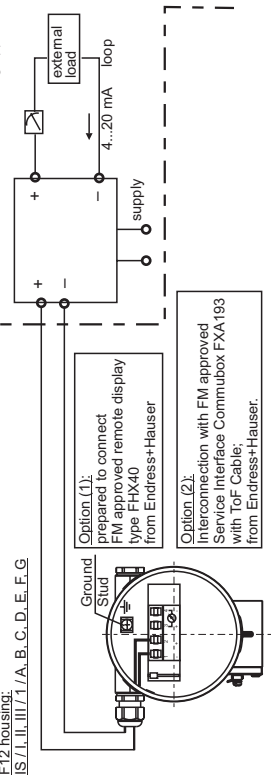


HAZARDOUS LOCATION

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



ZD075F-D/00/en/03.08
CCS/FM6.0
FM/D 31.07.07

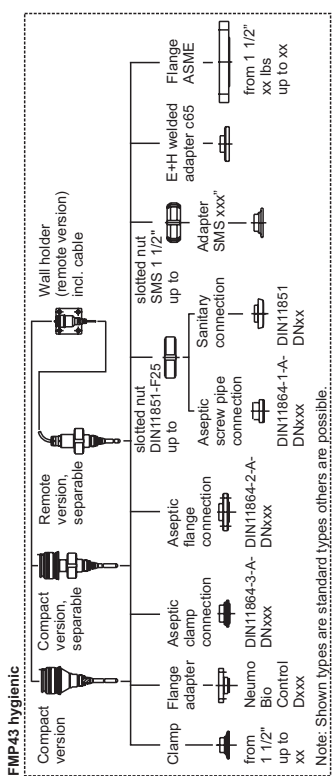
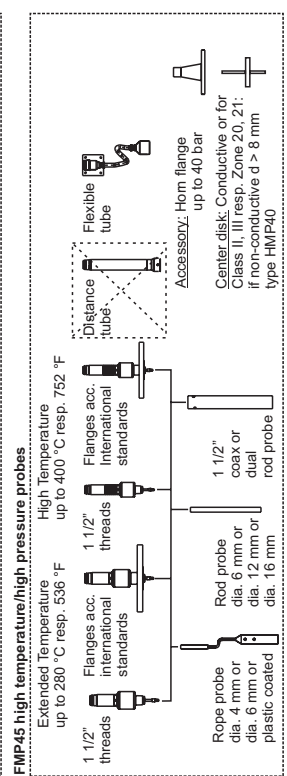
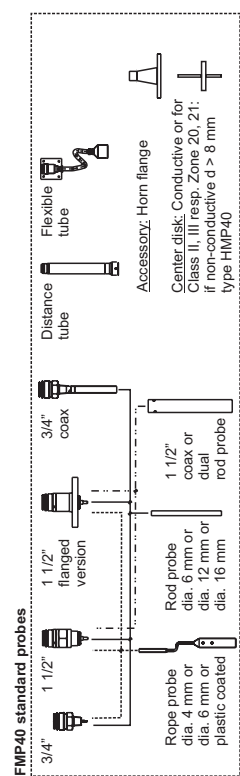
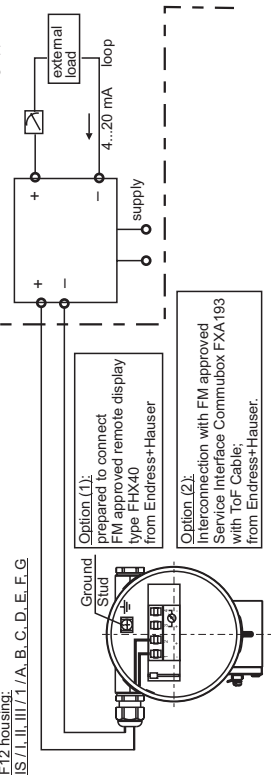
FM Control Drawing 960409-1170 D

Levelflex M
FMP4x
(F12 / IS-HART)



NON HAZARDOUS LOCATION

Any FM approved associated apparatus or associated nonincendive field wiring apparatus



Note: Shown types are standard types others are possible.
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: F12 enclosure: -40...+80 °C resp. -40...+176 °F
Probes: FMP40, FMP45 or FMP43 refer Technical Information

Notes:

- Intrinsically safe installation intrinsically safe (entity), Class I, Div. 1, Groups A, B, C, D; Hazardous Location Installation.
- Control room equipment may not use or generate over 250 Vrms.
- Use FM Approvals Entity-Approved intrinsic safety barrier with Voc or V ≤ Vmax, Isc or It ≤ Imax, Ca ≥ Ci + Ccable, La ≥ Li + Lcable barrier must be incapable of delivering more than 1 W to a matched load.
- Transmitter entity parameters are as follows: Vmax = 30 V; Imax = 300 mA; Ci ≤ 13 nF; Li = 0 μH; Pmax = 1 W.
- Installation should be in accordance with ANSI/ISA RP12.06.01.
- 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 Approved.
- Use supply wires suitable for 5 K above surrounding ambient.
- Probes made out of special materials like Alloy C22 marked as FMP40-1..... or FMP40-2..... should be used only in liquids or lightweight solids (e.g. plastic granulate, fly-ash, ...). Maximum permissible tensile force at the rope or rod 2000 N.
- FMP43 with separable probe in separated mode shall be closed by protective cover.

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 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.
- Nonincendive field wiring installation.
- The Nonincendive Field Wiring Circuit Concept allows interconnection of nonincendive field wiring apparatus with associated nonincendive field wiring apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when Vmax ≥ Voc or Vi, Ca ≥ Ci + Ccable, La ≥ Li + Lcable.
- Transmitter non incendive field wiring parameters for these current controlled circuit are as follows:
Vmax = 30 V; Ci ≤ 13 nF; Li = 0 μH; Imax = see note 3.
- For these current controlled circuit, the parameter Imax is not required and need not to be aligned with parameter Isc and it of the associated nonincendive field wiring apparatus or associated equipment.
- 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.
- Installation shall be in accordance with NEC using threaded conduits or other wiring methods in accordance with Article 500 through Article 510.
- 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 maximum ambient temperature of the electronic compartment (Ta) (enclosure F12)					
		FMP40 with 3/4" probe, compact	FMP40 with 1 1/2" probe, compact	FMP40 with 1 1/2" probe, remote electronic with distance tube	FMP40 with 1 1/2" probe, remote electronic with flexible tube	FMP43 compact or separable	FMP43 remote electronic with flexible tube
T6	+ 80 °C + 95 °C	+55 °C +60 °C	+55 °C +60 °C	+60 °C +60 °C	+60 °C +60 °C	+55 °C +60 °C	+60 °C +60 °C
T5	+ 95 °C + 130 °C	+70 °C +75 °C	+70 °C +75 °C	+70 °C +75 °C	+75 °C +75 °C	+70 °C +75 °C	+75 °C +75 °C
T4	+ 130 °C + 150 °C	+75 °C +80 °C	+75 °C +80 °C	+75 °C +80 °C	+80 °C +80 °C	+70 °C +80 °C	+80 °C +80 °C
T3 (functional) ¹	+ 150 °C + 195 °C	+80 °C +80 °C	+80 °C +80 °C	+75 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C
T2 (functional) ¹	+ 195 °C + 250 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C
T1 (functional) ¹	+ 250 °C + 290 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C	+80 °C +80 °C

Note: the applicable temperature of probe must be within their specified limits;
* functional means max. permissible process temperature

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) (enclosure F12)	
		FMP45 type A (XT version)	FMP45 type B or C (HT version)
T6	+ 80 °C + 95 °C	+58 °C +60 °C	+60 °C +60 °C
T5	+ 95 °C + 130 °C	+73 °C +75 °C	+75 °C +75 °C
T4	+ 130 °C + 150 °C	+76 °C +80 °C	+80 °C +80 °C
T3 (functional) ¹	+ 150 °C + 195 °C	+74 °C +80 °C	+80 °C +80 °C
T2 (functional) ¹	+ 195 °C + 250 °C	+72 °C +80 °C	+80 °C +80 °C
T1 (functional) ¹	+ 250 °C + 290 °C	+69 °C +80 °C	+80 °C +80 °C

Note: the applicable temperature of probe must be within their specified limits;
* functional means max. permissible process temperature

Functional ratings:
These ratings do not supersede Hazardous Locations values
Unom ≤ 30 V
Inom = 4...20 mA
(max. 25 mA)