



RMC PROFIBUS-DP Fieldbus Communications for RMC100 Motion Controllers

PROFIBUS is a vendor-independent, open fieldbus standard for a wide range of applications in manufacturing and factory automation. This high-speed fieldbus was designed especially for communicating between programmable controllers and distributed I/O such as the RMC motion controller. Up to 126 nodes can be connected to a single network spanning up to 14km. The RMC PROFIBUS-DP communications module supports data rates up to 12Mbaud, which permits high-speed on-the-fly downloading of positions and parameters to the RMC module and high-speed uploading of motion profile and status information to the host controller.

The RMC's PROFIBUS interface gives the flexibility of three operating modes: Message Mode, Compact Mode with Sync, and Compact Mode without Sync. See *Master I/O Requirements* on the reverse side for details. Select the mode that best fits your application and PROFIBUS master's capabilities.

Refer to other RMC data sheets and the RMCWin online help for more information. Download RMCWin from Delta's web page at www.deltamotion.com.

PROFIBUS-DP Masters

The following platforms either support PROFIBUS-DP or can have it added to them. Contact the companies listed below each for details on their PROFIBUS-DP masters, or contact the PTO at www.profibus.com for additional vendors:

- **Allen-Bradley 1746 (SLC 5/03 or later)**
SST (www.mysst.com)
Part: SST-PFB-SLC
- **Allen-Bradley 1756 (ControlLogix)**
SST (www.mysst.com)
Part: SST-PFB-CLX
- **Allen-Bradley 1771 (PLC-5)**
SST (www.mysst.com)
Part: SST-PFB-PLC5
- **GE Fanuc Series 90-30**
Horner Electric APG (www.heapg.com)
Part: HE693PBM101
- **GE Fanuc Series 90-70**
SST (www.mysst.com)
Part: SST-PFB-GE
- **Modicon® TSX Momentum**
Modicon (www.modicon.com)
Part: 170 DNT 110 00
- **Modicon TSX Quantum**
Modicon (www.modicon.com)
Part: 140 GRP 811 00
- **Modicon TSX Premium**
Modicon (www.modicon.com)
Part: TSXPBY100
- **PC (ISA, PCI, PCMCIA)**
Multiple options are available from SST, Applicom, and Grid Connect.
(www.mysst.com)
(www.applicom-int.com)
(www.gridconnect.com)
- **PC/104**
Multiple options are available from SST, Applicom, and Grid Connect
(www.mysst.com)
(www.applicom-int.com)
(www.gridconnect.com)
- **Reliance AutoMax PLC**
SST (www.mysst.com)
Part: SST-PFB-REL
- **Siemens SIMATIC PLCs (505, S7-300, S7-400, S5)**
(www.aut.sea.siemens.com)
Multiple options are available from Siemens.
- **Compact PCI**
Multiple options are available from Applicom.
(www.applicom-int.com)
- **VME bus**
SST (www.mysst.com)
Part: 5136-PFB-VME



RMC PROFIBUS-DP

Specifications

PROFIBUS-DP Interface

Data Rate	9.6kbaud up to 12Mbaud
Isolation	2500VAC optically isolated
Manufacturer ID	0x1630
Features Supported	Sync Mode, Freeze Mode, Set Slave Address, Auto-baud rate detect
Valid Station Addresses	0-126 (set by software or Set Slave Address function)
PROFIBUS Lab Certified	Certification Number Z00279

Master I/O Requirements

Message Mode	32 input registers for status 64 input registers for responses 64 output registers for requests
Compact Mode with Sync	1 output register, 1 input register for synchronization; 2 output registers, 2 input registers per axis; 2 output registers, 2 input registers for Sensor DI/O
Compact Mode without Sync	2 output registers, 2 input registers per axis; 2 output registers, 2 input registers for Sensor DI/O

Connector

PROFIBUS-DP Connector	Standard PROFIBUS-DP DB-9 (use termination in cable connectors as per PROFIBUS specification)
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Environment

Operating temperature	+32 to +140 °F (0 to +60 °C)
Storage temperature	-40 to +185 °F (-40 to +85 °C)
Agency compliance	CE, UL, CUL

PROFIBUS-DP Wiring

Standard PROFIBUS-DP cabling must be used.

A list of PROFIBUS product vendors can be obtained from www.profibus.com or by calling the PROFIBUS Trade Organization (PTO) at 602-483-2456.

Ordering Information

Any combination of transducers supported by the RMC is available with the PROFIBUS-DP communications interface. Append **-PROFI** to the part number to indicate this, as shown in this example:

- **RMC100-M1-PROFI**

Company Profile

Delta Computer Systems, Inc. manufactures motion controllers, color sensors/sorters, and other industrial controls providing high-performance automation solutions to a wide range of industries.

