

HarshIO Ethernet/IP IO-Link Modules



HarshIO EtherNet/IP* IO-Link* Modules are designed for factory automation machine builders, bringing versatility and cost savings to complex system designs through EtherNet/IP controllers

Features and Benefits

Metallic Plate
Functional grounding

Ultra-Lock M12 Connectors
Surpasses performance and reliability of traditional threaded connectors, delivering increased productivity and cost savings

1x IO-Link Master and 1x Digital I/O per M12 port
Each IO-Link master channel can be configured as IO-Link or Digital I/O point (Pin 4). Each digital channel can be configured as an Input or an Output point (Pin 2)

4-pole and 5-pole power connector versions
Ready for both American and European regions

8x IO-Link Master Channels
Specifications v1.1
COM1, COM2 and COM3

2-port Ethernet Switch
For daisy chain of EtherNet/IP network. Manages Ethernet ring redundancy (DLR)

Seal rated IP67
Designed for plant-floor and harsh industrial applications. Prevents ingress of dust and light jets of water

EtherNet/IP

Ethernet Metallic Plate
Allows both ODVA and PI Ethernet grounding strategies

3 Rotary Switches
IP address setting

Diagnostic LEDs
Blue color dedicated to IO-Link communication status. Status and troubleshooting made easy with LEDs for power, network and I/O signals

Versatile EtherNet/IP I/O Module
Support of I/O and explicit communications. Min. refresh I/O Interval: 1ms. Description file: Yes (EDS) – Upload EDS file from module using RSLinx

Low Cost Wiring
Uses a standard 4-pole M12 cordset. 20m maximum

Fixing Holes
Corner and center holes for robust and easy mounting

Extended Power Supply
Drives up to 3.6A total. Short-circuit protected

Diagnostic LEDs
Blue LEDs dedicated to IO-Link communication status. Status and troubleshooting made easy with LEDs for power and IO signals

Applications

Industrial Automation

- Food and Beverage
- Machine Manufacturers
- Machining Centers
- Grinding and Milling
- Conveying and Sorting
- Baggage Handling
- Postal Sorting
- Packaging Applications
- Automotive
- Final Body Assembly
- Power Train

Expand digital I/O connectivity with any IO-Link Master device
Enables simple and efficient system expansion. Fulfills different customer application requirements. IO-Link specifications v1.1. IO-DD file description for engineering software

High-Density Design
Permits installation of I/O wiring systems in limited space. Maximizes cost performance and safety design flexibility

Extended Power Supply
Dual signal with LED

Seal rated IP67
Designed for plant-floor and harsh industrial applications. Prevents ingress of dust and light jets of water

HarshIO Ethernet/IP IO-Link Modules



Specifications

HarshIO Modules

IO-LINK CHANNEL(S)

Port Class A
Support COM1, COM2 and COM3
Compliant with IO-Link version 1.1
Power Supply: max. 1.6A (pin 1)
SIO Modes
Input: PNP, Sinking, IEC 61131-2 Type 1
Output: PNP, Sourcing, 0.5A, short circuit
Connector: Ultra-Lock M12, 4-pin, female, stainless steel

SHOCK AND VIBRATION

Vibration: EN 60068-2-6 / EN 60068-2-29
Shock: EN 60068-2-6 / EN 60068-2-29

REGULATORY APPROVALS

ODVA certification
CE, RoHS, REACH, cULus / CSA 22.2
EMC: EN 61000-6-2 / EN 61000-6-4

INPUT CHANNEL(S)

Input type: PNP, Sinking, IEC 61131-2 Type 3
Diagnostic LED
Short circuit protection and overcurrent protection
Sensor Power Supply: 1.6A (pin 1)
Input filter: 0, 1, 3 or 5ms
Connector: Ultra-Lock M12, 4-pin, female, stainless steel

OUTPUT CHANNELS

Output type: PNP, Sourcing
(Output [UL] power supply)
Output current: 2A per channel, max. 8.0A at 25°C
Diagnostic LEDs
Short circuit protection (up to 6.5A) and overcurrent protection
Connector: Ultra-Lock M12, 4-pin, female, stainless steel

Output can be configured to power IO-Link
16 digital I/O hub
Switching frequency: 200 Hz

GENERAL

IP67 housing
Dimensions: 238 x 60 x 39 mm
Operating temperature: -25° to 70°C
Storage temperature: -40° to 70°C
Operating Relative Humidity: 10-95%, non-condensing
Firmware upgradable

FIELDBUS

Network connectors: 2x Ultra-Lock M12, 4-pole, female, D-Coded, stainless steel
Diagnostic LED per port (Link / Speed / Activity)
3x Rotary switches (DHCP, factory reset)
Ethernet/IP Adapter
Supports implicit and explicit communications
Ethernet Packet: Manage up to 2000 packets/sec
Min. refresh I/O Interval: 1ms
Description file: Yes (ESD)

IO-Link Digital Hubs

IO-LINK CHANNEL(S)

Port Class A
Support COM1, COM2 and COM3
Compliant with IO-Link version 1.1
Power Supply: max. 1.6A (pin 1)
Connector: M12, 4-pin, male, stainless steel
Minimum Cycle Time: 1ms

SHOCK AND VIBRATION

Vibration: EN 60068-2-6 / EN 60068-2-29
Shock: EN 60068-2-6 / EN 60068-2-29

REGULATORY APPROVALS

IO-Link certification
CE, RoHS, REACH, cULus / CSA 22.2
EMC: EN 61000-6-2 / EN 61000-6-4

INPUT CHANNEL(S)

Input type: PNP, Sinking, IEC 61131-2 Type 3
Diagnostic LED
Short circuit protection and overcurrent protection
Sensor Power Supply: 0.2A (pin 1)
Input filter: 0.5 to 3ms (filter step 0.5)
Connector: M12, 4-pin, female, stainless steel

OUTPUT CHANNELS

Output type: PNP, Sourcing
Output current: 0.5A per channel
(max. 2A total for all outputs)
Diagnostic LEDs
Short circuit protection and overcurrent protection
Connector: M12, 4-pin, female, stainless steel
Switching frequency: 200 Hz

GENERAL

IP67 housing
Dimensions: 152 x 54 x 29.6 mm
Operating temperature: 0° to 70°C
Storage temperature: -40° to 90°C
Mounting holes
Operating Relative Humidity: 10-95%, non-condensing
Housing material: PBT VALOX 420 SEO
Flammability Standard: UL 94 V-0

Ordering Information

HarshIO Modules

| Engineering No. | Molex Part No. | Description | Power Connector |
|-----------------|-----------------------------|---|--------------------------|
| TCIEI-888P-D1U | 112095-5121 | HarshIO EtherNet/IP, 8x IO-Link + 8x Digital IO User Configurable | 5-pole M12 (Mini-Change) |
| TCIEI-888P-DYU | 112095-5122 | | 4-pole M12 (Mini-Change) |

IO-Link Digital Hubs

| Engineering No. | Molex Part No. | Description | Digital |
|-----------------|-----------------------------|--|-------------------------|
| TEDIO-8DOP-808 | 112103-5000 | IP67 IO-Link Digital I/O Hub, 8x M12 ports | 16x Inputs |
| TEDIO-8B4P-808 | 112103-5001 | | 12x Inputs + 4x Outputs |
| TCIEI-888P-DYU | 112095-5122 | | 4-pole M12 |

www.molex.com/link/harshio.html

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