Foxboro FBM203 P0914SV

Official Technical Reference Excerpt

Foxboro FBM203 P0914SV accepts eight isolated platinum, nickel or copper RTD measurements and converts their resistance values for Foxboro control processing.

VERIFIED PRODUCT ROLE

Characteristic 1

Provides eight independent temperature channels for its rtd input module function.

Characteristic 2

Handles resistance-temperature detector inputs through the documented Foxboro system path.

Characteristic 3

Works with the RTD termination assembly and configured analog-input application.

Characteristic 4

Independent conversion and isolation support channel-by-channel temperature acquisition.

MANUFACTURER DOCUMENT

Manufacturer source	Schneider Electric, Foxboro DCS FBM203/b/c/d RTD Input Modules, PSS 41H-2S203 Rev B.
Evidence boundary	Technical statements are limited to the identified product or applicable manufacturer family.
Selection control	Use the complete ordering string and verify the installed system before purchase or installation.

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Foxboro Evo™ Process Automation System Hardware

Product Specifications

Foxboro by Schneider Electric

PSS 31H-2S203

FBM203/b/c/d Platinum/Nickel/Copper RTD Input Module



The FBM203/b/c/d Platinum/Nickel/Copper RTD Input Modules contain eight resistance temperature detector (RTD) input channels.

OVERVIEW

Each input channel of the FBM203/b/c modules accept a 2- or 3-wire RTD sensor input, within a 0 to 320 ohm (FBM203), 0 to 640 ohm (FBM203b), or 0 to 30 ohm (FBM203c) resistance range. Each input channel of the FBM203d accepts a 4-wire RTD sensor input, within a 0 to 320 ohm resistance range. Each analog input is galvanically isolated from other channels and ground.

The modules perform the signal conversion required to interface the electrical input signals from the field sensors to the optionally redundant fieldbus.

The FBM203/b/c/d modules execute an analog input application program, which provides conversion time (on a per module basis) and configurable options for Rate of Change Limits.

Two types of passive termination assemblies are available for the FBM203/b/c modules:

- DIN rail mounted TAs, similar to those used with the other 200 Series FBMs
- Baseplate-mounted TA, which mounts directly onto the field I/O connectors of the 200 Series baseplate. These TAs provide field I/O wiring

support for two FBM203/b/c in paired slots (that is, in positions 1 and 2, 3 and 4, 5 and 6, or 7 and 8), as shown in Figure 1.

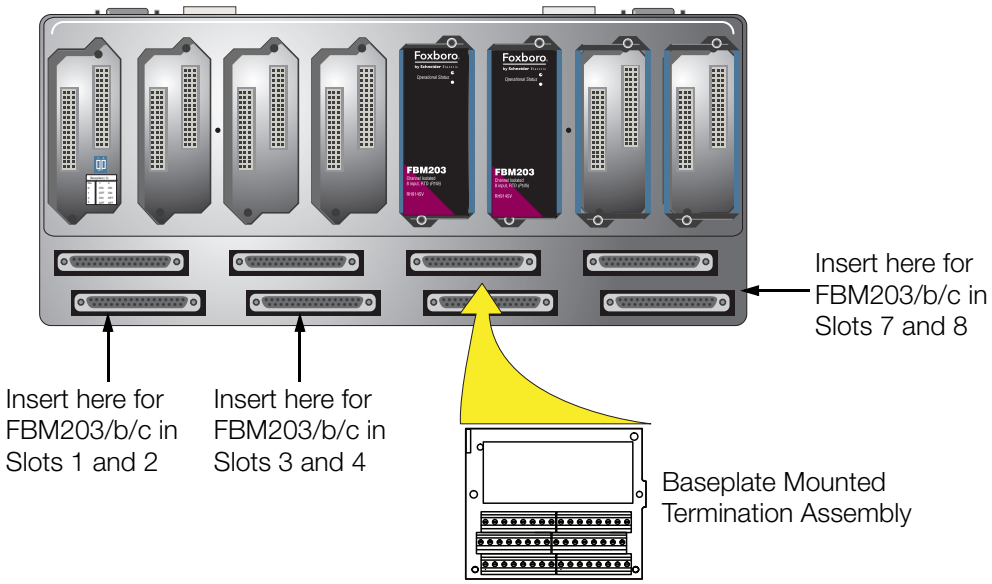


Figure 1. Baseplate-Mounted Termination Assembly

When connected to the appropriate TAs, the FBM203/c/d modules provide functionality formerly provided by the 100 Series FBM I/O subsystem.

The FBM203 can be used with any version of Foxboro Evo™ Control Core Services software that supports I/O FBMs. TAs are available for FBM203 which support the functionality of the 100 Series FBM03A when used with a 3-wire RTD input.

The FBM203c is supported only by I/A Series® software V8.0 to V8.8 or Control Core Services software V9.0 or later. TAs are available for FBM203c, which support the functionality of the 100 Series FBM33A when used with a 3-wire RTD input.

The FBM203d module is supported only by I/A Series software V8.6 to V8.8 or Control Core Services software V9.0 or later. TAs are available for FBM203d, which support the functionality of the 100 Series FBM03B or FBM33B when used with a 2-wire or 4-wire RTD input.

FEATURES

Key features of FBM203/b/c/d modules are:

- Eight resistance temperature detector (RTD) input channels
- Each analog input is galvanically isolated
- Rugged design suitable for enclosure in Class G3 (harsh) environments
- Execution of an analog input application program that provides conversion time and configurable options for Rate of Change Limits
- High accuracy achieved by sigma-delta data conversions for each channel
- Termination Assemblies (TAs) for locally or remotely connecting field wiring to the FBM203/b/c/d.

PHYSICAL SPECIFICATIONS (CONTINUED)

Part Numbers

MODULE

FBM203
RH914SV (supersedes P0914SV)
FBM203b
RH922UA (supersedes P0922UA)
FBM203c
RH922UD (supersedes P0922UD)
FBM203d
RH927AM (supersedes P0927AM)

TERMINATION ASSEMBLIES

Compression Screw TAs
Polyamide (DIN rail mounted): RH916XJ (supersedes P0916XJ)
Polycarbonate/Acrylonitrile Butadiene Styrene (Baseplate Mounted): RH924WN (supersedes P0924WN)
FBM203d Compression Screw TA
Polyamide: RH924EX (supersedes P0924EX)
Ring Lug TA
Polyamide: P0917JM

Termination Cables

CABLE LENGTHS

Up to 30 m (98 ft)

CABLE MATERIALS

Polyurethane or Low Smoke Zero Halogen (LSZH)

TERMINATION CABLE TYPE

FBM203/b/c
Type 1 - Refer to Table 2
FBM203d
Type 4 - Refer to Table 3

CABLE CONNECTION

FBM Baseplate End
37-pin D-subminiature
Termination Assembly End
FBM203/b/c
25-pin D-subminiature
FBM203d
37-pin D-subminiature

Construction - Termination Assembly

MATERIAL

DIN Rail Mounted TAs
Polyamide (PA), compression and ring lug
Baseplate-Mounted TAs
Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS), compression

Field Termination Connections

DIN RAIL TA COMPRESSION-TYPE ACCEPTED WIRING SIZES

Solid/Stranded/AWG
0.2 to 4 mm^2/0.2 to 2.5 mm^2/24 to 12 AWG
Stranded with Ferrules
0.2 to 2.5 mm^2 with or without plastic collar

BASEPLATE MOUNTED TA COMPRESSION - ACCEPTED WIRING SIZES

Solid/Stranded/AWG
0.2 to 1.5 mm^2/0.2 to 1.5 mm^2/24 to 16 AWG
Stranded with Ferrules
0.25 to 0.75 mm^2 with plastic collar
0.25 to 1.5mm^2 without plastic collar

RING-LUG - ACCEPTED WIRING SIZES

#6 size connectors (0.375 in (9.5 mm)
0.5 to 4 mm^2/22 AWG to 12 AWG

Related models and source control

Use these live ApterPower pages for comparison. Verify each complete ordering string independently.

RELATED PRODUCT REFERENCES

Bently Nevada 991-01-XX-02-05	Technical-reference companion. Review the complete ordering string before selection.
Bently Nevada 9200-06-05-05-00	Technical-reference companion. Compare the required interface and system position.
Bently Nevada 330130-00-05-05-02-00	Technical-reference companion. Confirm the execution independently for the intended task.

EXACT-SELECTION CONTROLS

Product identity	Confirm the complete FBM203 P0914SV marking.
System interface	the RTD termination assembly and configured analog-input application
Technical boundary	Use FBM203 P0914SV only with the RTD termination assembly and configured analog-input application; verify every interface and the controlled project configuration before energizing or pressurizing the subsystem.
Source	Schneider Electric, Foxboro DCS FBM203/b/c/d RTD Input Modules, PSS 41H-2S203 Rev B.

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