

IO-Link Master 4-EIP

Part Number: 99570-8



KEY FEATURES AND BENEFITS

- Four port IO-Link Master to EtherNet/IP™
- Rugged IP67 housing designed for harsh environments, M12 connectors allowing up to four sensor connections on one master block
- EtherNet/IP™ and Modbus TCP access to IO-Link process, event and service data
- EtherNet/IP™ Class 1 (Implicit) and Class 3 (Explicit) interfaces
- Write-to-Tag/File, Read-from-Tag/File
- PLC access to IO-Link ISDU blocks without complex programming
- 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 (0° to +55°C)
- Multi-side LED visibility for device, network and port status
- Additional digital input on every port
- Works with PortVision DX
- IO-Link V1.0 and V1.1 compatibility
- IO-Link COM1, COM2 and COM3 support (230K baud rate)
- Slim-line machine-mount installation
- MultiLink™ – Simultaneously provides IO-Link device access to multiple controllers
- Quality of Services Agreement
- Accredited IO-Link Test Center



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 ABS (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
4 - IO-Link
2 - Ethernet
2 - Power

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

Dimensions
6.07" x 2.04" x 1.68"
154 x 51.8 x 42.7 mm

Product Weight
0.70 lb
318 g

IO-LINK INTERFACE SPECIFICATIONS

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

Number of Ports
4

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

Transfer Rates
4.8K (COM1)
38.4K (COM2)
230.4K (COM3)

Baud Rate Recognition
Automatic

Output Current on IO-Link Connectors (Port 1-4)
C/Q on Pin 4 Vs on Pins 1, 3
200mA (Maximum) 500mA* (Maximum)

Short Circuit Protection
Yes

Cable Length (Max.)
20m

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

Sensor Current Load (Maximum)
200mA

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

Input Current Limitation
Yes

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

Cable Length (Max.)
30m

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

Actuator 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

Output Function
PNP/NPN

Cable Length (Max.)
30m

DIGITAL INPUTS (ONLY) SPECIFICATIONS

Sensor Current Load (Maximum)
200mA

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

Input Current Limitation
Yes

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

Voltage Limit
-40 to +40VDC

Cable Length
30m

ETHERNET INTERFACE SPECIFICATIONS

Connector Type
Female, M12 D-coded, 4-pin

Number of Ports
2

Ethernet Specification
10/100BASE-TX

Standards
IEEE802.3: 10BASE-T
IEEE 802.3u: 100BASE-TX

Auto-MDI/MDI-X
Yes

Auto-Negotiation
Yes

Link Distance
100 m

Cable Types
Twisted pair (Cat 5 or higher)

IPv4 Addressing
Yes

ETHERNET/IP INTERFACE SPECIFICATIONS

Supported PLCs
Including but not limited to:
Control Logix
Compact Logix
RSLogix
SLC 500
PLCs
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

Webpage 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

MODBUS TCP FEATURES

Supported Controllers (Modbus TCP Masters)
PLC
HMI
SCADA
OPC Server

Supported Clients
Any Modbus TCP Client
Applications on phones/tables

Web Page Configuration
Port configuration for ISDU Response Timeout, Process Data, and Transfer Mode

Diagnostics
Yes

4-EIP 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

ELECTRICAL SPECIFICATIONS

Input Voltage Range
20-30VDC / 4A (Max.)

Power Supply In (Us)
4A (Maximum)

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

Power Supply Out (Us)
*Us 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 (w/out devices)4A (Maximum*)
Actual Vs current for each IO-Link port

Power Connectors
Input (1)
Male M12 A-coded 5-pin
Output (1)
Female M12 A-coded 5-pin

ENVIRONMENTAL SPECIFICATIONS

Air Temperature
System On 0°C to +55°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

Packaged Shipping Weight
1.05 lb
455 g

Package Dimensions
9.19" x 7.25" x 2.5"
233 x 184 x 63.5mm

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
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
AS/NZS CISPR-22
FCC Part15 Subpart B
Class A limit
Canadian EMC requirements ICES-003

Safety
CSA C22.2 No. 142/UL 508E360395

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



Warranty Information

Control 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