Foxboro Evo™ Process Automation System
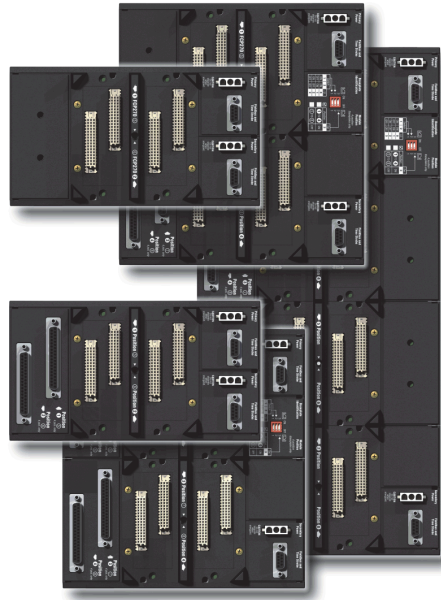
Product Specifications

Standard 200 Series Baseplates

The Standard 200 Series baseplates provide the mounting platform and communication backplane for DIN rail mounted 200 Series modules.

OVERVIEW

These standard 200 Series baseplates support distributed control for both small and large systems and specifically support the following Foxboro Evo™ system modules:

- Field Control Processor 280 (FCP280) fault-tolerant or non-fault-tolerant

- Field Device Controller 280 (FDC280) fault-tolerant or non-fault-tolerant

- Field Control Processor 270 (FCP270) fault-tolerant or non-fault-tolerant

- Field Communications Modules (FCM100Et and FCM100E) and other FCMs

- Fieldbus Expansion Modules (FEM100E)

- Fieldbus Isolator/Filter Modules (FBI200/FBI100)

- Standard Fieldbus Modules (FBMs) and 100 Series FBMs connection.

The standard FBM-supporting 200 Series baseplates enable overall system installation functionality by providing unit increments of 2, 4, and 8 FBM positions in combination with vertical and horizontal mounting.

FEATURES

Key features of the 200 Series baseplates are:

▸ For FBM-supporting baseplates:

- 2, 4, and 8 module positions in combination with vertical and horizontal mounting

- Field connection for I/O termination assemblies, redundant adapters and module identifiers for each module

- DIP switch for identification of certain Modular Baseplates

- Adding additional 200 Series baseplates without removing the system from service (requires redundant bus)

▸ For FCP280/FCP270, FDC280, and FCM100Et baseplates support:

- Connection for optional GPS time strobe. All non-FDC280 modules require splitters/terminators for time strobe connections. FDC280 baseplates support direct connection.

▸ All baseplates except the FDC280 baseplate (RH101KF) support:

- Connection to the 2 Mbps Module Fieldbus for the Standard Fieldbus Modules, or to a 268 Kbps Fieldbus for the 100 Series FBMs

- Splitters/terminators for A/B Fieldbus

- Backwards compatibility with existing I/O subsystems allowing for future expansion without additional interface hardware

▸ Primary and secondary 24 V dc power and communications connections

▸ Keyed positions dedicated to individual CP-type modules such as the FCP280, FDC280, or FCM/FBM only, depending on the baseplate type

▸ Passive backplane to increase system reliability.

200 SERIES BASEPLATE MOUNTING

Most 200 Series baseplates are available in three basic mounting configurations — horizontal DIN rail mount (see Figure 1), vertical DIN rail mount (see Figure 2), or either horizontal or vertical DIN rail mount provided the baseplate itself remains in the horizontal orientation (see Figure 3). Either of these mounting configurations can be employed internal to an enclosure, external to an enclosure, or mounted on a secure DIN rail.
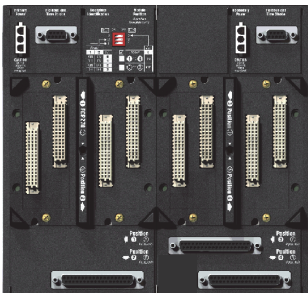
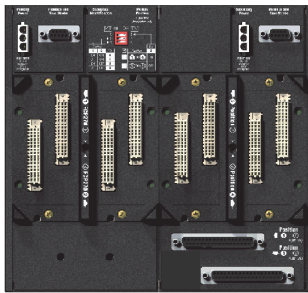Horizontal-Mounted Standard FCP280 Baseplate (RH924YL)

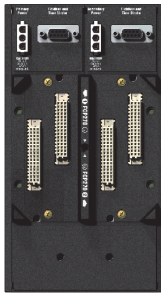FCM/FBM 2-position, RH926KE (supersedes P0926KE)
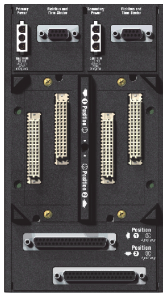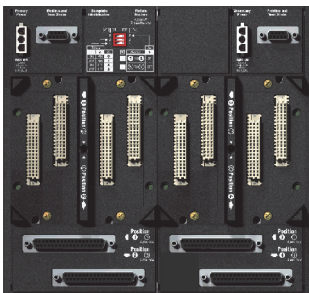
1 FCP270 and 3 FBM 4-position, P0926HJ[1]

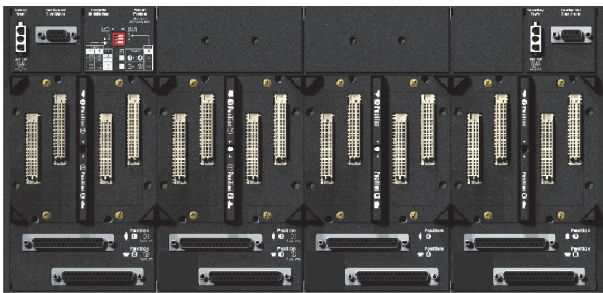2 FCP270 and 2 FBM 4-position, P0926HF[1]

FCP270 only 2-position, P0926HC[1]

FBM and/or FCM 4-position, RH926HM (supersedes P0926HM)

FBM and/or FCM 8-position, RH926HT (supersedes P0926HT)

Dual Cable FCP280 Baseplate (RH100JX)

(1) Not a RoHS part.

Figure 1. Horizontal DIN Rail Mounted 200 Series Baseplates

Vertical-Mounted Standard FCP280 Baseplate (RH924YF)

FCP270 only 2-position, P0926HW[1]

FCM/FBM 2-position, RH926KH (supersedes P0926KH)

FBM and/or FCM 4-position, RH926JF (supersedes P0926JF)

FEM100 only 2-position, P0973CG[1]

2 FCP270 and 2 FBM 4-position, P0926HZ[1]

1 FCP270 and 3 FBM 4-position, P0926JC[1]

2 FCP270 and 2 FEM100 4-position P0973CN[1]

FBM and/or FCM 8-position, RH926JM (supersedes P0926JM)

2 FBI200 2-position, RH924RT (supersedes P0924RT)

2 FBI100 2-position, P0923LR[1]

(1) Not a RoHS part.

Figure 2. Vertical DIN Rail Mounted 200 Series Baseplates

Standard FDC280 Baseplate (RH101KF)

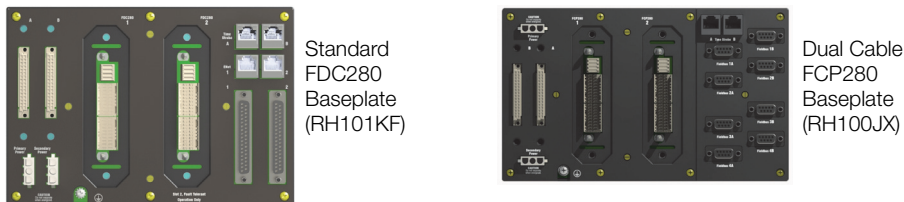Dual Cable FCP280 Baseplate (RH100JX)

Figure 3. Horizontal or Vertical DIN Rail Mounted 200 Series Baseplates (Must Remain in Horizontal Orientation)

MODULE IDENTIFICATION

The baseplate-mounted FBMs, FCM10E, or FCM10Ef are identified to the system software by means of a unique, 6-character string called a "letterbug". Most FBM-supporting baseplates include a DIP switch to help set this letterbug for the FBMs.

The letterbug for the FCP280s and FDC280s is a soft letterbug entered via the buttons on the module's faceplate. The letterbug for the FCP270s, FCM100Ets and FCM100Es is a soft letterbug entered using the I/A Series Letterbug Configurator.

The letterbug string for a particular FBM when used with FCMs is established from these three factors:

▶ The first four characters of the FCM10E, FCM10Ef, FCM100Et, or FCM100E letterbug.

▶ The number of the FBM baseplate in the group, as set by means of the baseplate Identification (I.D.) DIP switches on each baseplate (see Figure 4).
Baseplates should be assumed to have this switch unless otherwise specified in the sections below.

▶ The physical position (1-8) of the module on the baseplate.

The letterbug string for a particular FBM when used with an FCP280 or FCP270 is established from these four factors:

▶ The first four characters of the letterbug, which may be any letter A-Z or digit 0-9 as long as they do not match the first four characters of the FCP280 or FCP270 letterbug.

▶ The number of the baseplate in the group, as set by means of the baseplate Identification (I.D.) DIP switches on each non-FCP280 baseplate (see Figure 4). FBM-supporting baseplates should be assumed to have this switch unless otherwise specified below.
For the FCP270 used with the FEM100, this is a hexadecimal number as these configurations can

support up to 16 baseplates for one control processor, via 1-4 expansion ports.

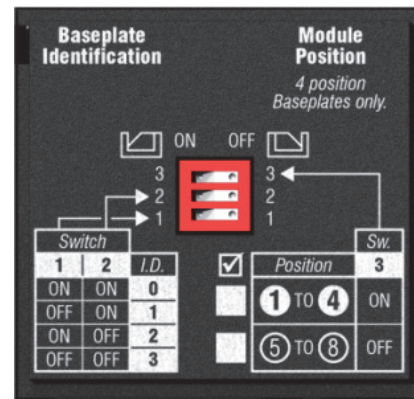▶ The physical position (1-8) of the module on the FBM-supporting baseplate

Figure 4. Modular Baseplate ID Switches (For FBM Baseplates)

200 SERIES BASEPLATE COMBINATIONS AND IMPLEMENTATION

There are 200 Series baseplates which support the:

▶ FCP280

▶ FDC280

▶ FCP270 with optional Fieldbus Expansion Modules (FEMs)

▶ Field Communications Modules (FCMs)

▶ Fieldbus Isolator/Filters (FBI200s and FBI100s)

▶ Fieldbus Modules (FBMs)

A combination of FCP270s and FBMs, FCP270s and FEMs, FCMs, and FBMs, or all FBMs can be mounted on some of the Modular Baseplates.

Various sizes of 200 Series baseplates allow you to incrementally upgrade existing systems or to create small systems. Implementation of these 200 Series baseplates allow you to place the control processor (FCP280 or FCP270) within the same enclosure as other FBMs.

The FCP270 module position(s) on Modular Baseplates for mounting the FCPs are keyed positions preventing FBM/FCM/FEM modules from plugging into the FCP mounting position.

Each 200 Series baseplate and its supported functionality is described below.

2-Position 200 Series Baseplates

The following 2-position 200 Series baseplates support:

▸ a non-fault-tolerant (single module) or fault-tolerant pair of FCP280s (horizontal and vertical)

▸ a non-fault-tolerant (single module) or fault-tolerant pair of FDC280s (vertical)

▸ a non-fault-tolerant (single module) or fault-tolerant pair of FCP270s (horizontal and vertical)

▸ a single module or redundant pair (two identical single modules) of FCMs, or up to two FBMs (horizontal and vertical)

▸ a single module or redundant pair of FEM100s

▸ a single module or redundant pair of FBI200s

▸ a single module or redundant pair of FBI100s.

FCP280 Only 2-Position Baseplate (see Figure 1 and Figure 2)

These 2-position baseplates support a non-fault-tolerant single or fault-tolerant pair of FCP280s, as well as two copper (RH924UQ) or fiber (RH924WA) adapters, required for connection to the Foxboro Evo Control Network.

The FCP280 baseplate provides support for four HDLC fieldbuses (PIO channels). Fieldbus port 1 can be terminated, if needed, by the DIP switches provided on the baseplate. Fieldbus ports 2-4 are internally terminated in the FCP280 baseplates and no external hardware or switches are required for their termination.

There is also an optional dual cable version of this baseplate that supports four PIO channels but has separate A versus B bus connectors. The dual cable baseplate also has dedicated connectors for the optional Time Strobe inputs. The dual cable baseplate can be installed on either a horizontal or vertical DIN rail, provided that the baseplate itself remains in the horizontal orientation.

The FCP280 baseplates can be added in the field to existing or new configurations. They have similar dimensions as the FCP270 Only 2-position baseplates for ease of replacement.

When upgrading existing CP60 systems to use FCP280s, you can recover an additional two FBM positions after removal of the old FCM10E/FCM10Efs.

FDC280 Only 2-Position Baseplate (see Figure 2)

This 2-position vertical baseplate supports a non-fault-tolerant single or fault-tolerant pair of FDC280s, as well as two copper (RH924UQ) or fiber (RH924WA) adapters, required for connection to the Foxboro Evo Control Network. It also has Ethernet and Serial connectors for use in communicating with its field devices through a customer-supplied network.

It can be installed on either a horizontal or vertical DIN rail, provided that the baseplate itself remains in the horizontal orientation. However, to meet Marine certification requirements, it must be installed on a horizontal DIN rail only.

The FDC280 baseplate can be added in the field to existing or new configurations. The FDC280 baseplate has larger dimensions than the 2-position FCP280 or FCP270 baseplate. However since the FDC280 does not require FBMs to connect to the field devices, its overall footprint saves space over an FCP/FBM solution.

FCP270 Only 2-Position Modular Baseplates (see Figure 1 and Figure 2)

These 2-position Modular Baseplates support a non-fault-tolerant single or fault-tolerant pair of FCP270s. Mounting space is provided for the fiber optic splitter/combiners that support a fault-tolerant pair of FCP270s. These Modular Baseplates do not have a baseplate identification DIP switch. Therefore, these baseplates have a hardwired address as baseplate 0.

These Modular Baseplates can be added to existing or new groupings of Modular Baseplates. They can be used to upgrade existing systems with FCP270s or to support FCP270s in a new system.

FEM100 Only 2-Position Expansion Baseplate (see Figure 2)

This 2-position vertical Expansion Baseplate supports a redundant pair of FEM100s. This baseplate does not have a baseplate identification DIP switch, as it does not require a hardwired address.

This Expansion Baseplate can be added to existing FCP 2-position Modular Baseplates. It is used to expand the number of 200 Series FBMs supported by a FCP270, by providing the capability to add up to four Expanded Fieldbuses which each can support up to thirty-two 200 Series FBMs.

FBI200 and FBI100 2-Position Baseplates (see Figure 2)

The FBI200 2-position vertical baseplate support a redundant pair of FBI200s, and the FBI100 2-position vertical baseplate supports a redundant pair of FBI100s. These Modular Baseplates do not have a baseplate identification DIP switch, as they do not require a hardwired address. The FBI200 2-position vertical baseplate does have DIP switches for baud rate mode selection.

FCM/FBM 2-Position Modular Baseplates (see Figure 1 and Figure 2)

These 2-position Modular Baseplates support FCMs/FBMs. These Modular Baseplates do not have a baseplate identification DIP switch. Therefore, these baseplates have a hardwired address as baseplate 0, with FBM addresses 1 and 2. They can be added to existing or new groupings of Modular Baseplates.

4-Position Modular Baseplates

Seven different 4-position Modular Baseplates support:

▶ a fault-tolerant pair of FCP270s in two positions and the remaining two positions mount FEM100s
▶ a fault-tolerant pair of FCP270s in two positions and the remaining two positions mount FBMs
▶ a single FCP270 in one position and the remaining three (non-fault tolerant) positions mount FBMs
▶ 4 FBMs or 2 FCMs and 2 FBMs.

The following applies to these baseplates, with the exception of the FCP270/FEM100 baseplate:

▶ These baseplates have horizontal and vertical versions.
▶ These baseplates have three active baseplate I.D. switches. The third baseplate I.D. switch selects operation as the first-half or second-half of an 8-position Modular Baseplate.

FCP270 and FEM100 4-Position Expansion Baseplate (see Figure 2)

This Expansion Baseplate is a 4-position Modular Baseplate that supports a fault-tolerant pair of FCP270s in two positions and the remaining two positions mount a redundant pair of FEM100s. Mounting positions are provided for the fiber optic splitter/combiners to support the pair of FCP270s. This Modular Baseplate does not have a baseplate identification DIP switch.

This Modular Baseplate can be used on system installations that require increased I/O capabilities and future upgrades.

FCP270 and FBM 4-Position Modular Baseplates (see Figure 1 and Figure 2)

These Modular Baseplates are 4-position Modular Baseplates that support a fault-tolerant pair of FCP270s in two positions and the remaining two positions mount FBMs. Mounting positions are provided for the fiber optic splitter/combiners to support the pair of FCP270s. These Modular Baseplates have a baseplate identification DIP switch.

These Modular Baseplates can be used on system installations that require increased I/O distribution and future upgrades.

Single FCP270 and FBM 4-Position Modular Baseplates (see Figure 1 and Figure 2)

These Modular Baseplates support a single FCP270 in one position and the remaining three positions mount FBMs. These Modular Baseplates have a baseplate identification DIP switch.

These Modular Baseplates can be used on system installations that require increased I/O distribution and future upgrades. They are intended to support small system requirements where fault tolerant control is not a requirement.

FBM and/or FCM 4-Position Modular Baseplates (see Figure 1 and Figure 2)

These 4-position Modular Baseplates supports FBM/FCMs. These Modular Baseplates have a baseplate identification DIP switch.

These Modular Baseplates can be used on system installations that require increased I/O distribution and future upgrades.

8-Position Modular Baseplates (see Figure 1 and Figure 2)

These 8-position Modular Baseplates support FBMs/FCMs. These Modular Baseplates have a baseplate identification DIP switch.

These Modular Baseplates mount up to 32 FBMs (four 8-position baseplates) in a standard enclosure. They supersede the P0914XA/XB baseplates and maximize module/baseplate density.

For Intrinsically Safe applications, the use of Pepperl and Fuchs Intrinsic Safe baseplates is recommended. Refer to *Intrinsically Safe Termination Assembly - Base Plate (ISTA-*BP*)* (PSS 31H-2Y12).

200 SERIES BASEPLATE-TO-BASEPLATE INTERCONNECTIONS

200 Series baseplates are interconnected over a 2 Mbps HDLC, redundant, serial bus (Module Fieldbus). Baseplate inter-connections for A/B Module Fieldbus connections are shielded twisted-pair cables to reduce the effects of noise.

All connectors are labeled to indicate their position and/or function on the 200 Series baseplates (see Figure 5). All module connectors have module guides to ensure the correct insertion of each module into the 200 Series baseplate. Primary and Secondary power connectors are direct connections from the FPS480-24, FPS400-24, FPS240-24, or FPS120-24 power supply. Field I/O connectors provide connections to various termination assemblies for actual connection to the I/O points in the plant.

FCM2F2/4/10 modules provide for fiber optic extension (baseplate-to-baseplate) of the Module Fieldbus.

For an explanation of the connectors on the FDC280 baseplate, refer to *Field Device Controller 280 (FDC280)* (PSS 31H-2FDC280).

Primary Power, Module Fieldbus and Time Strobe Splitter/Terminator

Secondary Power, Module Fieldbus and Time Strobe Splitter/Terminator
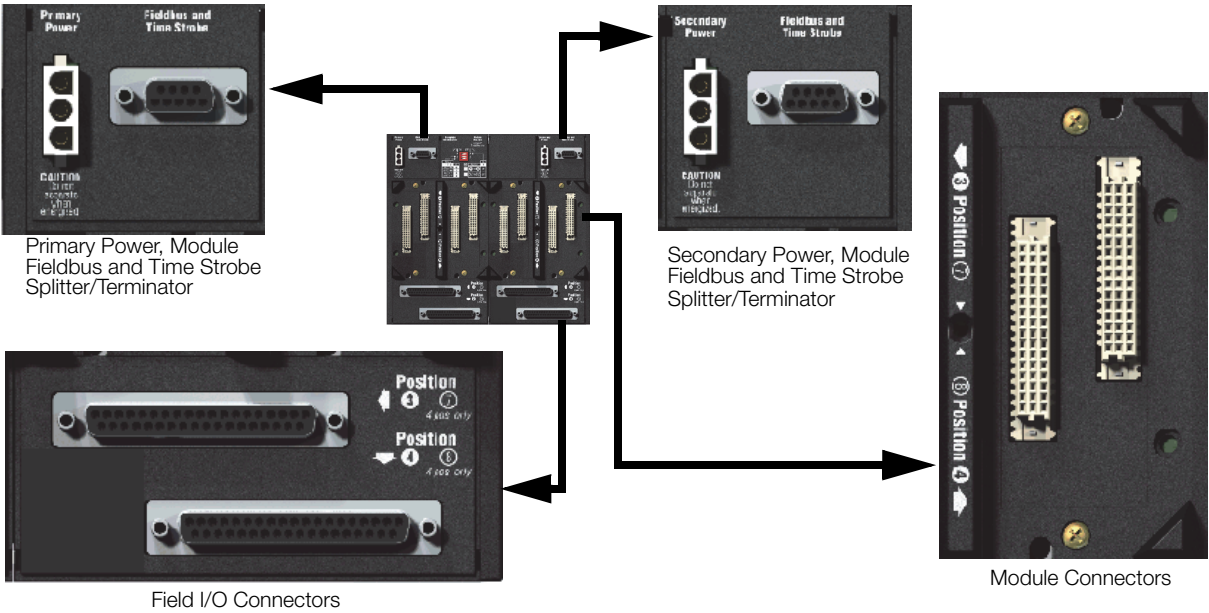
Module Connectors

Field I/O Connectors

Figure 5. 200 Series Baseplate Connections (Example FBM Baseplate Shown)

In addition, another type of termination assembly called the baseplate-mounted termination assembly can mount directly onto the field I/O connectors of an FBM-supporting 200 Series baseplate. These TAs provide field I/O wiring support for two of their associated FBMs in paired slots (that is, in positions 1 and 2, 3 and 4, 5 and 6, or 7 and 8), as shown in Figure 6.
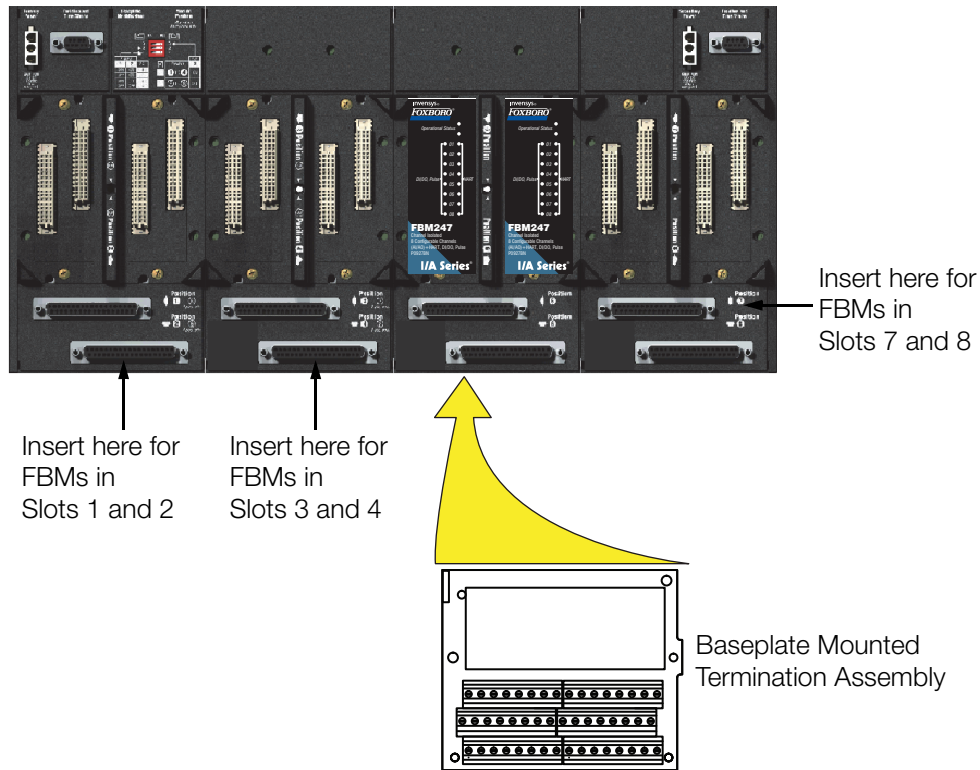

Insert here for FBMs in Slots 7 and 8

Insert here for FBMs in Slots 1 and 2

Insert here for FBMs in Slots 3 and 4

Baseplate Mounted Termination Assembly

Figure 6. Baseplate-Mounted Termination Assembly

MODULE PLACEMENT AND REMOVAL

The following rules must be observed with regard to placement of modules (CPs, FCMs, or FBMs) on their corresponding 200 Series baseplates. (Refer to PSS 31H-2SOV and PSS 31H-2COV for the various communication topologies used with the 200 Series baseplates.)

‣ Non-redundant FBMs – Can be placed in any available position
‣ Redundant FBMs – Must be placed in adjacent odd/even paired positions
‣ FCM10E, FCM10Ef, FCM100Et, FCM100E – Modules operating redundantly must be placed in adjacent odd/even paired positions (one pair per baseplate grouping). When operating as a single (non-redundant) module, both positions in an odd/even pair must be dedicated to the single module (The slot next to it must remain empty).
‣ FCP280, FDC280, and FCP270 – These modules are positioned only on the baseplates that are dedicated to the FCP280, FDC280, or FCP270. Some FCP270 baseplates may contain other modules as well.
‣ FEM100 – The FEM100 module(s) are positioned only on the Modular Baseplates that are dedicated to the FEM100.

▸ FBI200 – The FBI200 module(s) are positioned on the Modular Baseplate dedicated to the FBI200.

▸ FBI100 – The FBI100 module(s) are positioned only on the Modular Baseplate dedicated to the FBI100.

FCPs, FEMs, FCMs, FBI100s, and FBMs can be removed/replaced from their corresponding 200 Series baseplates without removing field device termination cabling, power, or communications cabling.

SPLITTERS AND TERMINATORS

The following Splitters and Terminators can be used with 200 Series baseplates:

▸ The Fieldbus Baseplate Terminator (RH916RB (supersedes (P0916RB)) is used to terminate either the CP end of the HDLC fieldbus or the last 200 Series baseplate in the daisy chain when Time Strobe or split A/B fieldbus cables are not required. (See Figure 7.)

▸ Fieldbus Baseplate Terminator/Splitter (RH926KW for non-FCP280 baseplates, RH924ZJ for Fieldbus port 1 on an FCP280 baseplate, or RH928CY for any Fieldbus port on an FCP280 baseplate) allows splitting of the A and B Module Fieldbus signals into different cables. This splitter can be used to interconnect optional redundant cables between Modular Baseplates. It can also be used to terminate both the fieldbus and time strobe signals. (See Figure 8 and Figure 9.)

▸ Time Strobe Fieldbus Baseplate Terminator (RH926KZ or RH924ZQ) connects the optional "A" and/or "B" time strobe signals to the Modular Baseplates. The Time strobe splitter/terminator RH924ZQ is used on only the first baseplate containing an FCP280. The Time strobe splitter/terminator RH926KZ is used on only the first baseplate containing an FCM100Et or

FCP270. This terminator also terminates the fieldbus signals. (See Figure 10.)

▸ Fieldbus Splitter (RH928CV) (see Figure 11) allows any of the Fieldbus ports on the FCP280 baseplates to connect to the twinaxial 268 Kbps fieldbus cables. RH928CV includes both a connector to any of the Fieldbus ports on the FCP280 baseplate, and a termination cable assembly (TCA) termination block similar to two of the P0903VY termination blocks joined together. Refer to PSS 31H-1FCP280 for the usage of this splitter.

▸ Fieldbus Splitter/Terminator (RH926LC/P0926LC) (see Figure 12) allows the FCP270 module(s) or FCM100E module(s) to connect to the remote Fieldbus used by the 100 Series Fieldbus Modules (Y-module FBMs) or Migration products.

RH926LC/P0926LC connects to the following baseplates:

• The FCP270 two-position, vertically mounted Modular Baseplate (P0926HW), four-position, vertically mounted Expansion Baseplate (P0973CN), or the FCP270 two-position, horizontally mounted Modular Baseplate (P0926HC).

• The FCM100E two-position, vertically mounted Modular Baseplate RH926KH (supersedes P0926KH) or the two-position, horizontally mounted Modular Baseplate RH926KE (supersedes P0926KE).

▸ The standard FCP280 baseplate connects to 100 Series FBMs. However, the dual cable FCP280 baseplate is not compatible with 100 Series FBMs.

100 Series (Y-module) FBMs or 100 Series-based Migration products are connected to an FCP280, FCP270, or FCM100E Modular Baseplate through an extended remote Fieldbus. When the FCP280, or an FCP270 is connected directly to the 100 Series

FBMs (communicating at 268 Kbps), the maximum twinaxial cable Fieldbus length is 915 m (3200 ft). For a FCP280 or FCP270 with an FBI200, the maximum Fieldbus length is 60 m (198 ft) between the FCP280/FCP270 and FBI200, and 1850 m (6000 ft) from the FBI200s to 100 Series FBMs. For a FCM100E, the maximum Fieldbus length is 1830 m (6000 ft) for 100 Series FBMs. For an FBI200, the maximum Fieldbus length is up to 305 m (1000 ft) for 2 Mbps data for 200 Series FBMs, and up to 1830 m (6000 ft) for 268 Kbps data for 100 Series FBMs.

Refer to PSS 31H-1FCP280 for the configurations through which the 100 Series FBMs can connect to the FCP280.

(RH924ZJ)

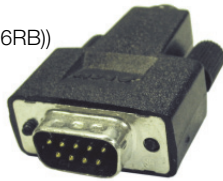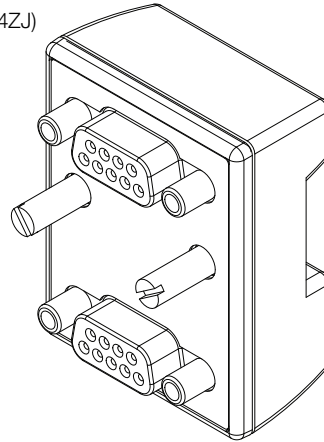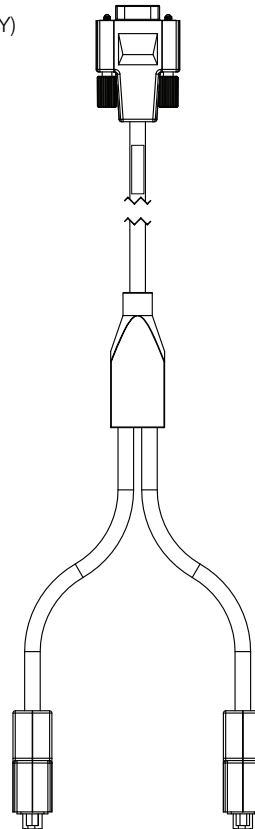To Fieldbus port on FCP280 baseplate

(RH916RB
(supersedes P0916RB))

Figure 7. Fieldbus Baseplate Terminator

(RH924CY)

To Module Fieldbus Cable A   To Module Fieldbus Cable B

Figure 8. Fieldbus Baseplate Terminator/Splitters – for FCP280 Baseplates

(RH926KW/
P0926KW)
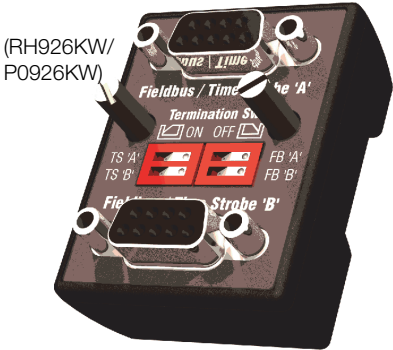
Figure 9. Fieldbus Baseplate Terminator/Splitter – for Non-FCP280 Baseplates

(RH924ZQ -
FCP280
Only)

(RH926KZ -
For CPs
other than
FCP280)
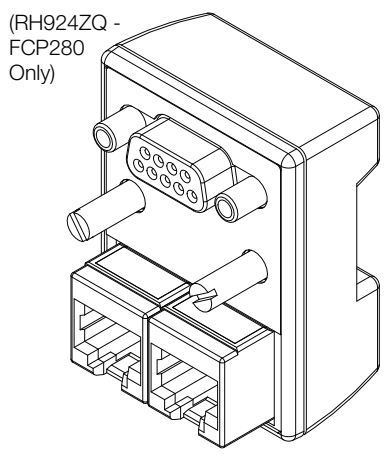
Figure 10. Time Strobe Fieldbus Baseplate Terminators

(RH928CV -
FCP280 Only)

FCP280 Baseplate
Fieldbus Port
Connector

3.0 m (9.8 ft)

Termination
Cable Assembly
Termination
Block

Fieldbus B
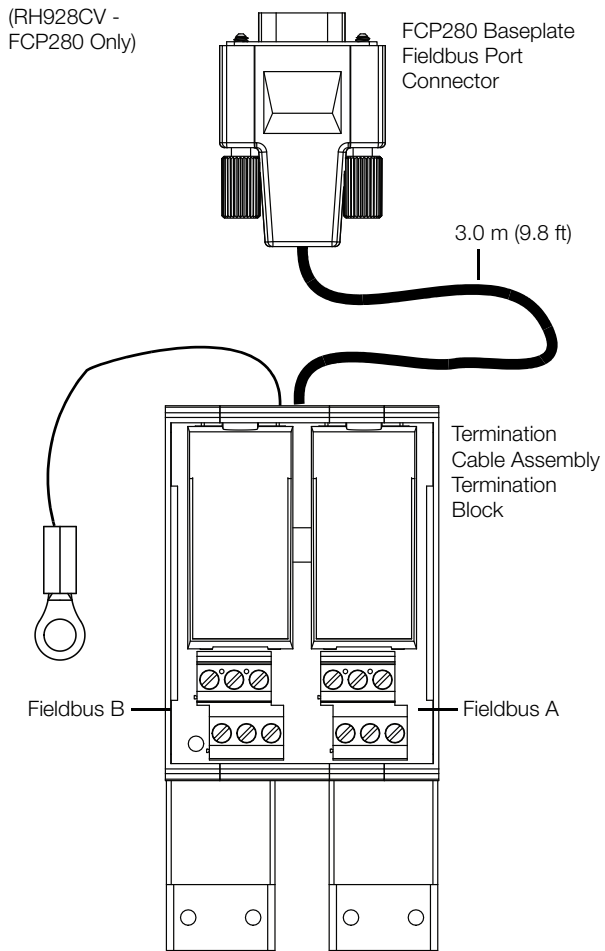
Fieldbus A

Figure 11. Extended Fieldbus Splitter for FCP280 Baseplate (Fieldbus Ports 1-4)

(RH926LC/
P0926LC)
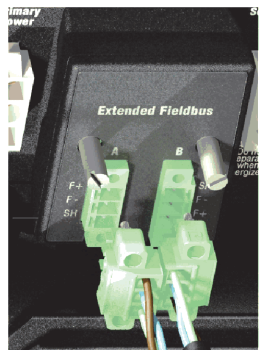
Figure 12. Extended Fieldbus Splitter/Terminator

ADDING ADDITIONAL FBM-SUPPORTING 200 SERIES BASEPLATES

You can add additional FBM-supporting 200 Series baseplates to existing FBM-supporting 200 Series baseplates without removing the system from service. To add these baseplates while the system is operational requires that the system have redundant (A and B) buses. A/B Module Fieldbus and Time Strobe splitter/terminators are used to split the A/B Module Fieldbus (2 Mbps) allowing redundant baseplate-to-baseplate cabling as well as the addition of 200 Series baseplates without interrupting bus communication.

FUNCTIONAL SPECIFICATIONS

Power Requirements

INPUT VOLTAGE RANGE (REDUNDANT)
24 V dc

POWER CABLING
Cable Lengths
0.4 m (16 in) up to 2.1 m (7 ft)

Regulatory Compliance

ELECTROMAGNETIC COMPATIBILITY (EMC)
European EMC Directive European EMC Directive 2014/30/EU
Meets EN61326:2013 Class A Emissions and Industrial Immunity Levels

PRODUCT SAFETY
Underwriters Laboratories (UL) for U.S. and Canada
UL/UL-C listed as suitable for use in Class I, Groups A-D; Division 2; temperature code T4 enclosure based systems. Communications circuits also meet the requirements for Class 2 as defined in Article 725 of the National Electrical Code (NFPA No.70) and Section 16 of the Canadian Electrical Code (CSA C22.1). Conditions for use are as specified in the *Standard and Compact 200 Series Subsystem User's Guide* (B0400FA).

European Low Voltage Directive 2014/35/EU, and Explosive Atmospheres (ATEX) Directive 2014/34/EU
ATEX (DEMKO) Ex nA IIC T4 Gc certified when connected as described in the *Standard and Compact 200 Series Subsystem User's Guide* (B0400FA). For use in an enclosure suited for an ATEX Zone 2 classified area.

Marine Certification
ABS Type Approved and Bureau Veritas Marine Certification for Environmental Category EC31.
Note, the following products are NOT marine certified: P0926KE, P0926KH, P0924RT, P0923LR, the Dual Cable FCP280 Baseplate (RH100JX), and the FDC280 Baseplate (RH101KF).

RoHS Compliance

Complies with European Recast RoHS Directive 2011/65/EU.

ENVIRONMENTAL SPECIFICATIONS[1]

Operating

TEMPERATURE
-20 to +60°C (-4 to +140°F)

RELATIVE HUMIDITY
5 to 95% (noncondensing)

ALTITUDE
-300 to +3,000 m (-1,000 to +10,000 ft)

Storage

TEMPERATURE
-40 to +70°C (-40 to +158°F)

RELATIVE HUMIDITY
5 to 95% (noncondensing)

ALTITUDE
-300 to +12,000 m (-1,000 to +40,000 ft)

Contamination (Non-Enclosure Mounted)
Class G3 (Harsh) as defined in ISA Standard S71.04

Contamination (Enclosure Mounted)
Class G3 (Harsh) as defined in ISA Standard S71.04.
Pollution degree 2 as defined in IEC 664-1.

PHYSICAL SPECIFICATIONS

Mounting

DIN RAIL

200 Series baseplates mount on a non-isolated, mechanically supported horizontal or vertical DIN rail, which can be internal to, or external to an enclosure. The 200 Series baseplate attaches to the DIN rail by means of fasteners.

RACK MOUNT

A mounting kit (P0930AS) is available for horizontal mounting of the 200 Series baseplate in a standard, 483 mm (19-inch) rack. This kit provides a 25.4 mm (1 inch) mounting depth.

Size[2]
See Figure 13 and Figure 14

Mass (Without Modules)
Maximum 0.91 kg (2.0 lb) for 8-position Modular Baseplate.

Rack Mounting Bracket
Material: Steel, Cold-Rolled, 0.0598 mm (16 Gauge)

Construction

MATERIAL
PC and ABS, flame rating UL94 V0

DIN RAIL FASTENER
Number fasteners depends on 200 Series baseplate size

COLOR
Black

Module Fieldbus Cabling

CABLE LENGTHS
0.125 m (5 in) up to 60 m (198 ft)
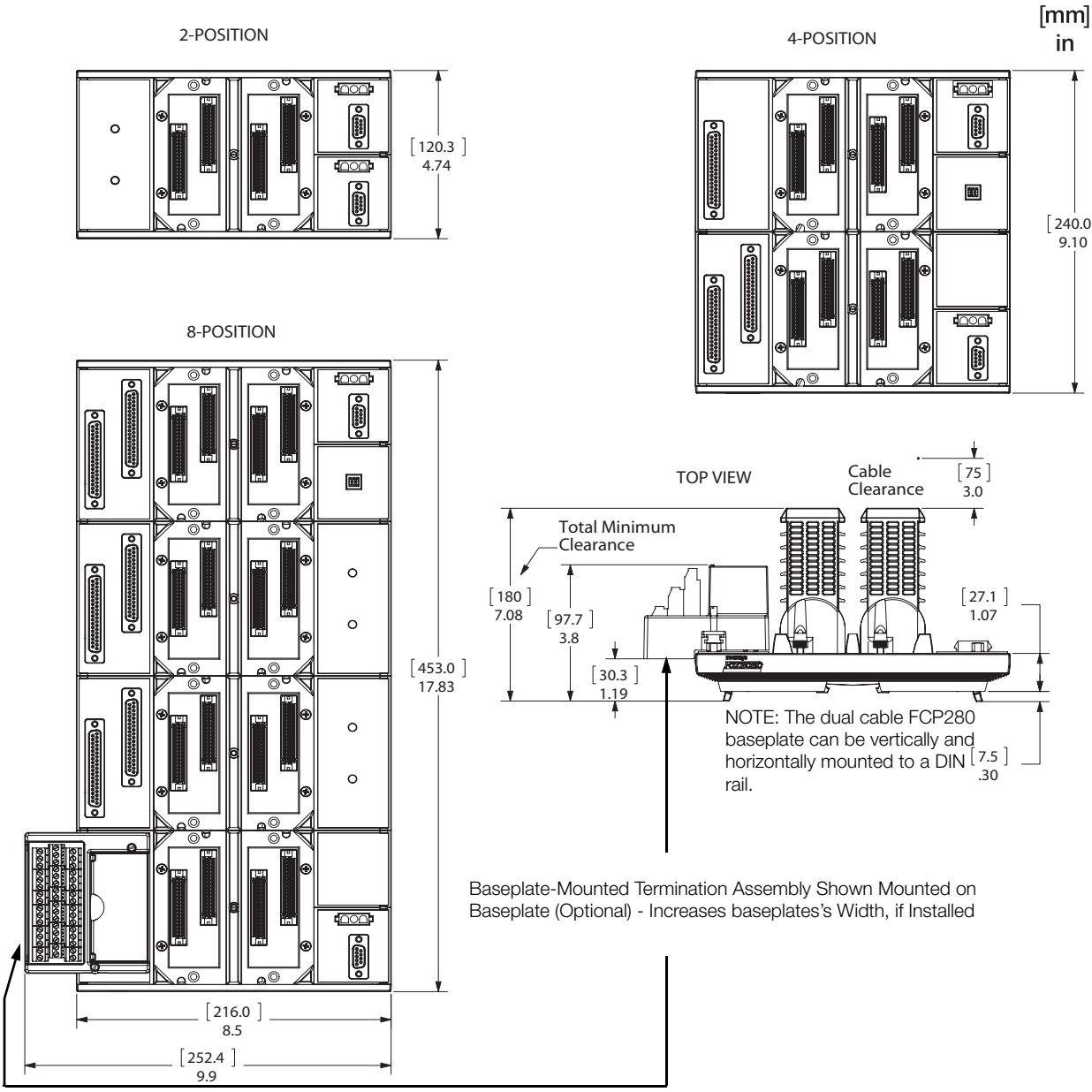
OVERALL CABLE LENGTH
60 m (198 ft) total allowable cable length

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(1) The environmental limits of the 200 Series baseplates may be enhanced by the type of enclosure containing the 200 Series baseplate.[Refer to the applicable Product Specification Sheet (PSS) which describes the specific type of enclosure that is to be used.
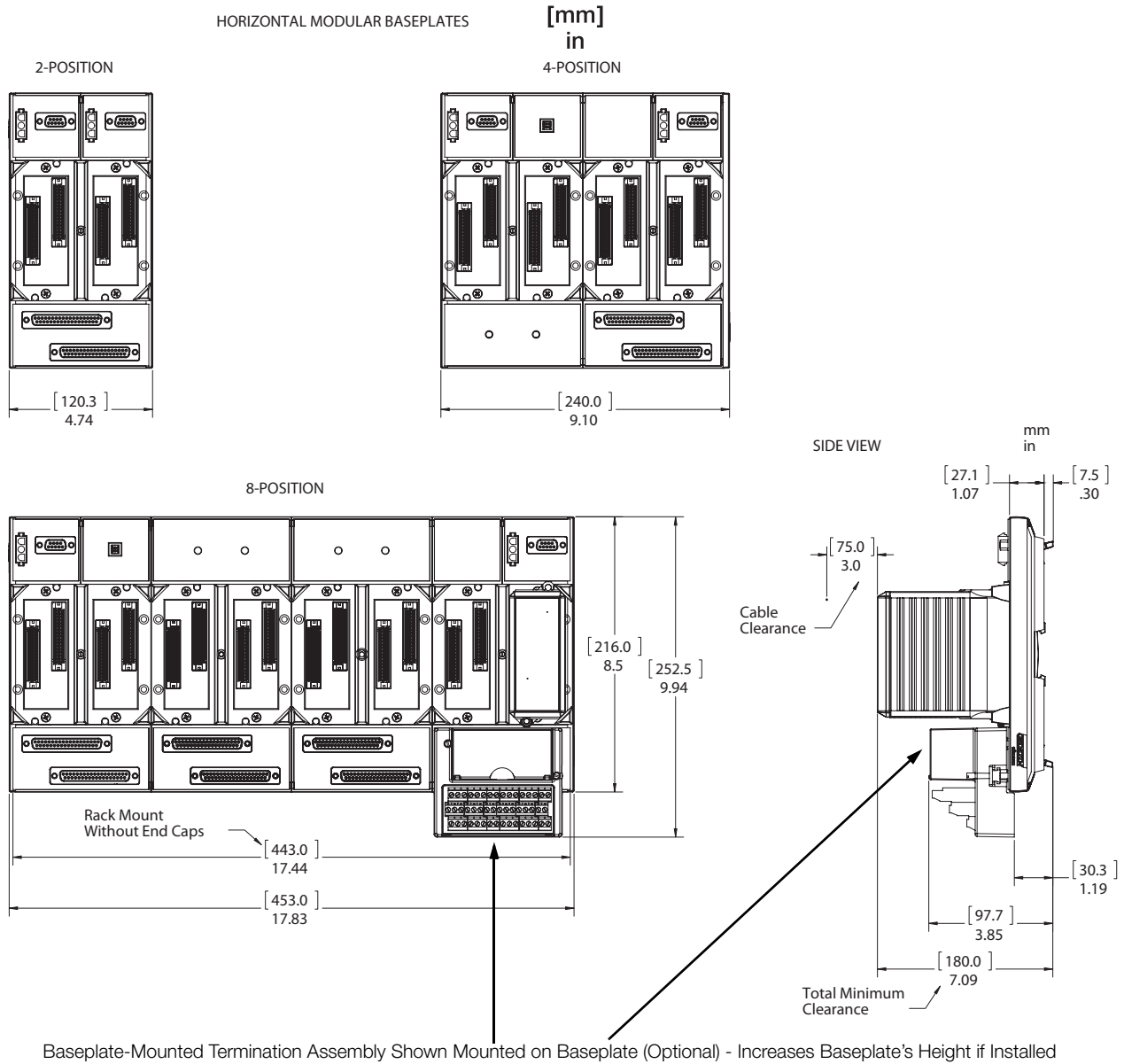(2) For dimensions of the FCP270, refer to PSS 21H-1B9.

VERTICAL MODULAR BASEPLATES

2-POSITION

[mm]
in

4-POSITION

$\left[\begin{array}{c} 120.3 \end{array}\right]$
4.74

$\left[\begin{array}{c} 240.0 \end{array}\right]$
9.10

8-POSITION

$\left[\begin{array}{c} 453.0 \end{array}\right]$
17.83

$\left[\begin{array}{c} 216.0 \end{array}\right]$
8.5

$\left[\begin{array}{c} 252.4 \end{array}\right]$
9.9

TOP VIEW

Cable Clearance $\left[\begin{array}{c} 75 \end{array}\right]$ 3.0

Total Minimum Clearance

$\left[\begin{array}{c} 180 \end{array}\right]$ 7.08

$\left[\begin{array}{c} 97.7 \end{array}\right]$ 3.8

$\left[\begin{array}{c} 27.1 \end{array}\right]$ 1.07

$\left[\begin{array}{c} 30.3 \end{array}\right]$ 1.19

NOTE: The dual cable FCP280 baseplate can be vertically and horizontally mounted to a DIN rail.

$\left[\begin{array}{c} 7.5 \end{array}\right]$ .30

Baseplate-Mounted Termination Assembly Shown Mounted on Baseplate (Optional) - Increases baseplates's Width, if Installed

NOTE: Clearance dimensions shown for 200 Series Fieldbus Modules installed in baseplates. For the clearance dimensions required for larger modules such as the FCP280 and FCP270, refer to the Product Specification Sheet associated with these larger modules. Cable clearance is the same for both 200 Series FBMs and other modules, such as the FCP280 and FCP270.

Figure 13. Dimensions – Vertical Mounted 200 Series Baseplates

HORIZONTAL MODULAR BASEPLATES

[mm]
in

2-POSITION

4-POSITION

$$\left[\begin{array}{c}120.3\end{array}\right]$$
4.74

$$\left[\begin{array}{c}240.0\end{array}\right]$$
9.10

SIDE VIEW

mm
in

$$\left[\begin{array}{c}27.1\end{array}\right]$$
1.07

$$\left[\begin{array}{c}7.5\end{array}\right]$$
.30

$$\left[\begin{array}{c}75.0\end{array}\right]$$
3.0

Cable
Clearance

8-POSITION

$$\left[\begin{array}{c}216.0\end{array}\right]$$
8.5

$$\left[\begin{array}{c}252.5\end{array}\right]$$
9.94

Rack Mount
Without End Caps

$$\left[\begin{array}{c}443.0\end{array}\right]$$
17.44

$$\left[\begin{array}{c}453.0\end{array}\right]$$
17.83

$$\left[\begin{array}{c}30.3\end{array}\right]$$
1.19

$$\left[\begin{array}{c}97.7\end{array}\right]$$
3.85

$$\left[\begin{array}{c}180.0\end{array}\right]$$
7.09

Total Minimum
Clearance

Baseplate-Mounted Termination Assembly Shown Mounted on Baseplate (Optional) - Increases Baseplate's Height if Installed
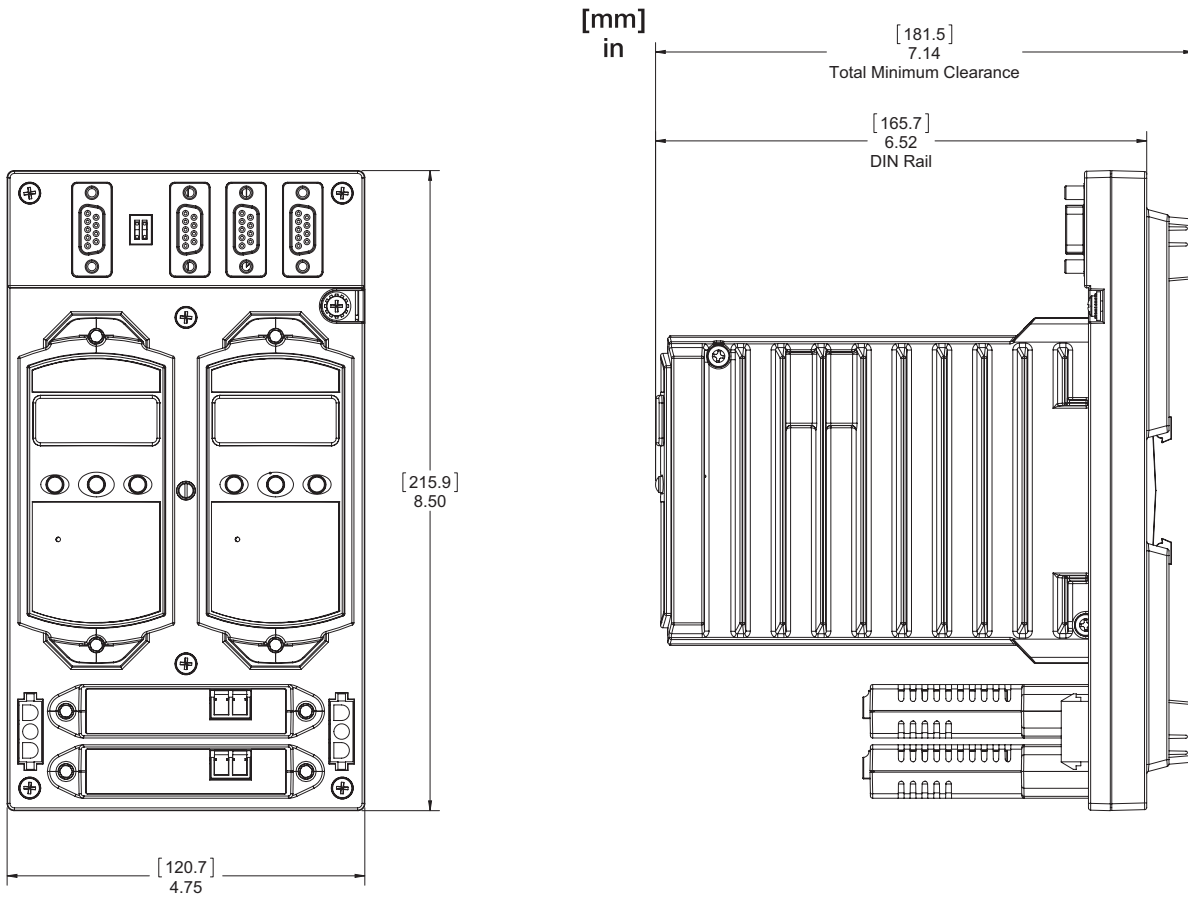
NOTE: Clearance dimensions shown for 200 Series Fieldbus Modules installed in baseplates. For the clearance dimensions required for larger modules such as the FCP280 and FCP270, refer to the Product Specification Sheet associated with these larger modules. Cable clearance is the same for both 200 Series FBMs and other modules, such as the FCP280 and FCP270.

*Figure 14. Dimensions – Horizontal Mounted 200 Series Baseplates*

[mm]
in
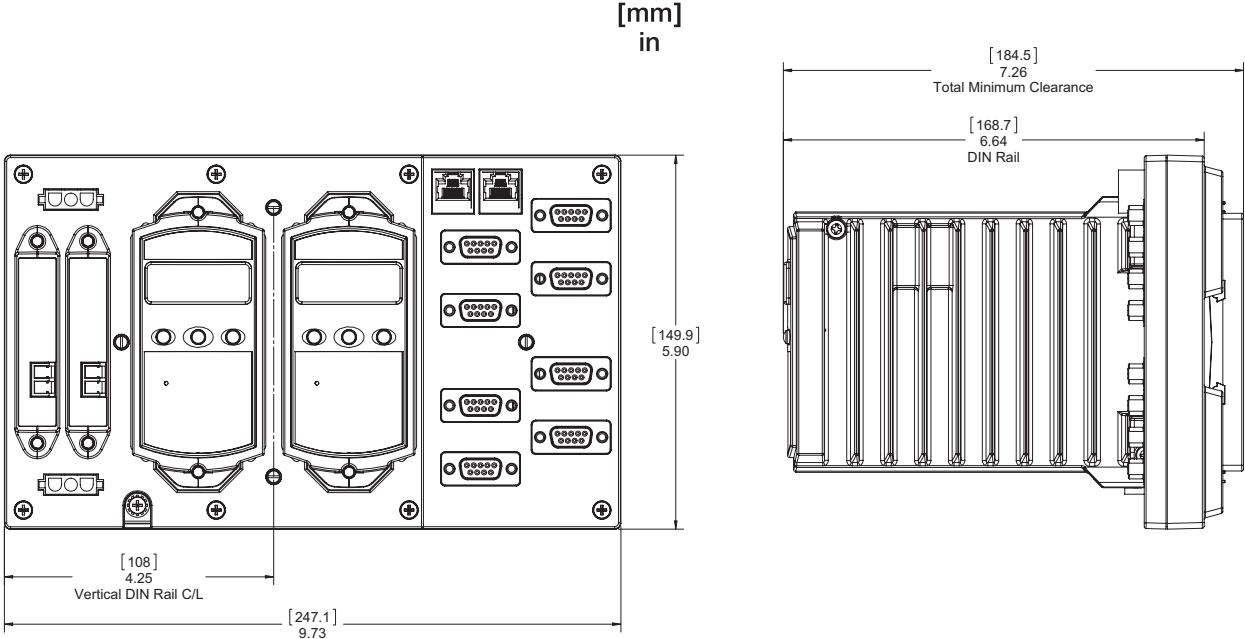
NOTE: The dual cable FCP280 baseplate is slightly larger than the standard 2-position CP baseplates.
It can be installed on either horizontal or vertical DIN rails, provided that the baseplate remains in the horizontal orientation shown here.

Figure 15. Dimensions – Horizontal or Vertical Mounted Dual Cable FCP280 Baseplate (RH100JX)

[mm]
in

$\begin{bmatrix} 181.5 \end{bmatrix}$
7.14
Total Minimum Clearance

$\begin{bmatrix} 165.7 \end{bmatrix}$
6.52
DIN Rail

$\begin{bmatrix} 215.9 \end{bmatrix}$
8.50

$\begin{bmatrix} 120.7 \end{bmatrix}$
4.75

NOTE: The vertical version of the standard FCP280 baseplate has the same dimensions of this version, only oriented 90 degrees to the right.

Figure 16. Dimensions – Horizontal Mounted Standard FCP280 Baseplate (RH924YL)

[mm]
in
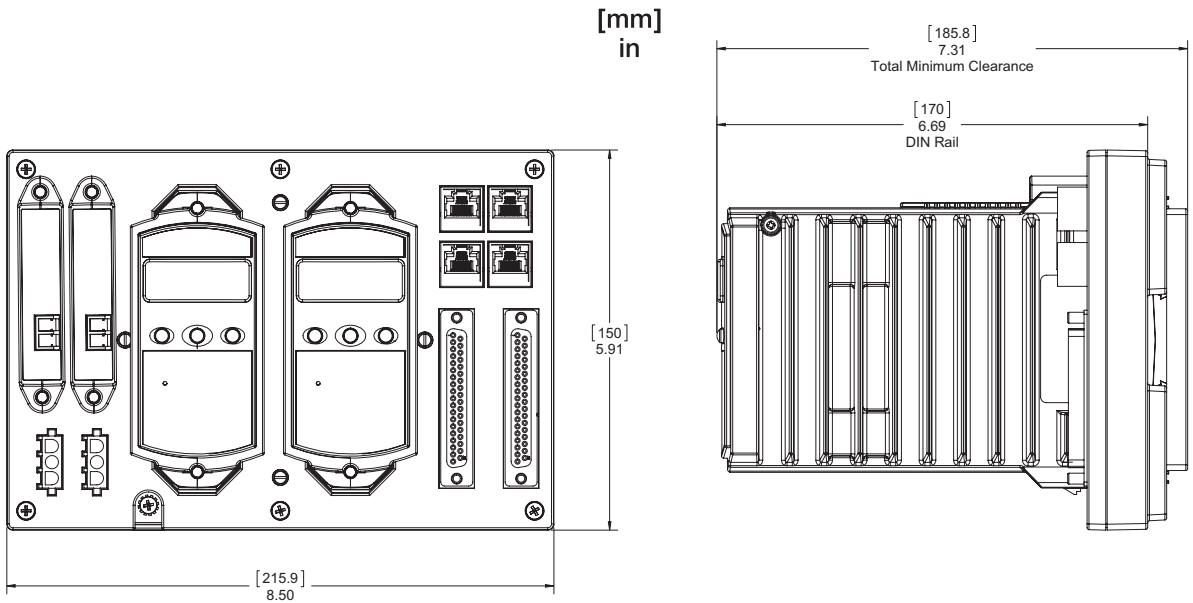
NOTE: It can be installed on either horizontal or vertical DIN rails, provided that the baseplate remains in the horizontal orientation shown here. However, for Marine certification, it must be installed on a horizontal DIN rail.

Figure 17. Dimensions - Horizontal or Vertical Mounted Standard FDC280 Baseplate (RH101KF)

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