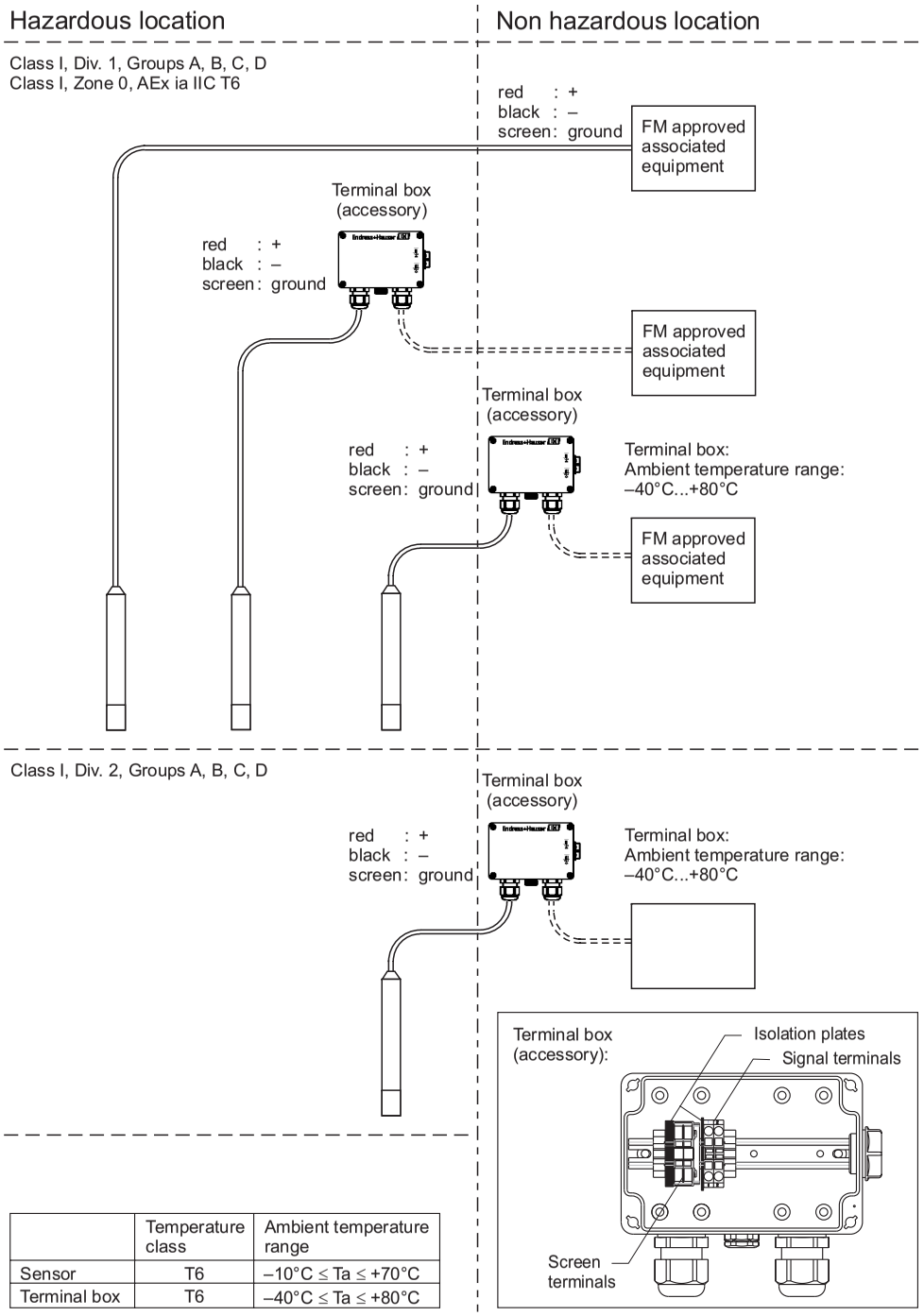
XA00632P-C/00/EN/13.11
CCS/FM6.0
FM/C 13.01.11
71148312

FM Installation Drawing
960503-1009 C

Waterpilot FMX167
(IS)

Endress+Hauser
People for Process Automation



	Temperature class	Ambient temperature range
Sensor	T6	–10°C ≤ Ta ≤ +70°C
Terminal box	T6	–40°C ≤ Ta ≤ +80°C

Intrinsically safe (entity), Class I, Div. 1, Groups A, B, C, D
Hazardous locations installations

1. Control room equipment may not use or generate over 250 V.
2. Use factory mutual entity-approved intrinsic safety barrier with Voc or Vt ≤ Vmax, Isc or It ≤ Imax, Ca ≥ Ci + Ccable, La ≥ Li + Lcable.
   Associated equipment must be incapable of delivering more than 1 Watt to a matched load.
   Transmitter entity parameters are as follows: Vmax = 30 VDC,
   Imax = 133 mA,
   Pmax = 1 W.
   Ci and Li per table:

Length of sensor cable	Ci (5.3 nF + 180 pF/m)	Li (1 µH/m)
5 m	6.2 nF	5 µH
10 m	7.1 nF	10 µH
20 m	8.9 nF	20 µH
30 m	10.7 nF	30 µH
50 m	14.3 nF	50 µH
100 m	23.3 nF	100 µH
200 m	41.3 nF	200 µH
300 m	59.3 nF	300 µH

3. Installation should be in accordance with ANSI/ISA RP 12.6 „Installation of intrinsically safe systems for hazardous (classified) locations" and the National Electrical Code (ANSI/NFPA 70).
4. Warning: Substitution of components may impair intrinsic safety.
5. Intrinsic safety barrier manufacturer's installation drawing must be followed, when installing this equipment: The configuration of the intrinsic safety barrier(s) must be FMRC approved.
6. Use supply wires suitable for 5°C above surrounding ambient.
7. Avoid friction and impact sparks. Anchor equipment if necessary, secure against swinging.
8. Warning: Potential build-up of electrostatic discharge exists.
   Do not rub. Do not clean with dry cloth, do clean only with damp cloth.
   Do not install within filling streams!

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

1. Install per National Electrical Code (NEC), Div. 2 barrier required.
   Max. supply voltage 30 VDC.
2. Warning: Explosion hazard - Do not disconnect equipment unless power has been switched off or area is known to be non hazardous.
   Warning: Substitution of components may impair suitability for Class I, Div. 2.
3. Potential built up of electrostatic discharge exists. Do not clean with dry cloth, do clean only with damp cloth. Do not install within filling streams!
4. Avoid friction and impact sparks. Anchor equipment if necessary, secure against swinging.

Note: For nonincendive field circuit evaluations, the input current (Imax or Ii) of the receiving device need not match the output current (Isc or Io) of the barrier/associated equipment supplying the energy.