



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

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Technical Support

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