

## IO-Link Master DR-8-PNIO-T

Part Number: 99673-6



### KEY FEATURES AND BENEFITS

- Eight port IO-Link Master to PROFINET IO 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
- PLC access to IO-Link ISDU blocks without complex programming
- PROFINET Certification
- Supports the IOL\_CALL function
- GDSML files
- Supports OPC UA
- 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

Control's IO-Link Master combines the benefits of the IO-Link standard with the PROFINET IO 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 PROFINET IO and Modbus TCP interfaces, which decreases system development time and installation efforts.

The IO-Link Master easily installs on a standard DIN rail and incorporates two Fast Ethernet ports, eight pluggable/removable screw terminal 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.

# 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 screw terminal block plugs	
Connection Methods	
Screw terminals	
Connectors (Ethernet)	RJ45
Network Protocols	
PROFINET IO, 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	9.6 oz 272 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

## PROFINET IO

Web Page Configuration	
PROFINET IO Device Name	
IOL_CALL Function Block Timeout (1-20)	

Diagnostics	Yes
GSD Files	Yes
Diagnostics	Yes

## MODBUS TCP

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

## DR-8-PNIO 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, PROFINET IO, 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	0.9 lbs. 408 g
Package Dimensions	5.7" x 5.7" x 3.4" 145mm x 145mm x 86.4mm
UPC Code	7-56727-99673-6
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	
Emissions	
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	
UL File # E360395	
Vibration	EN 60068-2-6 / IEC 60068-2-6
Mechanical Shock	EN 60068-2-27 / IEC 60068-2-27
Environmental / Mechanical Test Approvals	IEC 61131-2 IEC 60529
Ingress Protection Rating	Ingress Protection rating IP20 (IEC 60529)
Other	The components of this product comply with the requirements of the EMC/EMI Directive 2014/30/EU, Directive 2011/65/EU on the Restriction of the use of certain Hazardous Substances (RoHS2), 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

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