



Modbus Plus to DF1 Master/Slave Gateway 5301/5302-MBP-DFCM(4)

The MBP-DFCM modules are the ideal solution for the many applications where Modbus Plus connectivity can be used to integrate DF1 devices into a system. The Modbus Plus gateway is a powerful module designed with Server support, enabling easy connection to Rockwell Automation PLCs (CLX, SLC, PLC, CPLX, and similar devices). In combination with the DF1 device support, the module provides a very powerful interface to the many DF1 devices which are in use in the industrial marketplace today. Applications for the module are found in most industries, especially Manufacturing, Oil and Gas, Electrical Power and Food Processing.

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Modbus Plus to DF1 Master/Slave Gateway

5301/5302-MBP-DFCM(4)

The ProLinx Modbus Plus to DF1 Master/Slave Gateway creates a powerful connection between devices on a Modbus Plus network and DF1 Slave devices. This stand-alone DIN-rail mounted protocol gateway provides one Modbus Plus configurable DB-9F port and up to four configurable serial ports.

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

The DF1 protocol driver supports Master or Slave implementations of the protocol on each DF1 port. All DF1 ports are individually configurable.

Modbus Plus

The Modbus Plus protocol driver 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 max.) Global data write (32 words 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 and on change of data
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Modbus Plus Functioning as a Slave

Node address	1 to 64 – software selectable
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DF1 Master/Slave

The DF1 Master/Slave Protocol driver provides extensive support for both Master and Slave implementations of the protocol. The serial port on the gateway is user-configurable to support the DF1 protocol (Master or Slave, Error Checking, Baud rate, etc).

General Parameters

Communication parameters	Local Station ID: 0 to 254 Ports 1 to 3 Baud Rate: 110 to 115K baud Stop Bits: 1 Data Size: 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 ms
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Error Checking	BCC and CRC
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General Parameters

Miscellaneous	Full hardware handshaking control, providing radio, smart modem and Multi-drop support Floating point data supported
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DF1 Master Protocol Specifications

The ports on the module can be individually configured as Master ports. When configured in master mode, the DFCM module is capable of reading and writing data to remote DF1 devices.

DF1 Master Driver

DF1 Modes	Full-Duplex – Master (Module generates commands) Half-Duplex – Polling
Command List	Up to 100 commands per Master port, each fully-configurable for function, slave address, register to/from addressing and word/bit count
Polling of Command List	User-configurable polling of commands, including disabled, continuous, and on change of data (write only)

DF1 Slave Protocol Specifications

The ports on the module can be individually configured to support the Slave mode of the DF1 protocol. When in slave mode, the module can accept DF1 commands from a master to read/write data stored in the module's internal registers.

DF1 Slave Driver

DF1 Modes	Full Duplex – Slave (not peer mode) Half Duplex – Polled
Configurable parameters per slave port	Data Table File Start (File N[x] 0 to 999) Data Table File Size (1 to 1000 words) Data Table location in database (0 to 3999)

General Specifications

The ProLinx Communication Modules provide connectivity for two or more dissimilar network types. The modules, encased in sturdy extruded aluminum, are stand-alone DIN-rail mounted protocol gateways, providing communication between many of the most widely used protocols in industrial automation today.

Hardware Specifications

Specification	Description
Power Supply	24 VDC nominal 18 to 36 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA max@ 24 VDC
Operating Temperature	-20 to 50°C (-4 to 122°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95% (non-condensing)
Dimensions	Standard: 5.20H x 2.07W x 4.52D in. (13.2cmH x 5.25cmW x 11.48cmD) Extended: 5.20H x 2.73W x 4.52D in. (13.2cmH x 6.934cmW x 11.48cmD)

Specification	Description
LED Indicators	Power and Module Status Application Status Serial Port Activity LED Serial Activity and Error LED Status
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
Ethernet Port (Ethernet modules only)	RJ45 Connector Link and Activity LED indicators
Application Serial Ports	RS-232/422/485 RS-232 handshaking configurable RS-422/485 screw termination included
Serial Port Isolation	2500V RMS port signal isolation per UL 1577 3000V DC min. port to ground and port to logic power isolation
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4 ft RS-232 configuration cable 2.5mm screwdriver CD (docs and Configuration utility) RS-422/485 DB-9 to Screw Terminal Adaptor (1 or 4, depending on ports)

ProSoft Configuration Builder

ProSoft Configuration Builder (PCB) provides a quick and easy way to manage module configuration files customized to meet your application needs. PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations to new projects.

Additional Products

ProSoft Technology offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

Visit our web site at <http://www.prosoft-technology.com> for a complete list of products.

Ordering Information

To order this product, please use the following:

5301-MBP-DFCM Modbus Plus to DF1 Master/Slave
5302-MBP-DFCM4 Gateway

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to <http://www.prosoft-technology.com>

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