Modbus Master/Slave Communication Module

PTQ-MCM

The ProTalk Modbus Master/Slave Communication Module allows Schneider Electric Quantum processors to interface easily with other Modbus protocol compatible devices and hosts. The data transfer from the Quantum processor is asynchronous from the actions on the Modbus network.

Compatible devices include not only Modicon PLCs (which all support the Modbus protocol) but also a wide assortment of end devices.

Features and Benefits

Many host SCADA packages support the Modbus protocol, while devices commonly supporting the protocol include several PLCs, as well as many other third party devices in the marketplace. (For a partial list of devices that speak Modbus, please visit the ProSoft Tested section of the ProSoft Technology web site).

General Specifications

- Single Slot – Quantum backplane compatible
- The module is recognized as an Options module and has access to PLC memory for data transfer
- Configuration data is stored in non-volatile memory in the ProTalk module
- Configuration software for Microsoft Windows XP, 2000 and NT is included with the module.
- Up to six modules can be placed in a rack
- Local rack – The module must be placed in the same rack as processor.
- Compatible with common Quantum / Unity programming tools.
  - o UnityPro XL
  - o Concept
  - o ProWORX
- Quantum data types supported: 3x, 4x
- High speed data transfer across backplane provides quick data update times.
- Sample ladder file available.

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Applications using the Modbus Communication Module can be found in many industrial sectors and in the following applications:

- *Foreign device data concentrator*
- *Pipelines and offshore platforms*
- *Food processing*
- *Mining*
- *Pulp and paper*
- *SCADA communications*
- *Supports Enron version of Modbus protocol for floating point data transactions.*

How to Contact Us: Sales and Support

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Hardware Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 V
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	–40 to 85°C (–40 to 185°F)
Relative Humidity	5 to 95% (non-condensing)
LED Indicators	Module Status
	Backplane Transfer Status
	Serial Port Activity LED
	Serial Activity and Error LED Status
Configuration Serial Port (PRT1)	DB-9M PC Compatible
	RS-232 only
	No hardware handshaking
Application Serial Ports	(PRT2, PRT3)
	DB-9M PC Compatible
	RS-232/422/485 jumper selectable
	RS-422/485 screw termination included
	RS-232 handshaking configurable
	500V Optical isolation from backplane

Functional Specifications

Some of the general specifications include:

- Support for the storage and transfer of up to 5000 registers to/from the Quantum processor's data files
- Module memory usage that is completely user definable
- Two ports to emulate any combination of Modbus master or slave device
- Configurable parameters include:

Parameter	Description
Protocol	RTU or ASCII
Baud Rate	110 to 115,200
Parity	None, Odd and Even
Data Bits	5 to 8
Stop Bits	1 or 2
RTS On and Off Timing	0 to 65535 milliseconds
Minimum Response Delay	0 to 65535 milliseconds
Use of CTS Modem Line	Yes or No
Floating-Point Support	

Slave Specifications

The PTQ-MCM module accepts Modbus function code commands of 1, 2, 3, 4, 5, 6, 8, 15, 16, 17, 22 and 23 from an attached Modbus Master unit. A port configured as a Modbus slave permits a remote master to interact with all data contained in the module. This data can be derived from other Modbus slave devices on the network, through a master port, or from the Quantum processor.

Master Specifications

A port configured as a virtual Modbus Master device on the PTQ-MCM module actively issues Modbus commands to other nodes on the Modbus network. One hundred (100) commands are supported on each port. Additionally, the master ports have an optimized polling characteristic that polls slaves with communication problems less frequently. The Quantum processor can be programmed to control the activity on the port by actively selecting commands from the command list to execute or issuing commands directly from the ladder logic.

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:

PTQ-MCM   Modbus Master/Slave Communication Module

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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