

# OmniCon

Programmable Digital I/O for DeviceNet

## Product Description

Industry trends show no slowing in the popularity of the device level network. The most popular being the DeviceNet open protocol standard. The demand is being created by cost reduction in these systems, over expensive hardwired systems. In the past, most of the distributed I/O was controlled remotely through a software application and a PC. However, the increasing need to have distributed I/O with the ability to manage information locally has led to the design of the OmniCon.

The OmniCon is a programmable digital I/O device that was designed specifically for systems requiring highly distributed I/O close to sensors and actuators. The devices are programmed with SuperLogic software a ladder logic based programming application, similar to most applications used to program PLC's. The SuperLogic software features are optimized for controlling brushless motorized roller conveyor systems. Consequently, the OmniCon is ideal for diverts, merges, and other unique brushless motorized roller conveyor applications.



### Benefits

*Programmable through ladder logic based SuperLogic software*

*Communication via **DeviceNet** protocol, supports Polling - I/O Slave Messaging Connections*

*Peer-to-Peer messaging capabilities via DeviceNet network*

*Standalone device, no PC-host required*

*Status LEDs for inputs and outputs allow visual verification and troubleshooting*

*Open collector outputs with maximum switching current of 0.5amps at 24 Vdc*

*Self-contained in rigid enclosure*

*Optimized for brushless motorized roller conveyor applications*

*Serial port for barcode scanners*

*Individual power source for each input promotes efficient photoelectric sensor wiring*

The hardware voltage requirements are 24Vdc and the devices are self contained in a rigid enclosure. The OmniCon is equipped with 8 sourcing signal inputs and 8 open collector outputs. The inputs are provided with individual power sources which promote efficient photoelectric sensor wiring and maintenance. The outputs have a maximum switching current of 0.5 amps and are protected from back EMF. The input and output status LEDs, located on the front cover, are ideal for visual verification and troubleshooting an application.

The devices are also equipped with a serial port for configuring and programming the device locally. This serial port can also be connected to a barcode scanner, this enables alphanumeric barcodes to be passed through the device and over the network to a PC with a DeviceNet interface card.

The OmniCon supports the popular DeviceNet open protocol standard for network communication and is compatible with all DeviceNet devices and networks. Furthermore, It has the unique ability to perform peer-to-peer message connections via this protocol. This feature along with the local running of ladder logic engine allows the OmniCon's to be standalone devices on the network. As a result, Unlike PC based I/O control an expensive PC and software is not necessary for operation.

Additionally, the OmniCon supports the DeviceNet polled messaging connection between itself and a DeviceNet master device. The devices will produce 5 bytes of data to the network; input status, output status, interlock information, And 2bytes user defined. They will also consume 2 bytes of data from the network, allowing master devices to control internal programming bits. Therefore, with a DeviceNet interface card and the OPC server software, an off-the-self HMI software package can used to monitor and control the OmniCon devices.

## Specifications

|                             |   |
|-----------------------------|---|
| Product Type                | <i>Programmable digital I/O field device</i>  |
| Network                     | <i>DeviceNet</i>  |
| Voltage Range               | <i>Module : 12-30 Vdc; Network 12-30 Vdc</i>  |
| Current Consumption         | <i>Module: 210 mA Max @ 24Volts, excluding motor and photo-eye current; Network: 40 mA max.</i> |
| Operating Temperature Range | <i>-30 °C to 70 °C [-22 °F to 158 °F]</i>   |
| Storage Temperature Range   | <i>-55 °C to 85 °C [-67 °F to 185 °F]</i>   |
| Humidity                    | <i>95% RH, non-condensing</i>   |
| Standards                   | <i>Pending</i>  |
| Shock                       | <i>10 g</i>   |
| Vibration                   | <i>2 G, 10 to 500 Hz</i>  |
| Dimensions                  | <i>7 3/4" x 3 3/4" x 1"</i>   |
| Housing Material            | <i>Steel</i>  |
| Weight                      | <i>0.75 lbs..</i>   |
| Mounting                    | <i>#10-32 hex head machine screws</i>   |
| Function                    | <i>Low voltage programmable distributed I/O for DeviceNet</i>                                   |
| Inputs                      | <i>8 normally open, SOURCING sensors required; 12 - 24 Vdc</i>                                  |
| Input Signal Current        | <i>0.1 mA nominal</i>   |
| Sensor Input Power          | <i>Powered from module, sharing common power. Module Input current limited to 1.25A</i>         |
| Outputs                     | <i>8 independent control outputs ( common ground)</i>   |
| Output Type                 | <i>NPN open collector outputs</i>   |
| Output Voltage Drop         | <i>0.06 Vdc @ 100 mA, 0.35Vdc @ 500 mA</i>  |
| Max. Output Current         | <i>500 mA maximum</i>   |
| Output Leakage Current      | <i>10 µA maximum</i>  |
| Serial Port                 | <i>1 RS232 port. 9600, 8 bits, no parity, 1 stop bit. modem cable compatible</i>                |
| Wire Size (Recommended)     | <i>20 to 24 AWG stranded or solid</i>   |
| I/O Connectors              | <i>Screw terminals with quick disconnect</i>  |

### To order:

Omni Automation, Inc.  
331 E. Leah LN.  
Gilbert, AZ 85234 USA

480-216-3286 Phone  
480-812-3720 Fax

sales@omni-az.com E-mail  
www.omni-az.com Website



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