



## IO-Link Master DR-8-EIP

Part Number: 99590-6



### KEY FEATURES AND BENEFITS

- Eight port IO-Link Master to EtherNet/IP™ with additional digital inputs on every port allowing for a possible 10 DI ports with the two dedicated DI/DO ports
- Screw terminal connectors for IO-Link, Power, and Digital IO
- IP20 DIN rail mount enclosure
- Wide operating temperature (-40° to +70°C)
- LEDs for device, network, and port status
- EtherNet/IP™ and Modbus TCP access to IO-Link process, event, and service data
- EtherNet/IP™ Class 1 (Implicit) and Class 3 (Explicit) interfaces
- 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.
- Works with PortVision DX
- IO-Link V1.0 and V1.1 compatibility
- IO-Link COM1, COM2 and COM3 support (230K baud rate)
- Write-to-Tag/File, Read-from-Tag/File
- PLC access to IO-Link ISDU blocks without complex programming
- 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 DR-8-EIP 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 easily installs on a standard DIN rail and incorporates two Fast Ethernet ports, eight IO-Link ports, two DI/DO ports and two DI ports. This product is designed with industrial grade components and redundant power inputs to make it exceptionally reliable for critical applications. The IO-Link Master is easily integrated into a system network, and is compatible with existing and new industrial Ethernet environments.

# IO-LINK MASTER SPECIFICATIONS

## HARDWARE

Network Interfaces	10/100BASE-TX
Enclosure	Polyamide
Installation and Grounding Method	DIN rail
Network Protocols	EtherNet/IP, Modbus/TCP (slave)
Connectors	DI/DO, Ethernet, IO-Link, Power
LED Indicators	Power, Module Status, Network Status, IO-Link, DI, DIO states, and Ethernet Port Status
Dimensions (L x W x H)	3.9" x 4.5" x 1.8"
	100 x 115 x 45 mm
Product Weight	10 oz
	285 g

## IO-LINK INTERFACE SPECIFICATIONS

Connector Type	Screw Terminal
Number of Ports	8
IO-Link Version	Supports V1.0 and V1.1
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)	C/Q on Pin 4
	200mA (Maximum)
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
Short-Circuit and Overload protection	Yes
Short-Circuit proof	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
Input Current Limitations	Yes
Output Function	PNP/NPN
Cable Length (Max.)	30m

## DIGITAL INPUTS C/Q (DI and DIO Pin)

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
C/Q Input Threshold	Low: 5.2 - 6.4V
	High: 6.8 - 8.0V
Cable Length (Max.)	30m

## DEDICATED DIGITAL IO PORTS (Digital Input Mode)

Connector Type	Screw Terminal
Number of Ports	2 (D1 & D3)
Cable Length (Max.)	30m

## DIGITAL INPUTS/OUTPUTS

Connector Type	Screw Terminal
Number of Ports	2 (D2 & D4)
Configurations per port	DI/DO (configurable) = 1
	DI (dedicated) = 1
Cable Length (Max.)	30m

## DIGITAL OUTPUTS

Actuator (Sensor) Current Load (Max.)	200mA
Lamp Load (Max.)	4W
Over Load and Short Circuit Protection	Yes
Switching Output	PNP, NPN

## ETHERNET INTERFACE SPECIFICATIONS

Connector Type	RJ45
Number of Ports	2
Ethernet Specification	10/100BASE-TX
Standards	IEEE802.3: 10BASE-T
	IEEE 802.3u: 100BASE-TX
Auto-MD/MDI-X	Yes
Auto-Negotiation	Yes
Link Distance	100m
Cable Types	Unshielded or Shielded twisted pair
IPv4 Addressing	Yes

## 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 may be supported

## 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

## MODBUS TCP INTERFACE

### 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	
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Diagnostics	Yes
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## DR-8-EIP FEATURES

Data Storage	Screw Terminal
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)	
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### Remote Parameterization

Yes	
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### 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	
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## ELECTRICAL SPECIFICATIONS

DC Input Voltage Range	18-30VDC
Current Consumption (Max.)	4.3A @ 24VDC
Current Consumption (w/out devices)	100mA
Current Consumption (with load)	4.04A
Power Consumption (w/out load)	2.4W
Power Connectors	Screw terminal

## ENVIRONMENTAL SPECIFICATIONS

Air Temperature	
System On	-40°C to +70°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

## EXPORT INFORMATION

Package Weight	1.1 lbs
	481.94 g
Package Dimensions	9.2" x 7.25" x 2.5"
	233 x 184 x 64 mm
Country of Origin	USA
ECCN	5A992
Schedule B Number	8517.62.0050

## REGULATORY APPROVALS

### Immunity

European Standard 61000-6-2	
International Standard IEC 61000-6-2	
IEC 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	

### Emmissions

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	
UL 61010-1/UL 61010-1-201	

### Other

Ingress Protection rating IP@ (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

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