DATASHEET

PLX30

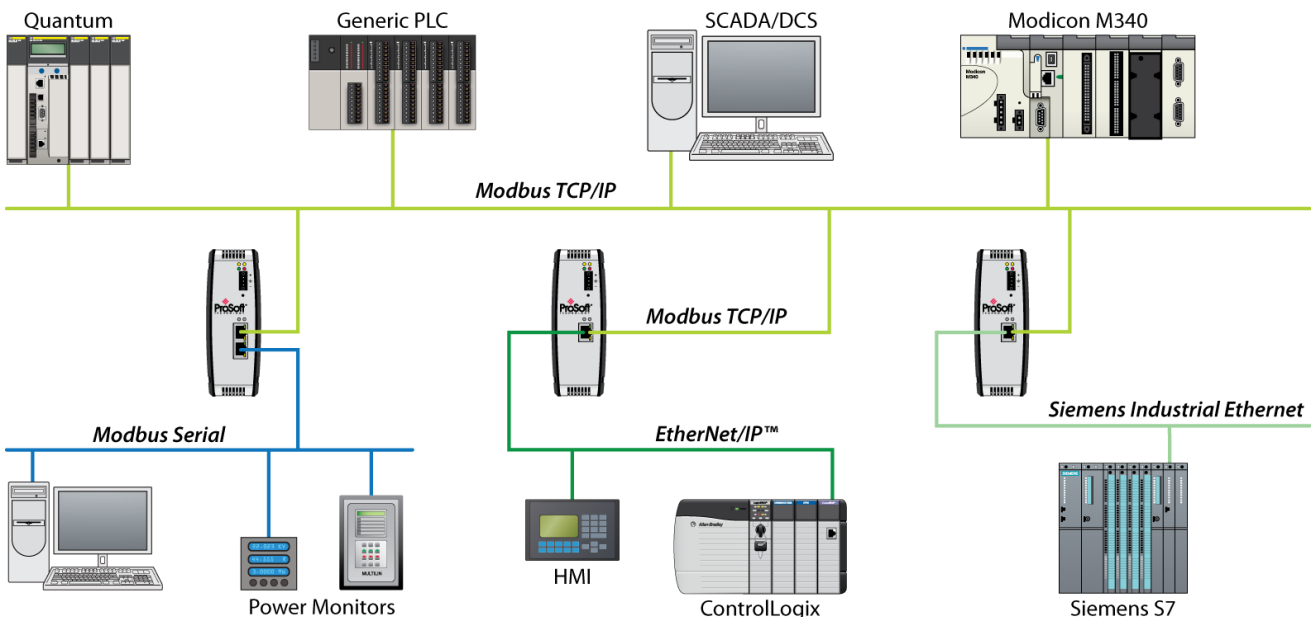### Modbus TCP/IP Communication Gateways

Our Modbus TCP/IP communication gateways offer bi-directional data transfers between devices on dissimilar networks. Our Modbus TCP/IP Driver uses Multiple Clients and Servers for faster data throughput. Protocol conversion gateways are the ideal solution for distributed networks when adding a remote rack becomes too costly.

The PLX30s are stand-alone DIN-rail mounted gateways that provide one Ethernet port for communication, remote configuration and diagnostics, and up to four (4) serial communication ports. The PLX30 gateways also come with an SD Card slot (SD card optional) for storing configuration files. In the event of a failure the SD card can be transferred to another gateway reducing downtime. These gateways contain a 4000 word database, includes a wide input power range (10 Vdc – 36 Vdc), and an extended temperature range (-25°C to 70°C). The PLX30 gateways include all the necessary cables required for communication.

Connectivity Solutions

Modbus TCP/IP to EtherNet/IP®	PLX31-EIP-MBTCP
Modbus TCP/IP to Modbus Serial	PLX31-MBTCP-MBS
Modbus TCP/IP to Modbus Serial 4 Port	PLX31-MBTCP-MBS4
Modbus TCP/IP to Siemens Industrial Ethernet	PLX31-MBTCP-SIE

EtherNet/IP® Specifications

Number of Class 3 Server Connections	5
Supported PLC Types	PLC2, PLC5, SLC and ControlLogix
Supported Message Types	PCCC and CIP
Number of Class 3 Client Connections	
Connected	2
Unconnected	1
Number of Class 1 I/O Connections	
PLX31-EIP-MBTCP	2
I/O connection sizes	248/248
Max RPI time	5ms per connection
CIP Services Supported	0x4C - CIP Data Table Read 0x4D - CIP Data Table Write
Command List	Support for 100 commands per Client, each configurable for command type, IP address, register to/from addressing and word/bit count.
Command Sets	PLC-2/PLC-3/PLC5 Basic Command Set PLC5 Binary Command Set PLC5 ASCII Command Set SLC500 Command Set

Modbus TCP/IP Specifications

Supported Modbus Function Codes	1: Read Coil Status 2: Read Input Status 3: Read Holding Registers 4: Read Input Registers 5: Force (Write) Single Coil 6: Preset (Write) Single Holding Register	15: Force (Write) Multiple Coils 16: Preset (Write) Multiple Holding Registers 22: Mask Write Holding Register (Slave Only) 23: Read/Write Holding Registers (Slave Only)
Supported Clients	10	
Supported Servers		
MBAP	5	
Encapsulated	5	
Command List	Up to 160 fully configurable Client commands	
Status Data	Error codes reported individually for each command	
Command List Polling	Each command can be individually enabled or disabled; write-only-on-data-change is available	

Modbus Serial Specifications

Command List	Up to 100 commands per Master port, each fully configurable for Function Code, slave address, register to/from addressing and word/bit count.	
Supported Modbus Function Codes	1: Read Coil Status 2: Read Input Status 3: Read Holding Registers 4: Read Input Registers 5: Force (Write) Single Coil 6: Preset (Write) Single Holding Register	15: Force (Write) Multiple Coils 16: Preset (Write) Multiple Holding Registers 22: Mask Write Holding Register (Slave Only) 23: Read/Write Holding Registers (Slave Only)
Software configurable communication parameters	Baud rate: 110 baud to 115.2 kbps Parity: None, Even, Odd Data Size: 7 or 8 bits Stop bits: 1 or 2 RTS on/off delay: 0 to 65535 milliseconds Modbus Modes RTU mode (binary) with CRC-16 ASCII mode with LRC error checking Floating Point Data Floating point data movement supported, including configurable support for Enron and Daniel implementations	
Polling of Command List	Configurable polling of command list, including continuous and on change of data, and dynamically user or automatic enabled.	
Status Data	Error codes available on an individual command basis. In addition, a slave status list is maintained per active Modbus Master port.	
Node Address	1 to 247 (software selectable)	
RS Interface	RS232, RS422, and RS485	

Siemens Industrial Ethernet Specifications

Specification	Description
Supported PLC Data Exchange (Read and Write)	Siemens S7-200, Siemens S7-300, Siemens S7-400, Siemens S7-1200
Supported Register Types	DB, Inputs, Outputs, Flags, Counters, Timers
Supported Clients	20

Hardware Specifications

Specification	Description
Power Supply	24 Vdc nominal 10Vdc to 36 Vdc allowed Positive, Negative, GND Terminals
Current Load	24 Vdc @ 300mA nominal 10 to 36 Vdc @ 610mA maximum
Operating Temperature	-25°C to 70°C (-13°F to 158°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Relative Humidity	5% to 95% RH with no condensation
Shock	IEC 60068-2-27; 15G @ 11ms, 3-Axis (Operational) IEC 60068-2-27; 30G @ 18ms, 3-Axis (Non-Operational)
Vibration	IEC 60068-2-6; 5G @ 10Hz to 150Hz
Dimensions (Height x Width x Depth)	Standard: 5.38 in x 1.99 in x 4.38 in (13.67 cm x 5.05 cm x 11.13 cm)
LED Indicators	Configuration (CFG) and Error (ERR) Communication Status Power (PWR) and Hardware Fault (FLT) Network Status (NS) EtherNet/IP™ Class I or Class III Connection Status (EtherNet/IP Only) Module Status (MS) Module Configuration Status (EtherNet/IP Only) Ethernet Communication Port Link/Activity and 100mbit Serial Communication Port Receive (RX) and Transmit (TX)
Ethernet Port	10/100Mbit half-duplex RJ45 Connector 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
Serial Port(S)	**Note:** The number of serial communication ports depends on the gateway type, and the combination of protocols.
Serial Port Isolation	2500 Vrms port signal isolation per UL 1577 serial port communication signal uses RF(Radio Frequency) modulation signal as isolation media, IC chip model is SiliconLabs Si844x(Si8440,Si8441,Si8442).
Shipped With Each Unit	2.5 mm screwdriver PLX30 DVD J180 Power Connector (1 to 4) RJ45-DB9M Serial Adapter Cable (serial protocol only) (1 to 4) DB9 to Screw Terminal Adapter (serial protocol only) 5' straight-through Ethernet cable (Grey)

Agency Approvals and Certifications

CE Mark
UL/cUL Class I Div II
ATEX Zone 2
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

Ordering Information

To order this product, please use the following:

PLX30 Gateways

PLX31-EIP-MBTCP

PLX31-MBTCP-MBS

PLX31-MBTCP-MBS4

PLX31-MBTCP-SIE

To place an order, please contact a local ProSoft distributor.

A list of ProSoft-authorized distributors is available on our website at:

www.prosoft-technology.com