Industrial automation - barcode scanner connectivity

As industrial automation continues to develop and make processes such as scanning, packaging, shipping and assembly more efficient, Comtrol's products have provided the connectivity required to integrate crucial elements in the automation system.

In conjunction with Compunetics Systems, a Michigan based company specializing in automated data collection; Comtrol has contributed to a comprehensive communications solution specifically designed for barcode scanning. Compunetics has developed a custom enclosure containing Comtrol's DeviceMaster UP and an internal voltage converter to power the scanning system and convert ASCII serial data from the barcode scanner to EtherNet/IP, PROFINET IO or Modbus TCP/IP (industrial network protocols) for the end programmable logic controller (PLC).

As seen in the diagram, the enclosure has three ports, enabling an RS-232 serial connection, a 24VDC power supply connection and an Ethernet connection. Twenty-four volts of direct current power are delivered into the enclosure; once inside the enclosure the standard 24VDC of power is stepped down to five volts where +5VDC is wired into pin nine of the serial port, easily powering the attached scanner. The DeviceMaster UP industrial ethernet gateway has a flexible power input of 5-30VDC thus allowing performance on the enclosure's five volt circuit. This serial power delivery eliminates the need to introduce an extra power supply for the barcode scanner. The barcode scanner then sends information and process data back through the serial connection to the DeviceMaster, which routes the information over Ethernet (EtherNet/IP, PROFINET IO or Modbus TCP/IP) to a PLC.

This joint industrial hardened solution not only enables the automation system, but the enclosure decreases necessary cabling and is customizable upon customer request. Installation is easy; all that is required is the enclosure, a 24VDC power supply, Ethernet cabling, DeviceMaster UP configuration and scanner connection.

Comtrol's DeviceMaster UP is designed to provide innovative PLC to device connectivity. The DeviceMaster UP provides EtherNet/IP, Modbus/TCP, Modbus RTU/ASCII, and PROFINET IO connectivity to a wide variety of devices. A highly advanced raw/ASCII device interface functionality simplifies PLC programming and ensures robust operation. These features greatly simplify connecting devices such as barcode scanners, RFID readers, weigh scales, vision systems, printers, encoders and sensors to PLCs. The DeviceMaster UP’s many unique features provide connectivity options and flexibility not provided by other gateway products.

Continued on back
HIGHLIGHTS

• DualConnectPlus™ Technology – simultaneously connect both serial and Ethernet devices to PLCs and/or applications. String, RFID, and barcode data filtering eliminates redundant data while extracting the RFID and barcode parameters.

• Provide PLC connectivity – to standard serial devices with protocol support for EtherNet/IP, PROFINET, Modbus/TCP, Modbus RTU/ASCII, and TCP/IP

• Supported PLC models – EtherNet/IP: Allen Bradley ControlLogix Family, SLC 5/05, PLC-5, MicroLogix PROFINET: Siemens ET 400, 300 S7 Modbus: Modicon Quantum, Premium, Momentum, Compact, Micro, GE Fanuc Rx7i, Rx3i, 90-70, 90-30, Versamax

• Wide -37°C to 74°C Industrial Temperature Range

• Variable power input – eliminates need for power converters

• PortVision® enterprise monitoring and management software

• RoHS Directive 2002/95/EC compliant

• Security Features – SSL & SSH management, SSL serial data stream encryption

For more detailed information visit
www.comtrol.com/devicemaster

NEMA CERTIFIED

ORDERING INFORMATION

99441-1 DeviceMaster UP 1-Port 5-30VDC

PRODUCT SUPPORT & SERVICE INFORMATION

Warranty Information
Comtrol offers a 30-day satisfaction guarantee and a 5-year limited warranty.

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