

DATASHEET

PROFIBUS DPV1 Master Communication Module PS69-DPM

The PS69 PROFIBUS DP Master module expands the functionality of the CompactLogix / MicroLogix family of processors to include PROFIBUS. This module supports both I/O control and messaging, thus integrating DPV0 and DPV1 functionality into CompactLogix / MicroLogix.

The PS69-DPM is a CompactLogix / MicroLogix compatible, PROFIBUS certified module, which enables controllers to communicate with a PROFIBUS network. The configuration and diagnostic of the PROFIBUS system is done via the serial diagnostic interface of the module using the System Configuration tool. The data exchange between controller and module is done via the I/O process data image using CompactLogix / MicroLogix backplane technology.

DPV0 Services Supported

- Fail Safe Mode
- Global Control
- Sync and Freeze
- Watchdog

DPV1 Services Supported

- Read Request
- Write Request
- Alarm Indication
- Extended Device Diagnostics



Features	Benefits
PROFIBUS certified	◆ Recognized quality certification mark
FDT configuration software and communication DTM included	◆ Module DTM will configure master module and network slave devices. The DTM can be used in many FDT compatible software containers
Sample ladder program	◆ Simplifies integration for quick and easy project start-up
Supports CIP ladder logic messaging	◆ Request diagnostic, status and slave data based on ladder events. Offer better cyclic data performance

Configuration

The Configuration for the PS69-DPM is done with our next generation configuration tool PROSOFT.fdt. The configuration software and communication DTM are included with the module allowing easy configuration of the Master module and network slave devices. The DTM can be used in any FDT compatible software container.

The configuration is transferred via the serial diagnostic interface and stored in the FLASH memory of the PS69-DPM module.

Functional Specifications

Specification	Description
Slaves	Maximum 125
Input/Output	Maximum 244 Bytes per Slave
Input Data	Maximum 408 Bytes (*)
Acyclic Data	DPV1
Status data	88 Bytes
Output data	Maximum 480 Bytes (*)
Command data	16 Bytes
DPV1 services	Read / Write class 1, Alarm
Services	Global-Control, Slave-Diag, Set-Parameter
Sync, Freeze Command	Supported

Up to 32 PROFIBUS devices can be connected to one bus segment. If several bus segments are linked to each other with repeaters, there can be up to 127 devices on the network.

The maximum length of a bus segment depends on the baud rate used. Only PROFIBUS certified cable, preferably the cable type A, should be used.

Baud rate in kBit/s	Max. Distance
9.6	1,200 m / 4000 ft
19.2	1,200 m / 4000 ft
93.75	1,200 m / 4000 ft
187.5	1,000 m / 3280 ft
500	400 m / 1300 ft
1,500	200 m / 650 ft
3,000	100 m / 325 ft
6,000	100 m / 325 ft
12,000	100 m / 325 ft

Parameter	Value
Impedance	135 to 65 Ohm
Capacity	< 30 pF/m
Loop resistance	110 Ohm/km
Wire gauge	0.64 mm



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General Specifications

- Single Slot – 1769 backplane compatible
- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module
- Ladder Logic is used for data transfer between module and processor. Sample ladder file included.
- Supports all CompactLogix and MicroLogix 1500 LRP Controllers except 1769-L23E-QBFC1B, 1769-L16x, and 1769-L18x

Hardware Specifications

Specification	Description
Processor	EC1-160P with integrated ASPC2
PROFIBUS Interface	RS-485, max. 12 MBaud, potential free, according EN 50170
Diagnostic Interface	RS232, PS/2 Mini DIN female connector, 9600 Baud, non isolated
Power Supply	+5 V $\pm$ 5 % / 260 mA
Max. Distance Rating	Maximum 6 modules to the power supply module
Dimensions	Standard 1769 Single-slot module
Burst	EN 61000-4-4, 2 kV, 5 kHz
Surge	EN 61000-4-5, 2 kV common mode, 1 kV differential mode
ESD	EN 61000-4-2, 4 kV contact, 8 kV air, 4 kV indirect
Radiated/ Conducted Immunity	EN 61000-4-3, 10 V/m, 30...1000 MHz, 80% AM, 1 kHz sinewave EN 61000-4-6, 10 V, 0,15...30 MHz
Radiated/ Conducted Emission	EN 55011 Class A
Vibration/Shock	IEC 600068-2-6, 10-150 Hz, $\pm$ 0,75 mm, $\pm$ 1 g, 1 Octave/min IEC 600068-2-27, 15 g, 11 ms
Operating Temp.	0°C to 60°C (32°F to 140°F)
Relative Humidity	5 to 95% (non-condensing)
Agency Certification: UL/CE	C-UL certified, UL 508 listed, CE
PROFIBUS conformance	Certified



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Ordering Information

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PS69-DPM

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