

DATASHEET

Modbus Plus to PROFIBUS DPV1 Master Gateway 5304-MBP-PDPMV1

The ProLinx Modbus Plus to PROFIBUS DPV1 Master Gateway creates a powerful connection between devices on a Modbus Plus network and a PROFIBUS slave device. This stand-alone DIN-rail mounted protocol gateway provides one Modbus Plus configurable DB9F port and one PROFIBUS DPV1 Master configurable DB9F port.

The Modbus Plus protocol supports both Master and Slave implementations of the protocol on the DB9 Female Modbus Plus port. The Modbus Plus port is fully configurable.

The PROFIBUS DPV1 Master protocol supports complete Master specifications according to IEC 61158 on either a Mono-Master or Multi-Master network. The module supports the DPV1 specification.



Features	Benefits
Powerful network integration	<ul style="list-style-type: none"> ◆ Move data between dissimilar networks using two communication protocols on one gateway ◆ Protocols share access to a common memory database to exchange data between networks ◆ View diagnostic data for both networks from a single configuration/debug port
Modbus Plus protocol interface	<ul style="list-style-type: none"> ◆ Modbus Plus serial port with dual media-redundant connectors
PROFIBUS DPV1 Master protocol interface	<ul style="list-style-type: none"> ◆ CIPConnect[®] enabled. Module supports communications with ProSoft Configuration Builder and FDT comDTM via Ethernet routing using Rockwell Automation Ethernet interface.
Backed by ProSoft Technology	<ul style="list-style-type: none"> ◆ 20-year history of delivering high-quality, reliable solutions designed with you in mind ◆ Free, unlimited, worldwide Technical Support by phone for pre-sale, set-up, or troubleshooting support helps you get going sooner and stay running longer ◆ Three-Year Warranty ensures reliability and protects against equipment failures ◆ Free ProSoft Software tools tightly integrate with our hardware...a simple and quick, total solution to help you make our products fit your applications

Configuration

ProSoft Configuration Builder (PCB) provides a PC-based software configuration solution for quick and easy management of gateway configuration files, as well as viewing communication and network diagnostics.

PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations into new projects.

General Specifications - ProLinX

ProLinX[®] Communication gateways provide connectivity for two or more dissimilar network types. The gateway, enclosed in sturdy extruded aluminum, are stand-alone, DIN-rail-mounted solutions that provide data transfer between many of today's most widely used industrial automation protocols.

General Specifications - MBP

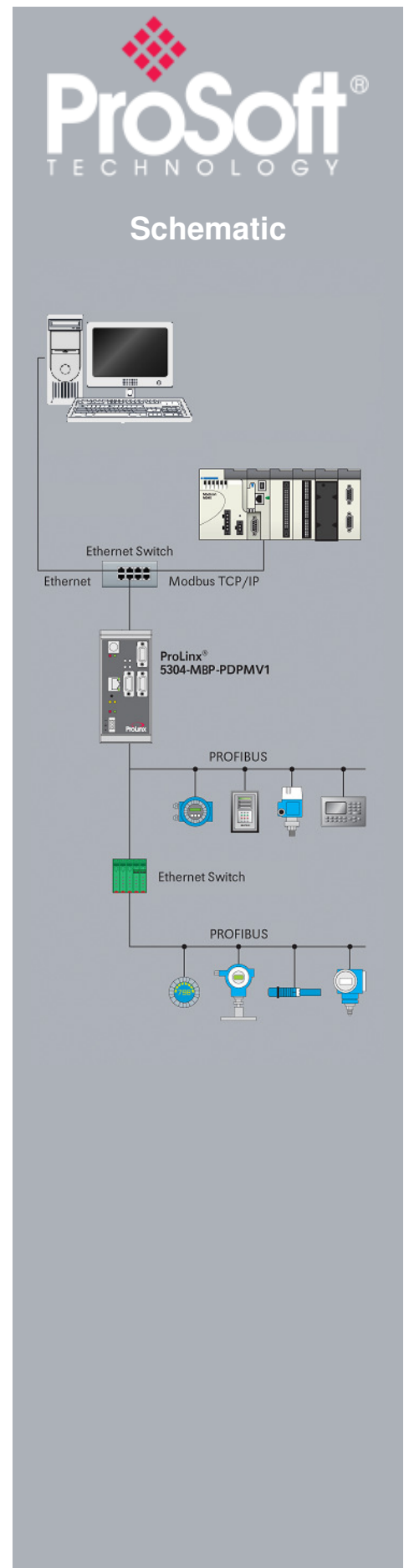
Communication parameters	Baud Rate: 110 to 115K baud Stop Bits: 1 or 2 Data Size: 7 or 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 milliseconds	
Modbus Modes	RTU mode (binary) with CRC-16 ASCII mode with LRC error checking	
Floating Point Data	Floating point data movement supported, including configurable support for Enron implementation	
Modbus Function Codes	1: Read Coil Status 2: Read Input Status 3: Read Holding Registers 4: Read Input Registers 5: Force (Write) Single Coil	6: Preset (Write) Single Holding Register 15: Force (Write) Multiple Coils 16: Preset (Write) Multiple Holding Registers

General Specifications - PDPMV1

The PROFIBUS DPV1 Master implementation is a powerful communication interface for ProLinX[®] processors. Developed under license from Siemens, the module incorporates proprietary backplane technology that enables powerful data exchange with Siemens processors.

The module supports complete Master specifications according to IEC 61158. Acyclic parameter data can be transferred with Class 1 or Class 2 DPV1 services, allowing processors to easily communicate with slave devices supporting PROFIBUS DPV0/V1 protocol.

The module acts as an input/output module between the PROFIBUS network and the processor. Data transfer from the processor is asynchronous with the I/O data transfer on the PROFIBUS network.



Functional Specifications - Modbus Plus

The Modbus Plus protocol (MBP) operates as a single, peer-to-peer, Modbus Plus Port with dual media-redundant connectors, which are not configurable as separate ports.

General Parameters

Modbus Function Codes	3: Read Multiple Data Registers (MSTR 2) 16: Write Multiple Data Register (MSTR 1) Global data read (32 words per node max.) Global data write (32 words per node max.)
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Address Scope	1 to 64
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Modbus Plus Functioning as a Master

Command List	Up to 200 commands on the master port, fully configurable for function, slave address, register to/from addressing and word count
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Polling of command list	Configurable polling of command list, including continuous read or write commands and write on change of data (Function Code 16 Write command only)"
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Modbus Plus Functioning as a Slave

Node address	1 to 64 (software selectable)
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Functional Specifications - PROFIBUS DP Master V1

- Easy-to-use drag and drop Master Busview configuration interface via ProSoft Configuration Builder software
- Project-unique GSD file import library
- Monitoring and Modification of process data and DPV1 acyclic data
- Multi-drop on a PROFIBUS DPV1 network with other compatible devices
- Automatic project documentation
- Automatic Bus Parameter calculation
- Online slave diagnostics
- Supports all standardized baud rates, up to 12Mbps
- Supports extended diagnostic data (DPV1)
- Auto baud detection at all valid PROFIBUS DPV1 rates
- CRC checksum determination of slave configuration consistency to processor
- Master Status LED Indicators for Operations, Network Communication, Master Token-Hold and Network Configuration.
- FDT/DTM PROFIBUS master transport communication DTM software included (see PSW-CDTM-PDPM)
- Up to 125 Slaves can be connected with a repeater
- Up to 1536 cyclic bytes input and 1536 bytes output data
- Supports Extended Diagnostic Data
- RS-485 optically isolated PROFIBUS Interface with on board DC-DC converter
- Acyclic communications (DPV1), Read and Write
- Alarm Handling (DPV1)
- Supports Sync and Freeze commands
- Supports PROFIdrive 3.1 compliant parameter read and write operations
- Supports Multicast and Broadcast telegrams (DPV1)



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Hardware Specifications

Specification	Description
Power Supply	24 Vdc nominal 18 to 32 Vdc allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA maximum @ 32 Vdc maximum
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Relative Humidity	5 to 95% (without condensation)
Dimensions (Height x Width x Depth)	Standard: 5.20 in x 2.07 in x 4.52 in (13.2 cm x 5.25 cm x 11.48 cm) Extended: 5.20 in x 2.73 in x 4.52 in (13.2 cm x 6.934 cm x 11.48 cm)
LED Indicators (On all gateways)	Power and Hardware Fault Configuration and Application Communication Status Serial Configuration Port Activity and Error
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
Ethernet Port (Ethernet protocol gateways only)	10Base-T half-duplex RJ45 Connector Link LED and Activity LED indicators Electrical Isolation 1500 Vrms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
Application Serial Port(s) (Serial protocol gateways only)	RS-232/422/485 RS-232 handshaking configurable RS-422/485 DB-9 to Screw Terminal Adapter Note: The number of serial application ports depends on the gateway type, and the combination of protocols.
Serial Port Isolation	2500 Vrms port signal isolation per UL 1577 3000 Vdc min. isolation port to ground and port to logic
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4-foot RS-232 configuration cable 2.5mm screwdriver CD (docs and configuration utility) RS-422/485 DB-9 to Screw Terminal Adapter for each serial application port (serial protocols only)

Agency Approvals & Certifications

cULus	ISA 12.12.01 Class I, Div 2 Groups A, B, C, D
cULus	C22.2 No. 213-M1987



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Additional Products

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Ordering Information

To order this product, please use the following:

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5304-MBP-PDPMV1

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