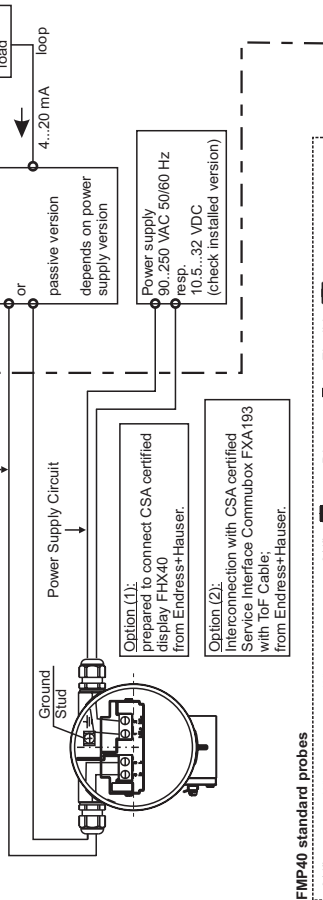


**HAZARDOUS LOCATION**  
Class II, Div. 1, GROUP G + Coal Dust  
Class III

F12 housing;  
Output I.S./Ex ia IIB  
Suitable for I.S./I, II, III, I, I.C., D, G + Coal Dust



**NON HAZARDOUS LOCATION**

**Notes:**  
**HAZARDOUS LOCATION INSTALLATION**

1. Install per the Canadian Electrical Code (CEC).
2. Power supply wires shall be installed in accordance with the CEC.
3. Control room equipment may not use or generate over 250 Vrms.
- 3.1 The 4W-DC apparatus requires an additional supply fuse with a breaking capacity of minimum 1500 A, if Control room voltage is more than 60 V or use a Class 2 supply.
4. Fuse rating: 250 Vrms / 1 A T or 250 Vrms / 1 A mT.
4. Warning: Keep cover tight when circuit is alive unless the area is known to be non-hazardous.
5. For electronic: maximum ambient temperature = 80 °C.
6. Use supply wires suitable for 5 K above surrounding ambient.
7. Use a dust tight seal at the conduit entry in Class II and III Location.
8. Transmitter Signal Circuit entry parameters are shown in table below.

9. The following conditions must be met:  
 $U_0 / V_{oc} \leq U_i / V_{max}$ ,  $I_0 / I_{sc} \leq I_i / I_{max}$ ,  $C_0 / C_a \geq C_i + C_{cable}$ ,  $L_0 / L_a \geq L_i + L_{cable}$ .
10. For "active" versions of the "FMP40...": transmitter, a diode-return type barrier ( $I_0 / I_{sc} = 0$ ) must be used. Probes made out of special materials like Alloy C22 marked as FMP40...1... or FMP40...2... should be used only in fluids or lightweight solids (e.g. plastic granulate, fly-ash, ...). Maximum permissible tensile force at the rope or rod 2000 N. Use specific cables, supplied with the Service Interface Commubox FXA193 or Remote Display FXH40.
11. Refer to the applicable Control Drawing.
12. FMP43 with separable probe in separated mode shall be closed by protective cover.

**CLASS I, DIV. 2, GROUPS G, D or EX nC IIB AND DIP, FOR CLASS II AND III, DIV. 1, GROUP G and Coal Dust HAZARDOUS LOCATION INSTALLATION**

1. Depending on Location install per Canadian Electrical Code (CEC) using wiring methods described in Rule 18-156 or Rule 18-202 or Rule 18-302. Intrinsic safety barrier not required max. supply voltage 30 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: Explosion Hazard - Substitution of components may impair suitability for Class I, Div. 2.  
For Class II and III, Div. 1:  
Warning: Keep cover tight unless power has been switched off or the area is known to be non-hazardous.

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, remote electronic compact with distance tube	FMP40 with 1 1/2" probe, remote electronic compact with flexible tube	FMP40 with remote electronic compact separable remote cable	FMP43 compact or separable remote cable
T4A	+ 80 °C	+80 °C	+80 °C	+80 °C	+80 °C
	+ 95 °C	+75 °C	+75 °C	+75 °C	+80 °C
	+130 °C	+75 °C	+75 °C	+70 °C	+80 °C
T4A	+150 °C	+75 °C	+75 °C	+80 °C	+65 °C
	+ 80 °C	+80 °C	+80 °C	+80 °C	+80 °C
	+ 95 °C	+75 °C	+75 °C	+70 °C	+80 °C
T4A	+130 °C	+75 °C	+75 °C	+80 °C	+80 °C
	+150 °C	+75 °C	+75 °C	+80 °C	+80 °C
	+280 °C	+75 °C	+75 °C	+80 °C	+80 °C

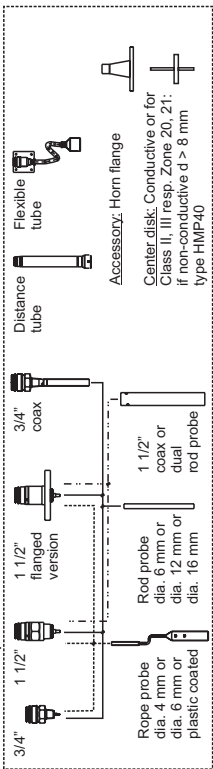
Temperature class with/without display VU331	Permissible max. medium temperature at the probe (process connection) Tmed	Permissible max. ambient temperature of the electronic compartment (Ta) (enclosure F12)	
		FMP45 type A (AT version)	FMP45 with remote electronic with flexible tube
T4A	+ 80 °C	+80 °C	+80 °C
	+ 95 °C	+78 °C	+80 °C
	+130 °C	+78 °C	+80 °C
T4A	+150 °C	+74 °C	+80 °C
	+280 °C	+67 °C	+80 °C
	+400 °C	not allowed	+80 °C

Note:  
The applicable temperature of probe must be within their specified limits.

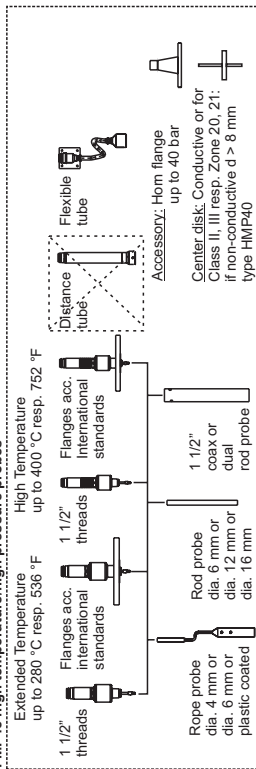
Electrical data:	
Supply circuit	AC DC
Voltage version	10.5...32 VDC
Supply voltage	90...250 VAC 50/60 Hz
Max. power	3.5 VA
Um =	250 VAC
Signal circuit intrinsically safe: Ex ia IIB	active
FMP4x... as version:	passive
	U <sub>0</sub> = 21.4 V
	I <sub>0</sub> = 237.48 mA
	P <sub>0</sub> = 1.271 W
	Characteristic: linear
	L <sub>0</sub> = 3 mH
	C <sub>0</sub> = 1.22 µF

**Thermal data:** Maximum surface temperature of electronic housing (F12) ≤ 115 °C (thermal fused inside)

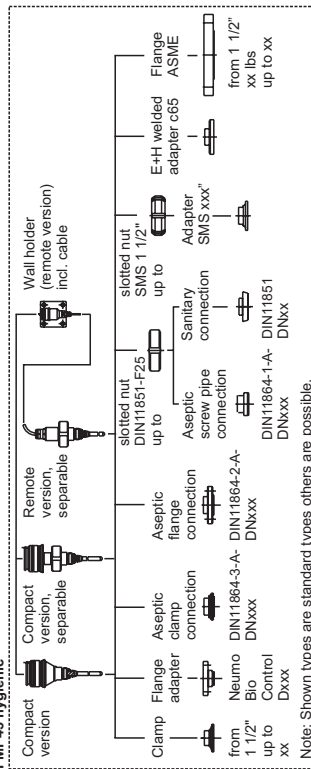
**FMP40 standard probes**



**FMP45 high temperature/high pressure probes**



**FMP43 hygienic**



Note: Shown types are standard types others are possible.  
The compact instruments are suitable for use in areas subject to explosion caused by gases, vapours or mists.  
Permissible ambient temperature: F12 enclosure -40...+80 °C  
Electronic: FMP40, FMP45 or FMP43 refer Technical Information  
Probes: FMP40, FMP45 or FMP43 refer Technical Information

