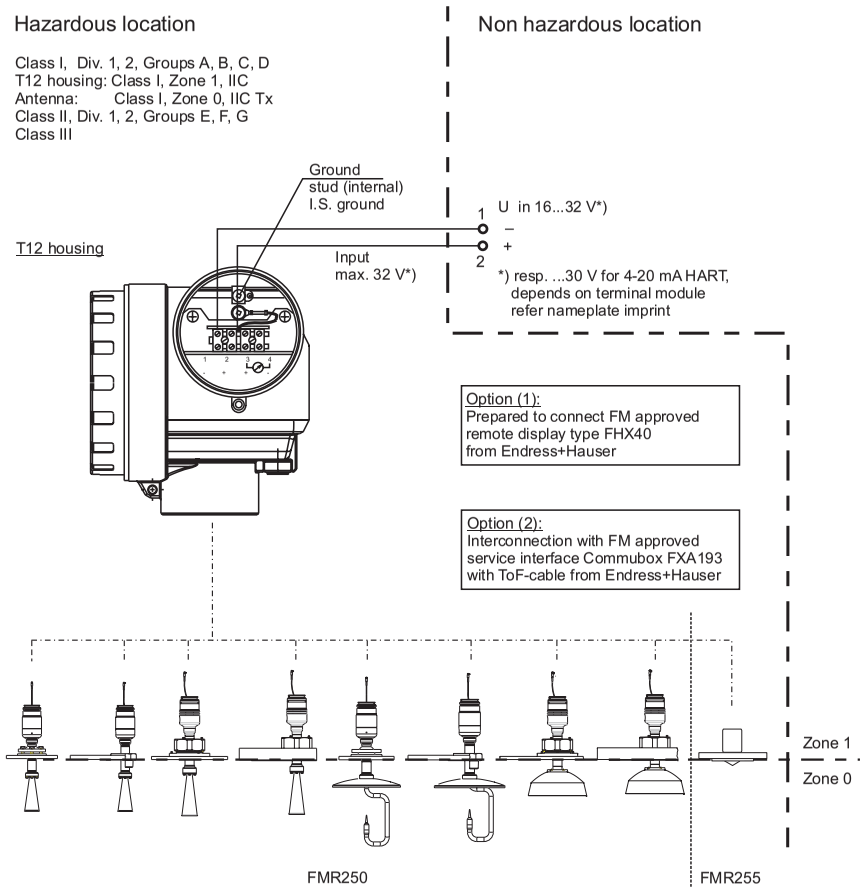
XA00607F-E/00/EN/13.11
CCS/FM6.0
FM/E 17.05.11
71156465

FM Control Drawing
960006749 E

Micropilot M
FMR250, FMR255
(T12 / XP)

Endress+Hauser
People for Process Automation



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
FMR250 -	Horn Parabolic	–40 °C/–40 °F to +200 °C/392 °F –40 °C/–40 °F to +200 °C/392 °F
FMR255 -	Compact	–40 °C/–40 °F to +150 °C/302 °F

Note: Take care to specific temperature ranges of antenna versions

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 locations installations.

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.
5. For electronic: Maximum ambient temperature = 70 °C
6. Use supply wires suitable for 5 K above surrounding ambient.
7. Ground stud shall be connected to a grounding electrode by 12 AWG wire or larger insulated conductors.
   Resistance between ground stud and grounding electrode shall be less than 1 Ohm.
8. Use a dust tight seal at the conduit entry in Class II and III location.
9. Use of scavenge junction
   It is the users responsibility to use the adequate method by using the scavenge device, like:
   Installation has to be IP-grade 67 resp. IP-grade 65 (IEC/EN 60529), depends on location.
   Scavege pressure > inside pressure at the container, max 10 bar resp. 150 psi.
   At non-scavenge status, a barrier spigot resp. valve must be closed.
   If the valve / spigot is open and no scavenge fluid is present the risk of flammable gas or combustible dust releases and flame entrance from outside exists.
10. FMR255: Avoid electrostatic charge at the antenna (e.g. do not rub with dry cloth; do not install within the filling curtain).
11. 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 behooves exclusive the operator.
12. Dual seal device per ISA 12.27.01. Additional process seal not required.

Division 2 and Zone 2 installation

Nonincendive, Class I, Div. 2, Groups A, B, C, D Hazardous locations installations.

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.
3. Dual seal device per ISA 12.27.01. Additional process seal not required.

Class II, III installation

DIP for Class II and III, Div. 1, Groups E, F, G Hazardous locations installations.

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. medium temperature at the probe (process connection) Tmed	Permissible max. ambient temperature of the electronic compartment (Ta) (T12 housing)					
		FMR250 Horn or parabolic antenna				**FMR255**	
		Option 20 (Antenna) 4, 5 or 6		Option 20 (Antenna) D, E, G, H or 9[2)]			
		HART or PROFIBUS PA	FOUNDATION Fieldbus	HART or PROFIBUS PA	FOUNDATION Fieldbus	HART or PROFIBUS PA	FOUNDATION Fieldbus
T6	+ 80 °C + 60 °C	+55 °C +60 °C	+50 °C +55 °C	+55 °C +60 °C	+50 °C +55 °C	+55 °C +60 °C	+50 °C +55 °C
T5	+ 95 °C + 70 °C	+65 °C +70 °C	+60 °C +70 °C	+65 °C +70 °C	+60 °C +70 °C	+65 °C +70 °C	+60 °C +70 °C
T4	+130 °C + 70 °C	+65 °C +70 °C	+65 °C +70 °C	+60 °C +70 °C	+60 °C +70 °C	+60 °C +70 °C	+60 °C +70 °C
T3C (functional)[1)]	+150 °C + 70 °C	+63 °C +70 °C	+63 °C +70 °C	+60 °C +70 °C	+60 °C +70 °C	+60 °C +70 °C	+60 °C +70 °C
T3	+195 °C + 70 °C	+60 °C +70 °C	+60 °C +70 °C	+55 °C +70 °C	+55 °C +70 °C	---	---
T2, T1 (functional)[1)]	+200 °C + 70 °C	+60 °C +70 °C	+60 °C +70 °C	+55 °C +70 °C	+55 °C +70 °C	---	---

Note: The applicable temperature of probe must be within their specified limits
[1)] Functional means max. permissible process temperature
[2)] Special version of horn or parabolic reflector dimensions