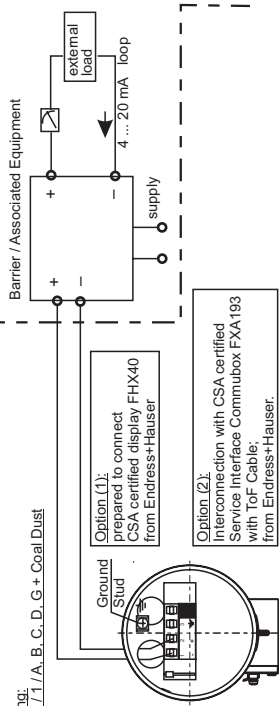


**HAZARDOUS LOCATION**  
Class I, Div. 1, GROUPS A, B, C, D  
Ex ia IIC T<sub>x</sub>  
Class II, Div. 1, GROUP G + Coal Dust  
Class III

F23 housing:  
IS / I, II, III / 1 / A, B, C, D, G + Coal Dust



**NON HAZARDOUS LOCATION**

**INTRINSICALLY SAFE (Ex ia) CLASS I, DIV. 1, GROUPS A, B, C, D or Ex ia IIC HAZARDOUS LOCATION INSTALLATION**

**DIVISION 1 INSTALLATION**

- Control room equipment may not use or generate over 250 Vrms.
- Install per the Canadian Electrical Code.
- Warning: Substitution of components may impair intrinsic safety.
- Ex ia IS defined as intrinsically safe.
- For entry installation use CSA certified safety barrier or other associated equipment that satisfy the following conditions:  
UoVoc ≤ UoVmax, Iofisc ≤ Iflmax, CorCa ≥ Ci + Cable, LotLa ≥ Li + Cable

|             |             |             |         |            |
|-------------|-------------|-------------|---------|------------|
| UI/Vmax (V) | Iflmax (mA) | Pf/Pmax (W) | Ci (nF) | Li (µH)    |
| 30          | 300         | 1.0         | ≤ 13    | negligible |

- For system installation use: CSA certified safety barriers as follows: (a) 28 V / 300 Ω + Ground or (b) 28 V / 300 Ω + 28 V / Diode or (c) 28 V / 300 Ω + 10 V / 50 Ω.
- Use supply wires suitable for 5 K above surrounding ambient.
- Install barrier/associated equipment in accordance with manufacturer's instruction.
- 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.
- Use specific cables, supplied with the Service Interface Commubox FXA193 or Remote Display FHx40.
- Refer to the applicable Control Drawing.
- FMP43 with separable probe in separated mode shall be closed by protective cover.

**CLASS I, DIV. 2, GROUPS A, B, C, D or Ex nc IIC AND D I.P. FOR CLASS II AND III, DIV. 1, GROUP G and Coal Dust HAZARDOUS LOCATION INSTALLATION**

- 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.
- 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 F23 (stainless steel)) |                                  |   |  |
|--|--|--|----------------------------------|---|--|
|  |  | FMP40 with 3/4" probe, remote electronic with distance tube  | FMP40 with 1 1/2" probe, compact | FMP40 with 1 1/2" probe, remote electronic with flexible tube | FMP43 with compact or separable remote cable |
| T6   | + 80 °C<br>+ 60 °C   | +55 °C<br>+60 °C   | +55 °C<br>+60 °C                 | +60 °C<br>+60 °C  | +60 °C<br>+60 °C                             |
| T5   | + 95 °C<br>+ 75 °C   | +70 °C<br>+75 °C   | +70 °C<br>+75 °C                 | +75 °C<br>+75 °C  | +70 °C<br>+75 °C                             |
| T4   | +130 °C<br>+ 80 °C   | +65 °C<br>+80 °C   | +65 °C<br>+80 °C                 | +80 °C<br>+80 °C  | +65 °C<br>+80 °C                             |
| T3   | +150 °C<br>+ 80 °C   | +55 °C<br>+80 °C   | +55 °C<br>+80 °C                 | +80 °C<br>+80 °C  | +55 °C<br>+80 °C                             |
| (functional) <sup>1</sup>                    | + 80 °C  | +80 °C   | +80 °C                           | +80 °C  | +80 °C                                       |

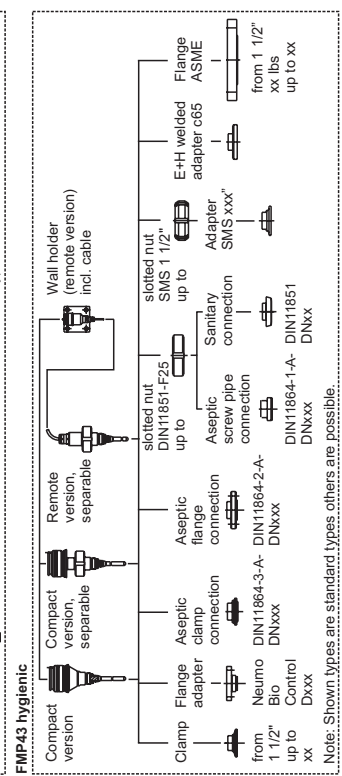
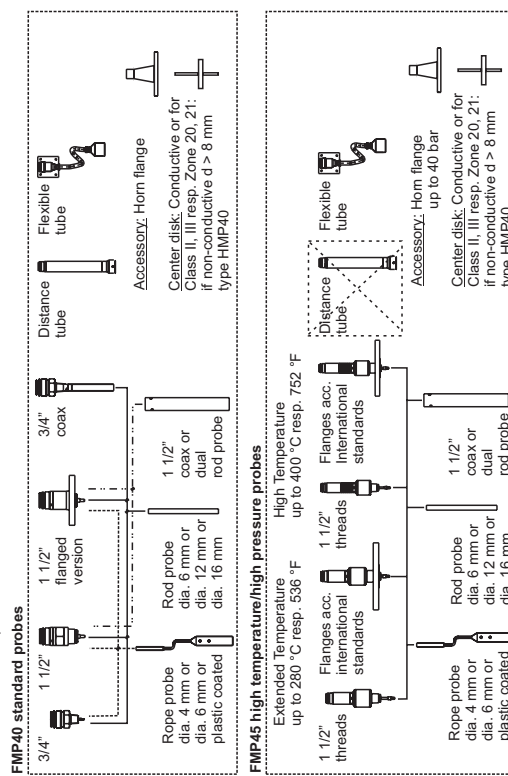
Note: the applicable temperature of probe must be within their specified limits;

\* 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 F23 (stainless steel)) |  |
|--|--|---|--|
|  |  | FMP45 type A (XT version)   | FMP45 with remote electronic with flexible tube (HT version) |
| T6   | + 80 °C<br>+ 60 °C   | +58 °C<br>+60 °C  | +60 °C<br>+60 °C   |
| T5   | + 95 °C<br>+ 75 °C   | +72 °C<br>+75 °C  | +75 °C<br>+75 °C   |
| T4   | +130 °C<br>+ 80 °C   | +74 °C<br>+80 °C  | +80 °C<br>+80 °C   |
| T3   | +150 °C<br>+ 80 °C   | +69 °C<br>+80 °C  | +80 °C<br>+80 °C   |
| (functional) <sup>1</sup>                    | +195 °C<br>+ 80 °C   | +66 °C<br>+80 °C  | +80 °C<br>+80 °C   |
| T2   | +250 °C<br>+ 80 °C   | +60 °C<br>+80 °C  | +80 °C<br>+80 °C   |
| (functional) <sup>1</sup>                    | +290 °C<br>+ 80 °C   | +56 °C<br>+80 °C  | +80 °C<br>+80 °C   |
| T1   | + 80 °C  | +80 °C  | +80 °C   |
| (functional) <sup>1</sup>                    | + 80 °C  | not allowed   | +80 °C   |

Note: the applicable temperature of probe must be within their specified limits;

\* functional means max. permissible process temperature



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:  
F23 enclosure: -40...+80 °C  
Electronics: refer Technical Information  
Probes: FMP40, FMP45 or FMP43

ZD113F-C/00/en/02.08  
CS/FM6.0  
CSA/C 31.07.07

**CSA Control Drawing**  
**960409-2175 C**

Levelflex M  
FMP4x  
(F23 / IS - HART)



People for Process Automation



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