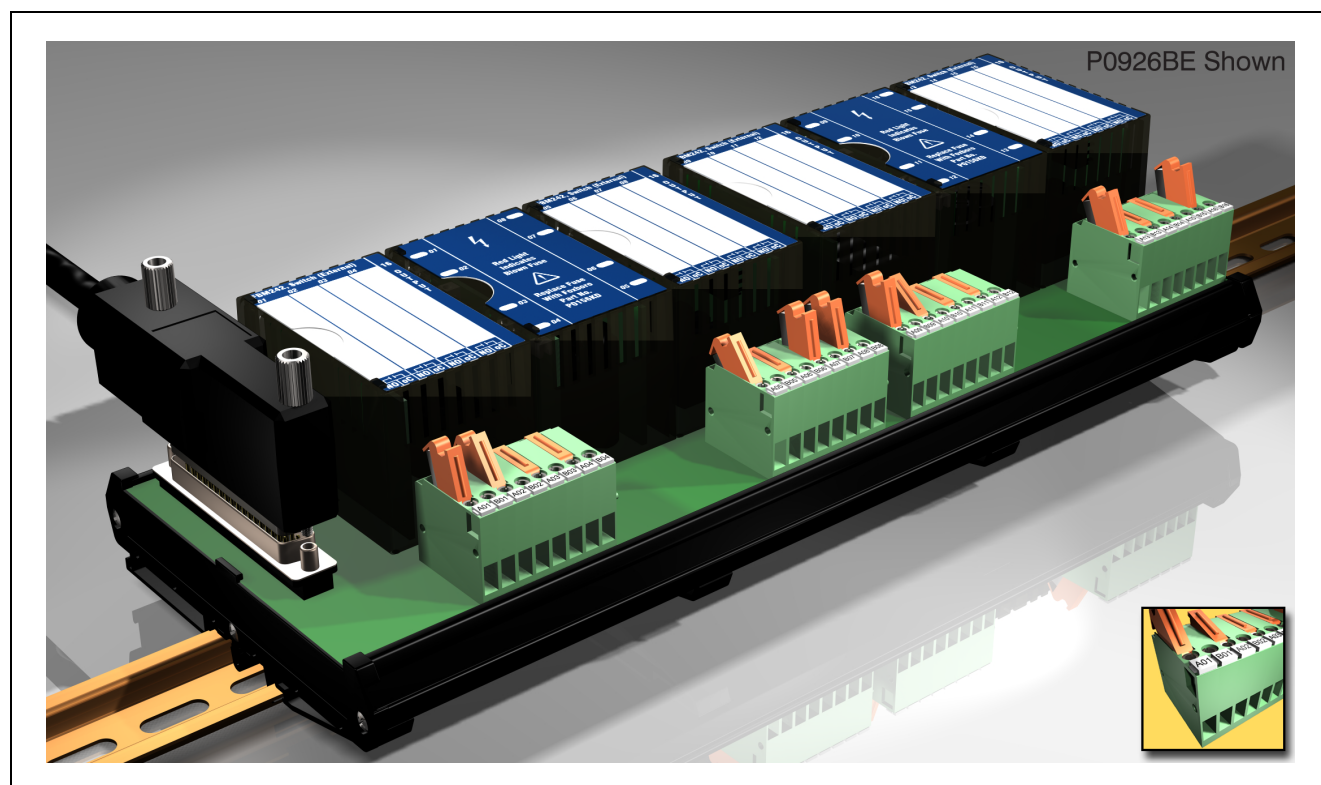


I/A Series® Hardware

FBM242 Termination Assembly

16 Output, 120 V ac or 125 V dc Solid-State Switch (External Source)



INTRODUCTION

The FBM242 Termination Assembly is part of the I/A Series DIN rail mounted FBM subsystem field wiring termination family.

Each FBM242 Termination Assembly and its associated termination cable provide active signal interfacing and connection between sixteen 2-wire externally sourced solid-state switched outputs and the FBM242 Channel Isolated Externally Sourced Discrete Output Interface Module.

The termination assembly's output switching supports externally sourced 120 V ac or 125 V dc.

Per channel fuses limit output current to a maximum of 2 A.

FEATURES

Key features include:

- Combination foot that supports 32 or 35 mm DIN rail mounting
- Multiple, integrated marking systems
- Distinct family group color
- Normally open, solid-state switched outputs
- Active per channel output fuse protection with bi-directional blown fuse indication (dc polarity independent)
- Per channel output knife disconnect and test sockets.

FUNCTIONAL SPECIFICATIONS

Signal Input

None

Signal Output(a)

16 channel, externally sourced solid-state switch
Channel isolation provided by termination assembly
RATING(a)

132 V ac at 2 A maximum with resistive load or
20 mH maximum inductive load without snubber
metal oxide varistor (MOV)
150 V dc at 2 A maximum with resistive load or
50 mH maximum inductive load without snubber
diode

INRUSH CURRENT

20 A peak for 16 ms maximum

LEAKAGE CURRENT

<1 mA

ON RESISTANCE

<100 m Ω at 20°C

HEAT DISSIPATION

7.0 W maximum

Signal Output(a) (Cont.)

FUSE

Type

5 x 20 mm

Rating

3.15 A (temperature derated for 2 A maximum)

Part Number

P0156KD

Knife Disconnect

Not rated for interrupting loads. Power must be
removed before disconnecting circuit.

Simplified Schematics

Refer to DIN Rail Mounted FBM Subsystem
Termination Assembly Overview, Product
Specification Sheet PSS 21H-2W4 B3.

Termination Cable Connection

37-pin male D-subminiature

Termination Cable Type(b)

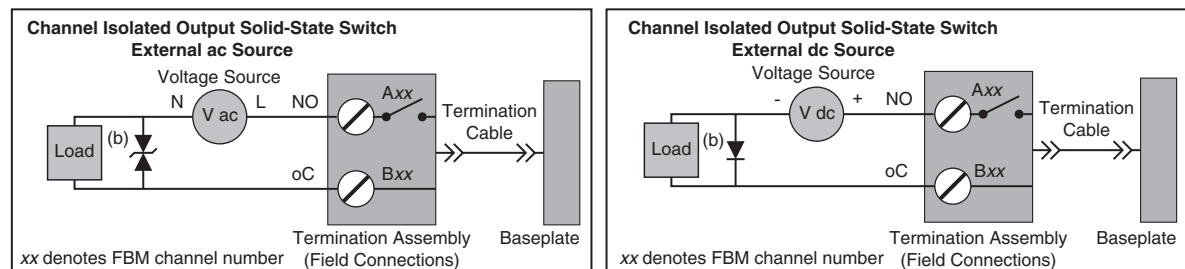
Type 4

Family Group Color

Dark blue - discrete

- (a) Output inductive load limits based on current of 2 A. Inductance limit increases by a factor of 4, for each factor of 2 reduction in current. For an inductive load above stated limits, a snubber diode is required for a dc inductive load or a MOV (metal oxide varistor) is required for an ac inductive load. Diode current rating must be equal to the maximum load current and voltage rating equal to 1.3X maximum supply voltage. MOV must be rated for 120 V ac use and current rating must be equal to maximum load current.
- (b) Refer to DIN Rail Mounted FBM Subsystem Termination Cables, Product Specification Sheet PSS 21H-2W4 B4, for complete information.

WIRING DIAGRAMS(a,b,c)



- (a) This assembly is capable of providing mixed signal types. It is the responsibility of the end user to maintain field wiring segregation.
- (b) Output inductive load limits based on current of 2 A. Inductance limit increases by a factor of 4, for each factor of 2 reduction in current. For an inductive load above stated limits, a snubber diode is required for a dc inductive load or a MOV (metal oxide varistor) is required for an ac inductive load. Diode current rating must be equal to the maximum load current and voltage rating equal to 1.3X maximum supply voltage. MOV must be rated for 120 V ac use and current rating must be equal to maximum load current.
- (c) Knife disconnects and test sockets are provided for circuit validation only. Knife disconnects are not rated for interrupting loads, power must be removed before operating disconnects.

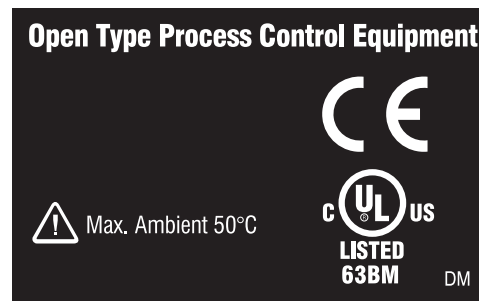
ENVIRONMENTAL SPECIFICATIONS

Temperature(a)

-20 to +50°C (-4 to +122°F)

Certification(b)

Classification Type 5 (Label shown is PVC version)



(a) Refer to DIN Rail Mounted FBM Subsystem Termination Assembly Overview, Product Specification Sheet PSS 21H-2W4 B3, for complete information.

(b) Refer to DIN Rail Mounted FBM Equipment, Agency Certification, Product Specification Sheet PSS 21H-2W2 B3, for complete product certification information.

PHYSICAL SPECIFICATIONS

Construction(a)

P0926BE – PVC, knife disconnect

Mass

Knife disconnect – 930 g (2.05 lb)

Output Indicators

Per channel light-emitting diodes (LEDs) indicate blown fuse status (off = good, on = bad)

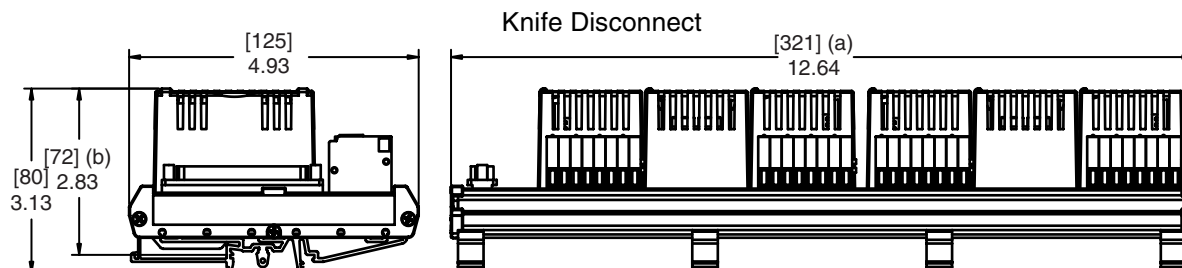
Field Terminations(a)

OUTPUTS
1 tier, 32 positions

(a) Refer to DIN Rail Mounted FBM Subsystem Termination Assembly Overview, Product Specification Sheet PSS 21H-2W4 B3, for additional information.

DIMENSIONS—NOMINAL

[mm]
in



(a) Overall width – for determining DIN rail loading.

(b) Height above DIN rail (add to DIN rail height for total).

RELATED PRODUCT SPECIFICATION SHEETS (PSS)

| PSS Number | Description |
|-----------------|---|
| PSS 21H-2W4 B3 | DIN Rail Mounted FBM Subsystem Termination Assembly Overview |
| PSS 21H-2W4 B4 | DIN Rail Mounted FBM Subsystem Termination Cables |
| PSS 21H-2W1 B3 | DIN Rail Mounted FBM Subsystem Overview |
| PSS 21H-2W2 B3 | DIN Rail Mounted FBM Equipment, Agency Certification |
| PSS 21H-2Z42 B4 | Channel Isolated Externally Sourced Discrete Output Interface Module (FBM242) |