DNP 3.0 Slave to DF1 Master/Slave Gateway

5102-DNPS-DFCM3

The ProLinx DNP 3.0 Slave to DF1 Master/Slave Gateway creates a powerful connection between devices on a DNP network and DF1 devices. This stand-alone DIN-rail mounted protocol gateway provides one DNP Slave serial port and three DF1 serial ports individually configurable as either Master or Slave.

The DNP 3.0 Slave protocol driver supports Slave implementations of the protocol on one port. This 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.

DNP 3.0 Slave

The DNP 3.0 Slave driver provides extensive support for Slave implementations of the protocol. The serial port on the gateway is user-configurable to support the DNP 3.0 protocol (Slave, Error Checking, Baud rate, etc).

General Parameters	
Internal Database	Binary Inputs: 0 to 500 word count
	Analog Inputs: 0 to 500 points
	Counters: 0 to 250 points
	Binary Outputs: 0 to 200 word count
	Analog Outputs: 0 to 500 points
	Binary Input Events: 0 to 100 event buffer
	Analog Input Events: 0 to 100 event buffer
Communication parameters	Baud Rate: 110 to 115K baud
	Stop Bits: 1
	Data Size: 8 bits
	Parity: None
	RTS Timing delays: 0 to 65535 ms
DNP Mode	DNP 3.0 Slave – Level 2

DNP Slave	
Node address	0 to 65534 (software selectable)

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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The DNPS-DFCM modules are the ideal solution for the many applications where DNP connectivity can be used to integrate DF1 Master or Slave devices into a system. The DNP 3.0 Slave gateway is a powerful module designed with level 2 Slave support, enabling easy connection between DNP masters and devices on a dissimilar network. 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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General Parameters	
Error Checking	BCC and CRC
Miscellaneous	Full hardware handshaking control, providing radio, smart modem and Multi-drop support
	Floating point data supported

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:

5102-DNPS-DFCM3   DNP 3.0 Slave to DF1 Master/Slave 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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