IO-Link Master DR-8-EIP-P

Part Number: 99669-9

KEY FEATURES AND BENEFITS

- Eight port IO-Link Master to EtherNet/IP™ with pluggable/removable push-in plug connectors for IO-Link and Power
- IP20 DIN rail mount enclosure
- Dual Ethernet ports
- Additional digital input on every port
- MultiLink™ – Simultaneously provides IO-Link device access to multiple controllers
- EtherNet/IP™ Class 1 (Implicit) and Class 3 (Explicit) interfaces
- EtherNet/IP™ and Modbus TCP access to IO-Link process, event, and service data
- HMI, SCADA, and PLC access to IO-Link ISDU blocks without complex programming
- EDS files and sample programs
- Convenient EtherNet/IP Write-to-Tag/File, Read-from-Tag/File data exchange option
- 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 - a discovery management application
- LEDs for device, network, and port status
- Wide operating temperature (-40° to +70°C)
- IO-Link V1.0 and V1.1 compatibility
- IO-Link COM1, COM2 and COM3 (230K baud rate) support

PRODUCT DESCRIPTION

Comtrol's IO-Link Master combines the benefits of the IO-Link standard with the EtherNet/IP™ and Modbus TCP protocols. The IO-Link Master effectively shields the PLC programmers from the IO-Link complexities by handling those complexities itself. The result is simplified EtherNet/IP™ and Modbus TCP interfaces, which decreases system development time and installation efforts.

This IO-Link Master easily installs on a standard DIN rail and incorporates two Fast Ethernet ports, eight pluggable/removable push-in plug IO-Link 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.

Your automation, our passion.

IO-LINK MASTER SPECIFICATIONS

HARDWARE

Network Interfaces	10/100BASE-TX
Enclosure	
Polyamide UL94V-0	
Ingress Protection Rating	IP20
Installation and Grounding Method	DIN rail
Connectors (PWR, IO-Link, DI/DO)	
Pluggable Push-In screwless terminal plugs	
Connection Methods	
Push-In spring screwless terminals	
Connectors (Ethernet)	RJ45
Network Protocols	
EtherNet/IP™, Modbus/TCP	
Channels	
8 x IO-Link / Digital I/O (configurable)	
8 x Digital Input DI	
2 x Ethernet	
LED Indicators	
Module Status, Network Status, IO-Link, DI, Ethernet Link & Activity	
Dimensions (L x W x H)	
1.78" x 4.65" x 4.5"	
45 mm x 1018 mm x 114 mm	
Product Weight	8.8 oz
	249.5 g

Electrical Specifications

DC Input Voltage Range	18 VDC – 30VDC
Current Consumption (max.)	3.7A at 24VDC
Current Consumption (system electronics)	155mA at 24VDC
Power Consumption (system electronics)	3.75W
Power Input Connector	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°C to +70°C
Storage Temperature	-40°C to +85°C
Operating Humidity (non-condensing)	10% to 95%
Storage Humidity (non-condensing)	10% to 95%
Shock/Vibrations	EN60068-2-6
	EN60068-2-27
Environmental / Mechanical Approvals	IEC 61131-2
	IEC 60529

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

IO-LINK PORTS SPECIFICATIONS

Number of Connectors	8 (PORT 1 – 8)
Number of Channels	
8 x IO-Link / Digital I/O (configurable)	
8 x DI	
IO-Link Version	Supports V1.0 and V1.1
Port Pinout	Pin 1 – L+
	Pin 2 – L-
	Pin 3 – DI
	Pin 4 – C/Q (configurable)
Configurations per port	
Pin 4 (configurable):	
IO-Link	
DI (SIO mode)	
DO (SIO mode)	
Pin 3: DI	
Output Current L+/L- (Pins 1 & 3)	200 mA
Output Current C/Q (Pin 4)	200 mA
Output Current per Master	3.2 A (max.)
IO-Link Mode Transfer Rates	4.8K (COM1)
	38.4K (COM2)
	230.4K (COM3)
Baud Rate Recognition	Automatic
Cable Length (Max.)	20m

IO-LINK PORTS – DIGITAL INPUT SIO MODE (PORT PIN 4)

Input Characteristics	
IEC 61131-2 Type 1 and Type 3 Compliant	
Sensor supply current (L+/L-)	200 mA
Sensor Supply current per Master	1.6 A (max.)
Input Threshold	High: 10.5 – 13.0V
	Low: 8.0 – 11.5V
Cable length (max.)	30 m

IO-LINK PORTS – DIGITAL OUTPUT SIO MODE (PORT PIN 4)

Typical Output Voltage	24 VDC
Output Current (max.)	200 mA
Output Current per Master	1.6 A (max.)
Protection	
Overload and short circuit protection	
Output Function	PNP/NPN (Push-Pull)
Cable length (max.)	30 m

IO-LINK PORTS – DIGITAL INPUT (PORT PIN 3; DEDICATED)

Input Characteristics	
IEC 61131-2 Type 1 and Type 3 Compliant	
Typical Input Current	3 mA
Input Threshold	High: 6.8 – 8.0V
	Low: 5.2 – 6.4V
Reverse Polarity Protected	Yes (-40V to +40V)
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 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

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

Diagnostics	Yes

ADDITIONAL FEATURES

Configuration
Embedded web interface, IO-Link, EtherNet/IP, and Modbus TCP

Data Storage
Automatic or Manual - Upload and/or Download

Device Validation	Yes
Data Validation	Yes

Diagnostics
IO-Link, EtherNet/IP, and Modbus TCP

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
• Save/Load Configuration Files
• 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

EXPORT INFORMATION

Package Weight	0.85 lbs.
	385.5 g
Package Dimensions	
5.7" x 5.7" x 3.4"	
145mm x 145mm x 86.4mm	
UPC Code	7-56727-99669-6
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
EN/IEC 61131-2 and EN/IEC 61131-9
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

Emmisions
European Standard EN 61000-6-4
International Standard IEC 61000-6-4
AS/NZS CISPR-11
FCC Part15 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 pre IEC/EN 61131-2
European Standard: 2011/65/EU (RoHS2) Directive.

Regulatory Approval Symbols

CE FC cULus

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