TERMINATION ASSEMBLIES AND CABLES

Field I/O signals connect to the FBM subsystem via DIN rail mounted termination assemblies (TAs) (see Figure 2). The FBM220/221 may be used with termination assemblies P0917RF/P0917RG respectively, or with termination assembly P0922VC/P0922VS. Termination assemblies P0917RF and P0917RG contain built-in dc-dc converters to power the H1 bus as well as built-in bus termination used to terminate the H1 segments when the FBM220/221 is located at the end of the segment. The TA associated with the FBM220 contains a single bus terminator and the TA associated with the FBM221 contains 4. The P0917RF and P0917RG termination assemblies are mature products available through the service channel.

Termination assemblies P0922VC and P0922VS allow external H1 power conditioners to be used. Usage with external power conditioners that are registered with the Fieldbus Foundation is the preferred configuration for major expansions using the FBM220/FBM221.

If the P0917RF or P0917RG termination assembly is used, its dc-to-dc converter receives 24 V dc power from an optionally redundant external power source. This power source can be one of the existing supplies which power the FBM baseplates, or a user supplied power supply. The 24 V dc power is converted to isolated 30 V dc power (at 300 mA) for powering the Foundation fieldbus field devices. Individual switch(es) on the TA provide on/off control of the power to each of the H1 bus segment(s).

The bus terminator(s) in the TA are used when the FBM220/221 is located at the end point on the Foundation fieldbus segment(s). Individual switch(es) on the TA provide for bus terminator selection (in or out) for each H1 segment.

H1 FOUNDATION fieldbus signal connections are made to two connection terminals for each cable connection to allow for both mid-bus and end-bus cabling configurations.

Power connections for redundant 24 V dc power sources are marked Primary and Secondary on the label. (Redundancy control is provided internal to the TA, by diode OR-ring of the two 24 V inputs.) Extra line and neutral connection terminals are provided to allow for possible daisy-chaining of power connections, or for the possibility of using additional power supplies for load sharing.

TAs are available in Polypropylene (PVC) material.

The DIN rail mounted TAs connect to the FBMS by means of a removable termination cable. The cable is available in a variety of lengths, up to 30 meters (98 feet), allowing the TA to be mounted in either the enclosure or in an adjacent enclosure. Termination cables (refer to Table 3) are available in the following materials:

- Polyurethane
- Hypalon® XLP (fire retardant)

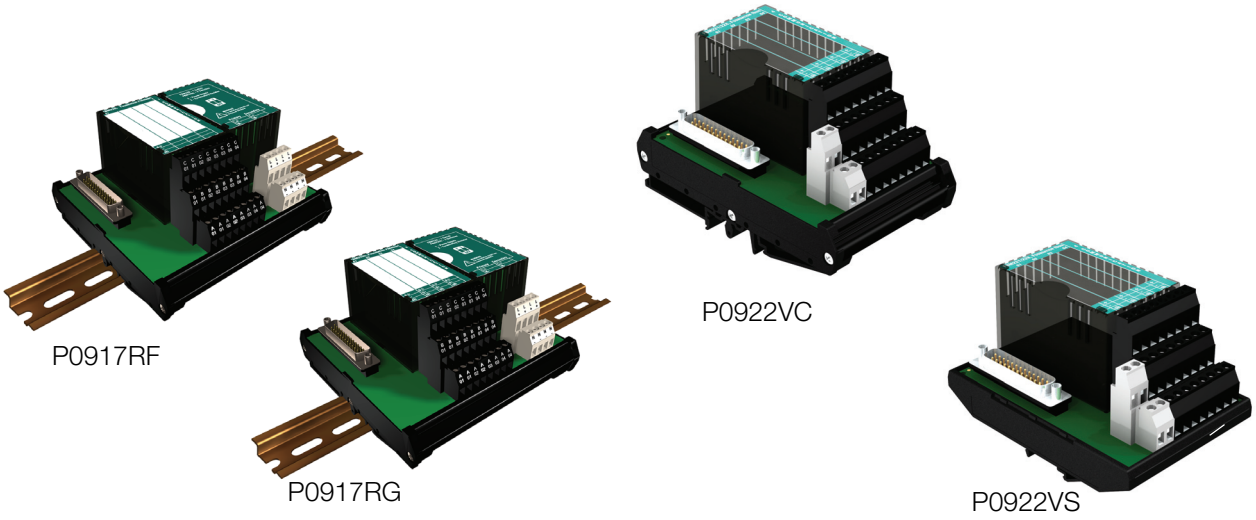


Figure 2. FBM220/221 Termination Assemblies

FUNCTIONAL SPECIFICATIONS - TERMINATION ASSEMBLIES

FBM Type	Input/Output Signal	TA Part No.(a)		Termination Type (b)	TA Cable Type (c)	TA Certification Type (d)
		PVC	PA			
FBM220	One I/O channel	P0917RF or	P0922VS	C	1	1
		P0922VC		C	1	1
FBM221	Four I/O channels	P0917RG or	P0922VS	C	1	1
		P0922VC		C	1	1

(a) PVC is polyvinyl chloride rated from -20 to +50°C (-4 to 122°F), PA is polyomide rated from -20 to +70°C (-4 to +158°F).
(b) C = TA with compression terminals.
(c) Refer to Table 3 for cable part numbers and specifications.
(d) Refer to Table 2 Termination Assembly certification definitions.

Table 2. Certifications for Termination Assemblies

Type	Certification
Type 1	TAs are UL/UL-C listed as suitable for use in Class I; Groups A-D; Division 2 temperature code T4 hazardous locations. They are CENELEC (DEMKO) certified EEx nA IIC T4 for use in Zone 2 potentially explosive atmospheres.

Table 3. Termination Cable Types and Part Numbers

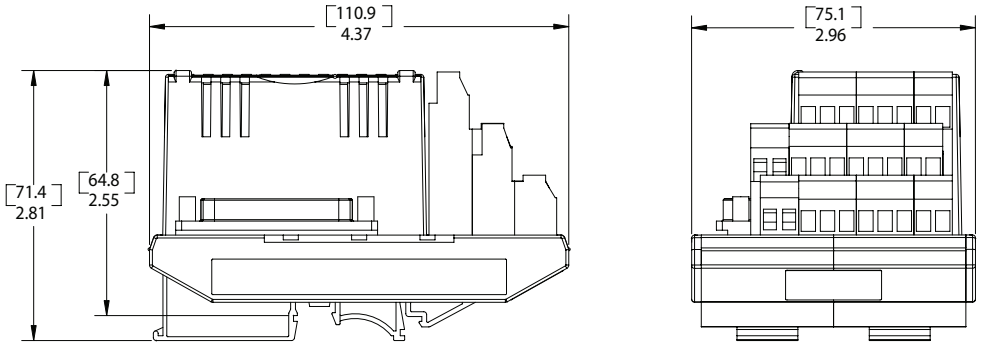
Cable Length m (ft)	Type 1 P/PVC (a)	Type 1 H/XLPE (b)	Cable Length m (ft)	Type 1 P/PVC (a)	Type 1 H/XLPE (b)
0.5 (1.6)	P0916DA	P0916VA	10.0 (32.8)	P0916DE	P0916VE
1.0 (3.2)	P0916DB	P0916VB	15.0 (49.2)	P0916DF	P0916VF
2.0 (6.6)	P0931RM	P0931RR	20.0 (65.6)	P0916DG	P0916VG
3.0 (9.8)	P0916DC	P0916VC	25.0 (82.0)	P0916DH	P0916VH
5.0 (16.4)	P0916DD	P0916VD	30.0 (98.4)	P0916DJ	P0916VJ

(a) P/PVC is polyurethane outer jacket and semi-rigid PVC primary conductor insulation. Temperature range: -20 to +80°C (-4 to +176°F).
(b) H/XLPE is Hypalon outer jacket and XLPE (cross-linked polyethylene) primary conductor insulation. Temperature range; -40 to +90°C (-40 to +194°F).

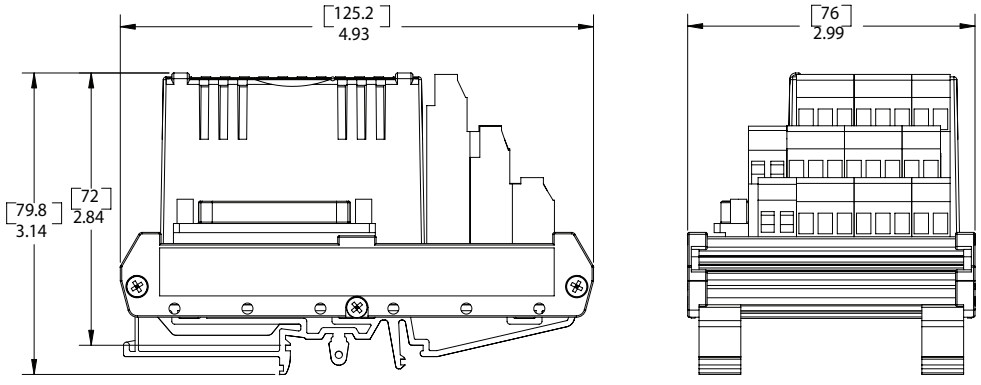
DIMENSIONS - NOMINAL

mm
in

Termination Assembly P0922VS



Termination Assembly P0922VC



DIMENSIONS - NOMINAL

mm
in

Termination Assembly P0917RF and P0917RG

