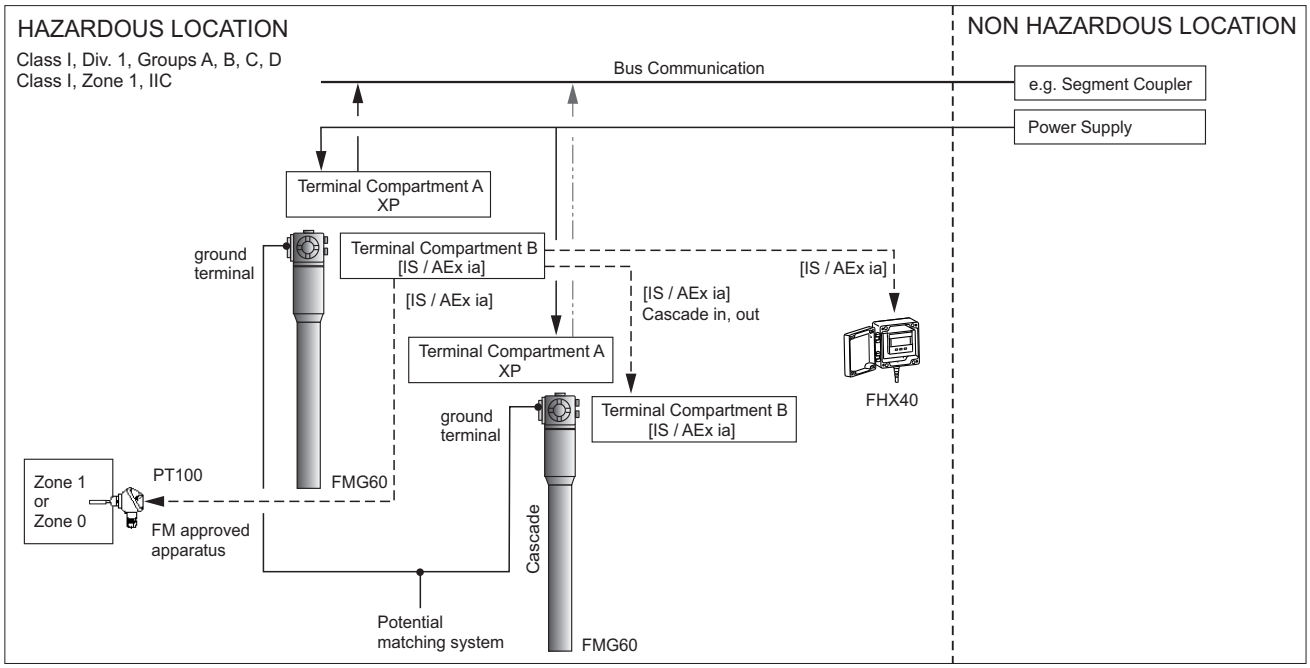
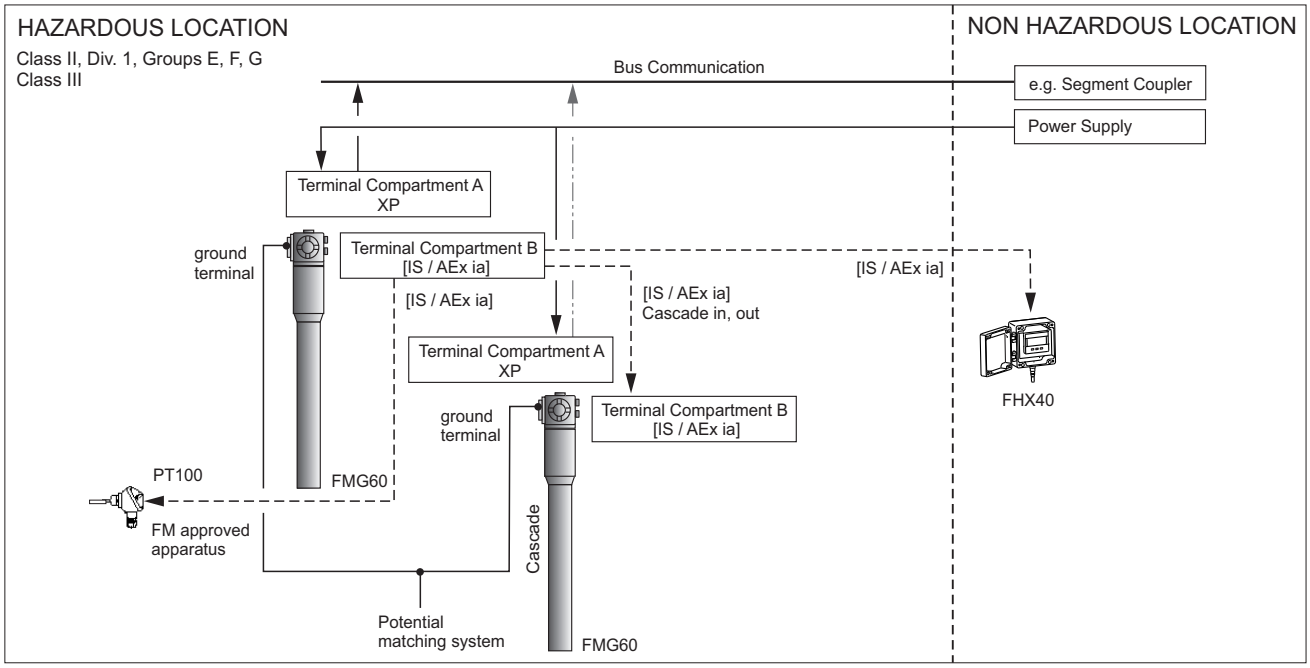
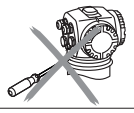
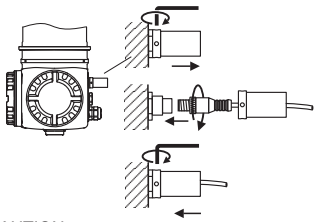




CAUTION:
The screws at the pipe housing must not be loosened!

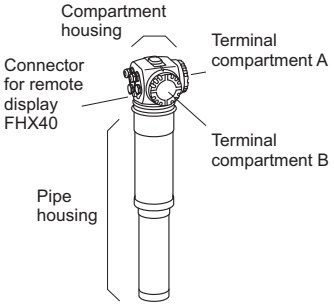


For previous connection depicted below refer to installation drawing: 960007339 A



CAUTION:
After connecting the FHX40 to the FMG60 the protective tube must be installed and secured by the screws.

Gammapilot M FMG60 with
NaJ scintillator or PVT scintillator



Warning :
The non-metallic labels, surface and coatings may store an electrostatic charge and become a source of ignition in gas and dust environments. Clean with a damp cloth to prevent the buildup of electrostatic charge.

XA01108F-D/00/EN/02.18
71410934

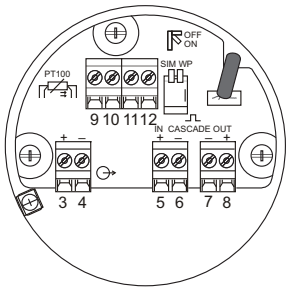
FM/25.05.18

FM Installation Drawing 960007339 D

Gammapilot M FMG60
PROFIBUS PA, FOUNDATION Fieldbus

Endress+Hauser
People for Process Automation

TERMINAL COMPARTMENT B

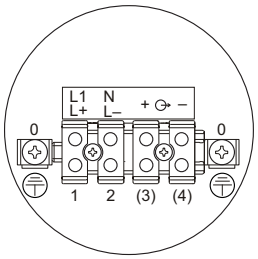


Intrinsically safe circuits Entity Parameters		Group A, B (IIC)	Group C, D (IIA, IIB)
Signal output + –	not connected		
PT100	Voc = 8.4 V Isc = 8.3 mA Po = 17.5 mW Ri = 1012 Ω	Ca = 5.2 µF La = 400 mH	Ca = 43 µF La = 400 mH
Cascade out – +	Voc = 8.4 V Isc = 19.2 mA Po = 40.3 mW Ri = 439 Ω	Ca = 5.1 µF La = 69 mH	Ca = 42 µF La = 199 mH
	Only for connection to Gammapilot FMG60 signal circuit "Cascade in"		
Cascade in + –	Vmax = 8.4 V Imax = 19.2 mA Pi = 40.3 mW Ci = 0 Li = 67 µH		
	Only for connection to Gammapilot FMG60 signal circuit "Cascade out"		
Connection for FHX40	Voc = 4.7 V Isc = 37.7 mA Po = 44.3 mW	For connection to the FM approved intrinsically safe Endress+Hauser display FHX40 with associated cable. Observe Installation Drawing 960411-1006.	
	This circuit may also be connected to the FM approved Endress+Hauser Service Interface Commubox FXA193 with associated connection cable for ToF instruments. Observe Installation Drawing FES 0072.		

INTRINSICALLY SAFE (Entity) Class I, Div. 1, Group A, B, C, D or Zone 1, IIC

1. FM approved apparatus must be installed acc. to manufacturer instructions.
2. The installation must be in accordance with the National Electrical Code ANSI/NFPA 70 and ANSI/ISA-RP 12.06.01.
3. WARNING: Substitution of components may impair intrinsic safety.
4. Control room equipment must not use or generate over 250 V.
5. Wiring: Use cables not subject to short circuiting.
   Use wires suitable for 20 K above surrounding ambient.
6. The maximum permissible values of voltage and current as well as the maximum permissible external capacitance and inductance are shown in the table above.
   Ca ≥ Ci + Ccable; La ≥ Li + Lcable
7. Do not operate a temperature sensor with “ib“ circuit in Zone 0!
8. Do not operate a temperature sensor with “ic“ circuit in Zone 0 or Zone 1!

TERMINAL COMPARTMENT A



Supply circuit		
	Terminal	**Supply voltage**
AC type	L1 N	90...253 VAC, 50/60 Hz
DC type	L+ L–	18...35 VDC
Signal circuit		
Type: FMG60-**D2***** FMG60-**D3*****	+ –	Rated voltage: ≤ 32 VDC Rated current: 11 mA The detector ensures galvanic isolation up to a maximum of 250 VAC between the signal circuit and any other circuit.

EXPLOSION PROOF Class I, Div. 1, Group A, B, C, D or Zone 1, IIC

1. Install per National Electrical Code (NEC).
2. Control room equipment must not use or generate over 250 V.
3. Supply wires shall be installed in conduit in accordance with the NEC.
4. Do not open the terminal compartment A if the supply voltage is switched on and a combustible atmosphere is present.
   If a combustible atmosphere is present, wait 3 minutes after switching off the supply voltage, before opening the cover.
5. Use supply wires suitable for 20 K above surrounding ambient.
6. Sealing plugs of the terminal compartment A must not be exchanged with those of the terminal compartment B.
7. Types with stainless steel terminal housing (FMG60-*****1***, FMG60-*****2***) Seal not required (apparatus was tested with 15 feet conduit).
8. Types with aluminium terminal housing (FMG60-*****3***, FMG60-*****4***) Seal required at enclosure wall!
9. The equipment includes flamepath joints, consult with the manufacturer if repair of the flamepath joints is necessary.

Class II, Div. 1, Group E, F, G, Class III

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 in Class II an III locations.
3. Do not open the terminal compartment A if the supply voltage is switched on and a combustible atmosphere is present.
   If a combustible atmosphere is present, wait 3 minutes after switching off the supply voltage, before opening the cover.
4. Use supply wires suitable for 20 K above surrounding ambient.

Models with PVT or NaJ scintillator	**Permissible ambient temperature**	**Temperature class**
Detector without water cooling: • Instruments with NaJ crystal scintillator • Instruments with PVT plastic scintillator	 -40 °C ≤ Ta ≤ +60 °C -40 °C ≤ Ta ≤ +60 °C	T6
Detector with water cooling in operation**: • Instruments with NaJ crystal scintillator • Instruments with PVT plastic scintillator	 -40 °C ≤ Ta ≤ +75 °C -40 °C ≤ Ta ≤ +75 °C	T6
**Notes: With water cooling in operation, the temperature at the pipe housing (within the water cooling) cannot exeed +60°C. In case if water cooling fails, the permissible maximum ambient temperature is still +75°C.		

Water cooling: For additional information see Operating Instructions BA00329F (PA) and BA00330F (FF) (e.g. mounting, safety, flow rate).