Foxboro FBM223 P0917HD

Installation & Commissioning Guide

Foxboro FBM223 P0917HD is a profibus-dp communication interface module for master/slave PROFIBUS-DP data and diagnostics. It operates with the selected PROFIBUS termination assembly, bus cabling and I/A Series control station and provides two independent PROFIBUS-DP ports.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Provides two independent PROFIBUS-DP ports for its profibus-dp communication interface module function.

Feature 2

Handles master/slave PROFIBUS-DP data and diagnostics through the documented Foxboro system path.

Feature 3

Works with the selected PROFIBUS termination assembly, bus cabling and I/A Series control station.

Feature 4

The interface transfers slave variables and diagnostic messages into the control database.

VERIFIED DATA SNAPSHOT

Protocol	PROFIBUS-DP
Physical layer	EIA RS-485
Bus segments	2 independent ports
Devices per unexpanded bus	Up to 31 slave devices

SYSTEM RELATIONSHIP

I/A control station → **FBM223 interface** → **RS-485 segment** → **PROFIBUS slaves**

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Pre-installation readiness

READINESS GATE

Identity

Compare the complete marking with the approved work order and installed record.

System match

Confirm the receiving channel, mating components and controlled configuration.

Physical condition

Inspect mounting surfaces, connectors, terminals, cable and support hardware.

Work controls

Apply authorized isolation, bypass, access and restoration procedures.

TECHNICAL PROFILE FOR THE WORK

Protocol

PROFIBUS-DP

Physical layer

EIA RS-485

Bus segments

2 independent ports

Devices per unexpanded bus

Up to 31 slave devices

Expanded capacity

Up to 91 slave devices per port with approved repeaters

IMPORTANT NOTICE

Resolve every unmatched interface, configuration or receiving-system condition before removal or installation.

SOURCE AND WORK CONTROLS

Manufacturer source	Invensys, I/A Series FBM223 PROFIBUS-DP Communication Interface Module, PSS 21H-2Z23 B4.
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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Installation sequence

CONTROLLED WORK STEPS

01	Match the complete FBM223 P0917HD marking to the work order and installed position before removal.
02	Confirm the selected PROFIBUS termination assembly, bus cabling and I/A Series control station before disconnecting any interface.
03	Keep master/slave PROFIBUS-DP data and diagnostics within the documented electrical or pneumatic range.
04	Record terminal designations, polarity, common, shield and cable routing before disconnection.
05	Inspect mounting, connector keying, terminal condition and retention hardware before installation.
06	Restore the controlled database, range, alarm, filter and fail-state settings before energization.
07	Review local indicators and controller diagnostics during the controlled startup sequence.
08	Prove the intended response across two independent PROFIBUS-DP ports and record the acceptance result before release.

CONNECTION RECORD

As found	Photograph and label every connection and installed orientation before removal.
Mechanical	Record mounting position, support, clearance and connector engagement.
Electrical	Record polarity, common, shield, channel assignment and cable route.
Configuration	Preserve approved settings, scaling, alarm logic and acceptance limits.
As left	Record the final physical condition and any controlled deviation.

I/A control station → **FBM223 interface** → **RS-485 segment** → **PROFIBUS slaves**

WORK HOLD POINTS

Before removal	Identity, position, wiring, orientation and controlled settings recorded.
Before connection	Mating interfaces, condition and routing reviewed.
Before power-up	Mechanical work, wiring, shielding and configuration independently checked.
Before release	Static value, dynamic response and protection behavior accepted.

Commissioning and functional proof

COMMISSIONING SEQUENCE

Initial state

Observe status at power-up and check for unexpected fault or alarm indication.

Static value

Verify the expected bias, gap, loop, contact or channel value for the application.

Dynamic response

Apply the approved machine or test stimulus and confirm response and scaling.

Protection path

Verify the configured alarm, relay, data or receiving-system behavior.

APPLICATION-SPECIFIC EVIDENCE

System maintenance

Restores the documented profibus-dp communication interface module function in an existing Foxboro control system.

Signal-path service

Supports controlled testing of master/slave PROFIBUS-DP data and diagnostics at the assigned system position.

Planned replacement

Provides an exact-identity replacement path after the selected PROFIBUS termination assembly, bus cabling and I/A Series control station has been verified.

Commissioning

Allows the responsible engineer to prove configuration, diagnostics and response for two independent PROFIBUS-DP ports.

ACCEPTANCE RECORD

Identity	Complete marking and final installed position recorded.
Physical inspection	Mounting, connectors, terminals and routing checked.
Channel status	Expected status and configured measurement confirmed.
Functional test	Required output or protection response demonstrated.
Restoration	Bypasses removed and operating state approved.

COMMISSIONING QUESTIONS

What network is interfaced by Foxboro FBM223 P0917HD?	It connects PROFIBUS-DP slave devices to the I/A Series control system.
How many PROFIBUS segments are available?	Two independent RS-485 bus ports are provided.

Release record and technical references

CLOSEOUT QUESTIONS

How many slaves fit on a bus without repeaters?	An unexpanded segment supports up to 31 slave devices.
What capacity is possible with approved repeaters?	The documented expanded topology supports up to 91 slave devices per port.
Which data reaches the control database?	Process variables and PROFIBUS diagnostic messages from configured slave devices are integrated.
When is bus termination required?	Terminate each RS-485 segment at its physical ends according to the TA and network layout.
What must be recorded before changing an FBM223?	Save both port configurations, slave addresses, data maps, baud/topology settings and diagnostic state.
What proves the interface is ready for service?	Confirm both ports, every expected slave, mapped process data and device diagnostics from the control station.

RELATED MODELS FOR INSTALLATION PLANNING

Siemens 6BK1100-0BA01-1AA0	Installation-planning reference. Review the complete ordering string before selection.
Siemens 6AV8100-0BB00-0AA1	Installation-planning reference. Compare the required interface and system position.
Siemens 6ES5316-8FA12	Installation-planning reference. Confirm the execution independently for the intended task.

MANUFACTURER SOURCE AND FINAL CONTROL

Manufacturer source	Invensys, I/A Series FBM223 PROFIBUS-DP Communication Interface Module, PSS 21H-2Z23 B4.
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.

IMPORTANT NOTICE	Release the equipment only after the responsible site authority accepts the recorded result.

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