

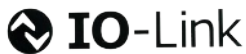
IO-Link Master 8-PNIO-L

Part Number: 99607-1



KEY FEATURES AND BENEFITS

- Eight M12 IO-Link ports to PROFINET, which allows up to eight sensor or actuator connections on a single master
- L-Coded power connectors
- Rugged IP67 housing design for harsh environments
- Dual Ethernet ports
- Additional digital input on every port
- Power port sharing capability
- 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 (-25° to +60°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 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.

This IO-Link Master features a rugged IP67 slim-line design incorporating two Fast Ethernet ports, eight M12 IO-Link ports with L-Coded power connectors. Designed for harsh environments, its machine-mount design uses industrial grade components. The IO-Link Master is easily integrated into a system network and is compatible with existing and new industrial Ethernet installations.

IO-LINK MASTER SPECIFICATIONS

HARDWARE

Network Interfaces	10/100BASE-TX
Enclosure	Molded Polyamide 66 (potted)
Ingress Protection Rating	IP67
Installation and Grounding Method	Machine or panel mount
	Two-hole M4 or #8 screws
Network Protocols	PROFINET IO, Modbus/TCP (slave)
Channels	8 x IO-Link / Digital I/O (configurable)
	8 x Digital Input DI
	2 x Ethernet
LED Indicators	Power, Module Status, Network Status, IO-Link, DI and Ethernet Port Status
Dimensions	8.35" x 2.56" x 1.18"
	212 x 65 x 30 mm
Product Weight	1.0 lb
	454 g

ELECTRICAL SPECIFICATIONS

Power Connectors	1 x Power Input
	1 x Power Output

Connector type

M12, L-coded, 4 + FE

Power Connector Pin-Out

Pin 1 – US+ (Master electronics & sensor supply)
Pin 2 – UA- (Actuator supply)
Pin 3 – US- (Master electronics & sensor supply)
Pin 4 – UA- (Actuator supply)

DC Input Voltage Range

20 VDC – 30 VDC

Power Supply In

Module electronics and sensor (US) 16A (max.)

Actuator supply (UA) 16A (max.)

Power Consumption (module electronics)

100mA @ 24VDC

Power Supply Out

US 16A (max.) *

UA 16A (max.) **

* US output available is determined by subtracting the following from the available input current:

- Module electronics
- Total C/Q current for all IO-Link ports
- Total sensor supply current

** UA output available is the same as the available UA input current

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature -25°C to +60°C

Storage Temperature -40°C to +70°C

Operating Humidity (Non-Condensing)

10% to 95%

Storage Humidity (Non-Condensing)

10% to 95%

Ingress Protection IP67 (EN / IEC 60529)

Shock / Vibrations EN60068-2-6

EN60068-2-27

Environmental / Mechanical Approvals

IEC 61131-2

ETHERNET INTERFACE SPECIFICATION

Number of Ports	2
Connector Type	M12 D-coded, 4-pin
Ethernet Specification	10/100BASE-TX
Standards	IEEE 802.3: 10BASE-T
	IEEE 802.3u: 100BASE-TX
Auto-MDI/MDI-X	Yes
Auto-Negotiation	Yes
Link Distance	100 m
Cable Types	Unshielded/shielded twisted pair (Cat 5 or higher)
IPv4 Addressing	Yes

IO-LINK PORTS

IO-Link Version	Supports V1.0 and V1.1
Connectors	8 (Port 1 – 8)
Connector type	M12, A-coded Female, 5-position
Channels	8 x IO-Link / Digital I/O (configurable)
	8 x DI
Connector Pinout	Pin 1 = L+
	Pin 2 = DI
	Pin 3 = L-
	Pin 4 = C/Q
	Pin 5 = no connect

Configurations per connector

Pin 4 (configurable):

IO-Link

DI (SIO mode)

DO (SIO mode)

Pin 3: DI

Output Current L+/L- (sensor)

1.6 A (Port 1)

1.0 A (Port 2 – 8; each)

Output Current C/Q 200 mA

Output Current per Master (C/Q & L+/L-)

6.7 A (max.)

IO-Link Mode Transfer Rates 4.8K (COM1)

38.4K (COM2)

230.4K (COM3)

Automatic

20 m (max.)

Baud Rate Recognition

Cable Length

Protection Overload and short circuit protection (Self recovers)

Cable Length (Max.) 20 m

IO-LINK PORTS – DIGITAL INPUT SIO

MODE (PORT PIN 4)

Input Characteristics

IEC 61131-2 Type 1 and Type 3 Compliant

Input Threshold High: 10.5 – 13.0V

Low: 8.0 – 11.5V

Typical Input Current 3 mA

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.)

Lamp Load (max.) 4W

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

Yes (-40V to +40V)

Reverse Polarity Protected

Cable Length (Max.) 30m

PROFINET IO INTERFACE SPECIFICATIONS

Web Page Configuration

PROFINET IO Device Name

IO_LINK 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

IO-LINK MASTER FEATURES

Configuration

Embedded web interface, IO-Link, PROFINET IO, 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

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 Shipping Weight 1.2 lb

544.3 g

Package Dimensions 10.5" x 4.5" x 1.5"

267 x 114 x 38mm

UPC Code 7-56727-99607-1

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 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

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

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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sales@comtrol.com

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