



IO-Link Master 4-PNIO

Part Number: 99575-3



KEY FEATURES AND BENEFITS

- Four channel IO-Link Master to PROFINET IO
- Write-to-Tag/File, Read-from-Tag/File
- PLC access to IO-Link ISDU blocks without complex programming
- Rugged IP67 housing designed for harsh environments, M12 connectors allowing up to four sensor connections on one master block
- 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
 - Data validation
- Wide operating temperature (0° to +55°C)
- Multi-side LED visibility for device, network and port status
- Additional digital input on every port
- IO-Link V1.0 and V1.1 compatibility
- IO-Link COM1, COM2 and COM3 support (230K baud rate)
- Slim-line machine-mount installation
- PROFINET Certification

IO-LINK MASTER



PRODUCT DESCRIPTION

Control's IO-Link Master combines the benefits of the IO-Link standard with the popular industrial PROFINET IO protocol by providing a gateway that's a streamlined bridge between the field level sensor network and the industrial PROFINET IO backbone, making retrofitting or expansion simple.

The IO-Link Master features a rugged IP67 slim-line design incorporating two Fast Ethernet ports and four IO-Link ports with Class A M12 connectors. This product is for industrial applications with its machine-mount design using industrial grade components. The IO-Link Master is easily integrated into factory automation networks and is compatible with both IO-Link and digital IO sensor technologies.

IO-LINK MASTER SPECIFICATIONS

HARDWARE

Network Interfaces
10/100BASE-TX

Enclosure
Molded ABS (potted)

Ingress Protection Rating
IP67

Installation and Grounding Method
Machine or panel mount - two-hole M4 or #8 screws

Network Protocols
PROFINET IO

Connectors
4 - IO-Link
2 - Ethernet
2 - Power

LED Indicators
Power, Module Status, Network Status, IO-Link, DI and Ethernet Port Status

Dimensions
6.07" x 2.04" x 1.68"
154 x 51.8 x 42.7 mm

Product Weight
0.70 lb
318 g

IO-LINK INTERFACE SPECIFICATIONS

Connector Type
Female, M12 A-coded, 5-pin

Number of Ports
4

IO-Link Version
Support V1.0 and V1.1

Connector Pinout
Pin 1 = L+
Pin 2 = DI
Pin 3 = L-
Pin 4 = C/Q
Pin 5 = Not Connected

Configurations per Port
IO-Link = 1
DI (SIO mode) = 1
DO (SIO mode) = 1
DI (dedicated) = 1

Transfer Rates
4.8K (COM1)
38.4K (COM2)
230.4K (COM3)

Baud Rate Recognition
Automatic

Output Current on IO-Link Connectors (Port 1-4)
C/Q on Pin 4 Vs on Pins 1, 3
200mA (Maximum) 500mA* (Maximum)

Short Circuit Protection
Yes

Cable Length (Max.)
30m

Digital Output Mode
PNP/NPN

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

Input Current Limitation
Yes

C/Q Input Threshold
Low: 8.0 - 11.5V
High: 10.5 - 13.0V

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

Output Function
PNP/NPN

DIGITAL INPUTS (ONLY) SPECIFICATIONS

Sensor Current Load (Maximum)
200mA

Input Characteristics
IEC 61131-2 Type 1 and Type 3 Compliant

Input Current Limitation
Yes

DI Input Threshold
Low: 5.2 - 6.4V
High: 6.8 - 8.0V

Voltage Limit
-40 to +40VDC

Cable Length
30m

ETHERNET INTERFACE SPECIFICATIONS

Connector Type
Female, M12 D-coded, 4-pin

Number of Ports
2

Ethernet Specification
10/100BASE-TX

Standards
IEEE802.3: 10BASE-T
IEEE 802.3u: 100BASE-TX

Auto-MDI/MDI-X
Yes

Auto-Negotiation
Yes

Link Distance
100 m

Cable Types
Twisted pair (Cat 5 or higher)

IPv4 Addressing
Yes

PROFINET IO INTERFACE SPECIFICATIONS

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

Diagnostics
Yes

GSD Files
Yes

4-PNIO FEATURES

Data Storage
Automatic or Manual - Upload and/or Download

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)

Remote Parameterization
Yes

Mobile App Support
Simplify monitoring of control systems Process and Service Data using simple standard clients available for free in Google Play and Apple App Store

ELECTRICAL SPECIFICATIONS

Input Voltage Range
20-30VDC / 4A (Max.)

Power Supply In
4A (Maximum)

Power Consumption (Without Load)
100mA @ 24VDC (Vs)

Power Connectors
Input (1)
Male M12 A-coded 5-pin
Output (1)
Female M12 A-coded 5-pin

ENVIRONMENTAL SPECIFICATIONS

Air Temperature
System On 0°C to +55°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

Enclosure Rating
IP67 (IEC 60529)

EXPORT INFORMATION

Packaged Shipping Weight
1.05 lb
455 g

Package Dimensions
9.19" x 7.25" x 2.5"
233 x 184 x 63.5mm

UPC Code
7-56727-99575-3

Country of Origin
USA

ECCN
5A992

Schedule B Number
8517.62.0050

REGULATORY APPROVALS

Immunity
European Standard EN 61000-6-2
IEC/EN 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

Emissions
European Standard EN 61000-6-4
AS/NZS CISPR-22
FCC Part 15 Subpart B
Class A limit
Canadian EMC requirements ICES-003

Safety
CSA C22.2 No. 142/UL 508E360395

Other
Ingress Protection rating IP67 (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.

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