

# DATASHEET

## DNP 3.0 Master to PROFIBUS DP Slave Gateway 5105-DNPM-PDPS

The ProLinx DNP 3.0 Master to PROFIBUS DP Slave Gateway creates a powerful connection between devices on a DNP 3.0 network and PROFIBUS DP master devices. This stand-alone DIN-rail mounted protocol gateway provides one serial port and PROFIBUS DP Slave port.

The DNP 3.0 Master protocol supports Master implementations of the protocol on one port. This port is fully configurable.

The PROFIBUS Slave protocol supports the PROFIBUS DP-V0 implementation, providing powerful data transfer capability between the ProLinx gateway and a PROFIBUS DP Master. With relatively few options to adjust, the PROFIBUS DP Slave configuration is quick, simple, and easily accomplished, using the provided ProSoft Configuration Builder software.



Features	Benefits
Powerful network integration	<ul style="list-style-type: none"> <li>◆ Allows movement of data between dissimilar networks using two communication protocols on one gateway</li> <li>◆ Protocols share access to a common memory database to exchange data between networks</li> <li>◆ View diagnostic data for both networks from a single configuration/debug port</li> </ul>
DNP 3.0 Master protocol interface	<ul style="list-style-type: none"> <li>◆ DNP 3.0 Master – Level 2</li> <li>◆ Connects to up to 40 slave devices</li> <li>◆ Up to 300 commands</li> </ul>
PROFIBUS DP-V0 Slave protocol interface	<ul style="list-style-type: none"> <li>◆ Adds PROFIBUS DP Slave device monitoring and control to a DNP 3.0 Master network</li> <li>◆ Easy configuration - GSD file provided</li> <li>◆ 122 words input/122 words output, 200 words maximum I/O</li> </ul>
ProSoft Configuration Builder software included	<ul style="list-style-type: none"> <li>◆ Graphical drag-and-drop configuration tool for simple module configuration</li> <li>◆ Easy-to-use diagnostics window with menu-driven hardware and protocol diagnostics</li> <li>◆ View module database contents through serial connection to a desktop PC</li> </ul>
Backed by ProSoft Technology	<ul style="list-style-type: none"> <li>◆ 20-year history of delivering high-quality, reliable solutions designed with you in mind</li> <li>◆ Free, unlimited, worldwide Technical Support by phone for pre-sale, set-up, or troubleshooting support helps you get going sooner and stay running longer</li> <li>◆ Three-Year Warranty ensures reliability and protects against equipment failures</li> <li>◆ Free ProSoft software tools tightly integrate with our hardware...a simple and quick, total solution to help you make our products fit your applications</li> </ul>

## General Specifications

ProLinx® Communication Gateways provide connectivity for two or more dissimilar network types. The gateways, encased 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.

The PROFIBUS DP-V0 Slave driver provides a powerful and easy-to-use interface between a PROFIBUS DP network and other networks. This slave implementation gives access to up to 244 bytes of PROFIBUS Input data and up to 244 bytes of PROFIBUS Output data, with a maximum configurable limit of 400 total data bytes. These Input and Output data areas are fixed in the ProLinx gateway's data memory, allowing the user to monitor or manipulate this data with either of the installed gateway protocols.

## Configuration

ProSoft Configuration Builder (PCB) provides a PC-based software configuration solution for 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.

## DNP 3.0 Master Functional Specifications

The DNP 3.0 Master driver provides extensive support for Master implementations of the protocol. The serial port on the gateway is user-configurable to support the DNP 3.0 protocol (Master, Baud Rate, and so on).

### 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 500 word count Analog Outputs: 0 to 500 points
DNP Mode	DNP 3.0 Master - Level 2
DNP Object Support	DNPM Driver Manual contains full Object Definition documentation

### DNP Master

Node address	0 to 65534 (software selectable)
Slave count	Up to 40 slave devices
Command count	Up to 300 user defined commands to interface with remote slave devices

## PROFIBUS DP Slave Functional Specifications

GSD File	PRLX05A5.GSD Available on Product DVD, or downloadable from ProSoft Technology® web site
Communication parameters	Baud Rate: 9.6 kbps to 12 Mbps
Supported I/O length	244 bytes Input data 244 bytes Output data 400 total data bytes, maximum
Supported PROFIBUS DP-V0 features	PROFIBUS DP-V0 Slave using Siemens SPC3 chipset Freeze Mode Sync Mode Auto Baud Setting
Configurable Parameters	PROFIBUS Node Address: 0 to 125 Data byte swapping Action on loss of PROFIBUS connection Communication Fail Timeout Multiplier Status Data location in Internal Database



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Whether your application is large or small, our technical professionals are there to help you choose the right communication solution.

## Hardware Specifications

Specification	Description
Power Supply	24 Vdc nominal 18 Vdc 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% RH with no condensation
Shock	IEC 60068-2-6; 5G @ 10-150HZ
Vibration	IEC 60068-2-27; 20G @ 11ms, 3-Axis (Operational)
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)	10 Base-T half-duplex RJ45 Connector Link LED and Activity LED indicators Electrical Isolation 1500 Vrms at 50 Hz to 60 Hz for 60 seconds, 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)	2 DB-9F Female Modbus Plus Ports
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 2.5 mm 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 and Certifications

ATEX

CE

cULus

CB Safety



## Additional Products

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

For a complete list of products, visit our web site at:  
[www.prosoft-technology.com](http://www.prosoft-technology.com)

## Ordering Information

To order this product, please use the following:

### DNP 3.0 Master to PROFIBUS DP Slave Gateway

5105-DNPM-PDPS

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to:  
[www.prosoft-technology.com](http://www.prosoft-technology.com)  
and select *How to Buy* from the menu.