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

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

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

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

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

- **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)

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

- **Ethernet Metallic Plate**
  - Allows both ODVA and PI Ethernet grounding strategies

- **3 Rotary Switches**
  - IP address setting

- **Fixing Holes**
  - Corner and center holes for robust and easy mounting

- **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. IODD file description for engineering software

- **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

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

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

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

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

**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

- **Food and Beverage**
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- **Postal Sorting**
- **Packaging Applications**
- **Automotive**
- **Final Body Assembly**
- **Power Train**
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: 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 [UL] power supply)
Output current: 0.5A per channel
(max. 2A total for all outputs)
Diagnostic LEDs
Short circuit protection and overcurrent protection
Connector: M12, 4-pin, male, 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 upgradeable

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, female, stainless steel

OPERATIONAL TEMPERATURE
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

OUTPUT CHANNELS
Output type: PNP, Sourcing
Output current: 0.5A per channel
(max. 2A total for all outputs)
Diagnotic 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
Housing material: PBT VALOX 420 SEO
Flammability Standard: UL 94 V-0

Ordering Information

HarshIO Modules

<table>
<thead>
<tr>
<th>Engineering No.</th>
<th>Molex Part No.</th>
<th>Description</th>
<th>Power Connector</th>
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<tr>
<td>TCEI-888P-D1U</td>
<td>112095-5121</td>
<td>HarshIO EtherNet/IP, 8x IO-Link + 8x Digital IO User Configurable</td>
<td>5-pole M12 (Mini-Change)</td>
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<tr>
<td>TCEI-888P-DYU</td>
<td>112095-5122</td>
<td>HarshIO EtherNet/IP, 8x IO-Link + 8x Digital IO User Configurable</td>
<td>4-pole M12 (Mini-Change)</td>
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IO-Link Digital Hubs

<table>
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<tr>
<th>Engineering No.</th>
<th>Molex Part No.</th>
<th>Description</th>
<th>Digital</th>
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<tbody>
<tr>
<td>TEDIO-8DP-808</td>
<td>112103-5000</td>
<td>IP67 IO-Link Digital I/O Hub, 8x M12 ports</td>
<td>16 Inputs</td>
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<tr>
<td>TEDIO-8BP-808</td>
<td>112103-5001</td>
<td>IP67 IO-Link Digital I/O Hub, 8x M12 ports</td>
<td>12x Inputs + 4x Outputs</td>
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<tr>
<td>TCEI-888P-DYU</td>
<td>112095-5122</td>
<td>HarshIO EtherNet/IP, 8x IO-Link + 8x Digital IO User Configurable</td>
<td>4-pole M12</td>
</tr>
</tbody>
</table>

www.molex.com/link/harshio.html

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