



## IO-Link Master 8-EIP

Part Number: 99608-8



### KEY FEATURES AND BENEFITS

- Eight port IO-Link Master to EtherNet/IP™
- Rugged IP67 housing desing for harsh environments, M12 connectors allowing up to eight sensor or actuator connections on one master block
- MultiLink™ – Simultaneously provides IO-Link device access to multiple controllers
- EtherNet/IP™ and Modbus TCP access to IO-Link process, event and service data
- EtherNet/IP™ Class 1 (Implicit) and Class 3 (Explicit) interfaces
- HMI, SCADA, and PLC access to IO-Link ISDU blocks without complex programming
- Power port sharing capability
- EDS files and sample programs
- Powerful web GUI for configuration and diagnostics, including: IO-Link device management using the IO-Link device manufacturers IODD file for easy device configuration, Automatic data storage (upload and download), Manual data storage (upload and download), Device validation, and Data validation.
- Wide operating temperature (-25° to +60°C)
- Additional digital input on every port
- IO-Link V1.0 and V1.1 compatibility
- IO-Link COM1, COM2 and COM3 (230K baud rate) support
- Quality of Services Agreement
- Accredited IO-Link Test Center

IO-LINK MASTER



### PRODUCT DESCRIPTION

Control's IO-Link Master combines the benefits of the IO-Link standard with the popular industrial EtherNet/IP protocol by providing a gateway that's a streamlined bridge between the field level sensor network and the industrial EtherNet/IP backbone, making retrofitting or expansion simple.

The IO-Link Master features a rugged IP67 slim-line design incorporating two Fast Ethernet ports and four IO-Link ports with Class A M12 connectors. This product is for industrial applications with its machine-mount design using industrial grade components. The IO-Link Master is easily integrated into factory automation networks and is compatible with both IO-Link and digital IO sensor technologies.

# IO-LINK MASTER SPECIFICATIONS

## HARDWARE

**Network Interfaces**  
10/100BASE-TX

**Enclosure**  
Molded Polyamide 66 (potted)

**Ingress Protection Rating**  
IP67

**Installation and Grounding Method**  
Machine or panel mount - two-hole M4 or #8 screws

**Network Protocols**  
EtherNet/IP™, Modbus/TCP (slave)

**Connectors (M12)**  
8 - IO-Link  
2 - Ethernet  
2 - Power

**LED Indicators**  
Power, Module Status, Network Status, IO-Link, DI and Ethernet Port Status

**Dimensions**  
8.35" x 2.56" x 1.18"  
212 x 65 x 30 mm

**Product Weight**  
1.0 lb  
454 g

## IO-LINK INTERFACE SPECIFICATIONS

**Connector Type**  
Female, M12 A-coded, 5-pin

**Number of Ports** 8

**IO-Link Version**  
Support V1.0 and V1.1

**Connector Pinout**  
Pin 1 = L+  
Pin 2 = DI  
Pin 3 = L-  
Pin 4 = C/Q  
Pin 5 = Not Connected

**Configurations per Port**  
IO-Link = 1  
DI (SIO mode) = 1  
DO (SIO mode) = 1  
DI (dedicated) = 1

**IO-Link Mode Transfer Rates**  
4.8K (COM1)  
38.4K (COM2)  
230.4K (COM3)

**Baud Rate Recognition**  
Automatic

**Output Current on IO-Link Connectors (Ports 1-8)**  
Port 1 max current: 1.6A  
Port 2 - Port 8 max current: 500mA (Each Port)

**Short Circuit Protection** Yes

**Cable Length (Maximum)** 30 m

## DIGITAL INPUTS C/Q (SIO Mode Using IO-Link Ports)

**Sensor Current Load (Max.)**  
200mA

**Input Characteristics**  
IEC 61131-2 Type 1 and Type 3 Compliant

**Short-Circuit and Overload Protection**  
Yes

**Short-Circuit Proof**  
Yes

**Input Current Limitation**  
Yes

**C/Q Input Threshold**  
Low: 8.0 - 11.5V  
High: 10.5 - 13.0V

**Cable Length (Max.)**  
30 m

## DIGITAL OUTPUTS C/Q (SIO Mode Using IO-Link Ports)

**Actuator Current Load (Max.)**  
200mA

**Input Characteristics**  
IEC 61131-2 Type 1 and Type 3 Compliant

**Short-Circuit and Overload Protection**  
Yes

**Short-Circuit Proof**  
Yes

**Input Current Limitation**  
Yes

**Output Function**  
PNP/NPN

**Cable Length (Max.)**  
30 m

## DIGITAL INPUTS (ONLY) SPECIFICATIONS

**Sensor Current Load (Maximum)**  
200mA

**Input Characteristics**  
IEC 61131-2 Type 1 and Type 3 Compliant

**Short-Circuit and Overload Protection**  
Yes

**Short-Circuit Proof** Yes

**Input Current Limitation** Yes

**DI Input Threshold**  
Low: 5.2 - 6.4V  
High: 6.8 - 8.0V

**Cable Length (Max.)** 30 m

## ETHERNET/IP INTERFACE SPECIFICATIONS

**Supported PLCs**  
Including but not limited to:  
Control Logix  
Compact Logix  
RSLogix  
SLC 500  
PLC5  
MicroLogix  
Other Class 1 or Class 3 EtherNet/IP PLCs may be supported

**ISDU Read & Writes**  
Up to 40 individual commands in one EtherNet/IP message

**ISDU Commands**  
Selectable byte swapping (none, 16-bit, or 32-bit)  
Selectable payload sizes (4 to 232 bytes)  
ISDU block index  
ISDU sub-index  
Length of read or write  
Data payload

**Web Page Configuration**  
Provides the following capabilities:  
Port configuration for ISDU Data, Process Data, Transfer Mode, Read/Write, Write PDI to Tag/File, and Read PDO from Tag/File.  
EtherNet/IP configuration:  
Time to Live (TTL) Network Value  
Multicast IP Address Allocation Control  
User-Defined Number of Multicast IP Addresses  
User-Defined Multicast Starting IP Address  
Session Encapsulation Timeout

**Diagnostics** Yes

**Electronic Data Sheets (EDS)** Yes

**Sample PLC Programs** Yes

## IO-LINK MASTER FEATURES

**Data Storage**  
Automatic or Manual - Upload and/or Download

**Device Validation** Yes

**Data Validation** Yes

**Powerful Web Interface**  
Provides the following capabilities  
Firmware upgradable  
Password protected with Admin, Operator, and User accounts  
ISDU batch handling  
Load IODD files to configure the IO-Link Device  
IODD Handler parses xml files making them readable and configurable  
Log files

**Upgradable Firmware**  
Yes (Web page or using PortVision DX)

**Remote Parameterization** Yes

**Mobile App Support**  
Simplify monitoring of control system Process and Service Data using simple standard clients available for free in Google Play and Apple App Store

## ELECTRICAL SPECIFICATIONS

**Input Voltage Rang**  
20-30VDC / 12A (Max)

**Power Supply In**  
Vs - 12A (Max)  
Va - 12A (Max)

**Power Consumption (Without Load)**  
100mA @ 24VDC (Vs)

**Power Supply Out**  
Vs - 10A (Max)\*  
Va - 10A (Max)\*\*

**Short Circuit Protection for IO-Link Connectors**  
Yes

**Power Connectors**  
Input (1)  
Male M12 T-coded 4-pin  
Output (1)  
Female M12 T-coded 4-pin

\*Vs output available is determined by subtracting the following from the available input current:  
IO-Link Module Power  
Actual C/Q current for each IO-Link Port  
Actual Vs current for each IO-Link port  
\*\* Va output available is the same as the available Va input current

## ENVIRONMENTAL SPECIFICATIONS

**Air Temperature**  
System On  
-25°C to +60°C  
System Off  
-40°C to +70°C

**Operating Humidity (non-condensing)**  
10% to 95%

**Storage Humidity (non-condensing)**  
10% to 95%

**Shock/Vibrations**  
EN60068-2-6  
EN60068-2-27

**Enclosure Rating**  
IP67 (IEC 60529)

## EXPORT INFORMATION

**Package Shipping Weight**  
1.2 lb  
544.3 g

**Package Dimensions**  
10.5" x 4.5" x 1.5"  
267 x 114 x 38mm

**UPC Code**  
7-56727-99570-8

**Country of Origin**  
USA

**ECCN**  
5A992

**Schedule B Number**  
8517.62.0050

## REGULATORY APPROVALS

**Immunity**  
European Standard EN 61000-6-2  
International Standard IEC 61000-6-2  
IEC/EN 61131-2  
IEC 1000-4-2/EN 61000-4-2: Electrostatic Discharge (ESD)  
IEC 1000-4-3/EN 61000-4-3: Radiated, Radio-Frequency (RF)  
IEC 1000-4-4/EN 61000-4-4: Fast Transient/Burst  
IEC 1000-4-5/EN 61000-4-5: Surge  
IEC 1000-4-6/EN 61000-4-6: Conducted disturbance  
IEC 1000-4-8/EN 61000-4-8: Magnetic field  
IEC 1000-4-11/EN 61000-4-11: Dips and Voltage Variations

**Emissions**  
European Standard EN 61000-6-4  
International Standard IEC 61000-6-4  
AS/NZS CISPR-11  
FCC Part 15 Subpart B  
Class A limit  
Canadian EMC requirements ICES-001

**Safety**  
CSA C22.2 No. 61010-1-12 / CSA C22.2 No. 61010-1-201

**Other**  
Ingress Protection rating IP67 (IEC 60529)  
Environmental & Mechanical testing pre IEC/EN 61131-2  
European Standard: 2011/65/EU (RoHS2) Directive.  
Regulatory Approval Symbols



### Warranty Information

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

### Sales Support

+1.763.957.6000  
sales@comtrol.com

### Technical Support

+1.763.957.6000  
www.comtrol.com/support

### Email, FTP, and Web Support

info@comtrol.com  
ftp.comtrol.com  
www.comtrol.com