

Brad® PROFINET* IO-Link* HarshIO Modules



Brad® PROFINET* IO-Link* HarshIO Modules, designed for factory automation machine builders, bring versatility and cost-savings to complex system designs through PROFINET* controllers

Features and Advantages

4-pole and 5-pole power connector versions
Ready for both America and Europe regions

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

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

3 Rotary Switches
IP address setting

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

IO-Link

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)

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

2-port Ethernet Switch
For daisy chain of PROFINET* network. Manages new cybersecurity requirement (Netload) and Ethernet ring redundancy (MRP)

Ethernet Metallic Plate
Allow both ODVA and PI Ethernet grounding strategies

Versatile PROFINET* I/O Module
Specification v2.32 Class B
Standard RT, Netload class A.
SNMP, LLDP, FSU ready.
Easy replacement.
Configuration via GSD File.
IO access to IO-Link* process, event and service data

PROFINET

Applications

Industrial Automation

- Food and Beverage
 - Machine Manufacturers
- Machining Centers
 - Grinding and Milling
- Conveying and Sorting
 - Baggage Handling
 - Postal Sorting
 - Packaging Applications



Conveying and Sorting



Robot Cells



Food and Beverage

Automotive

- Final Body Assembly
- Power Train

*Both PROFINET and IO-Link are registered trademarks of PROFIBUS International

Specifications - HarshIO Modules

REFERENCE INFORMATION

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

PI 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: 200Hz

FIELDBUS

Network connectors: 2x Ultra-Lock M12, 4-pole, female, D-Coded, stainless steel
 Diagnostic led per port (Link / Speed / Activity)
 3x Rotary switches (DCP, factory reset)
 PROFINET IO-Device spec v2.3 Class-B
 Support of I/O and acyclic communications
 Diagnostic alarms
 Ethernet Packet: Manage up to 3000 packet/sec
 Min refresh I/O Interval: 1ms
 Topology: LLDP sender/receiver, SNMP V1
 Netload: Class 1
 Description file: Yes (GSD)

GENERAL

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

Specifications - IO-Link* Digital Hubs

REFERENCE INFORMATION

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: 200Hz

GENERAL

IP67 housing
 Dimensions: 152 x 54 x 29.6 mm
 Operating temperature: -25° to +70° C
 Storage temperature: -40° to +90° C
 Mounting holes
 Relative Humidity: 10...95%, non-condensing
 Housing material: PBT VALOX 420 SEO
 Flammability Standard: UL 94 V-0

Ordering Information

Engineering No.	Order No.	Description	Power Connector
TCIEP-888P-D1U	112095-5119	HarshIO PROFINET*, 8x IO-Link* + 8x Digital IO User Configurable	5-pole M12 (Mini-Change®)
TCIEP-888P-DYU	112095-5120		4-pole M12 (Mini-Change®)

Engineering No.	Order No.	Description	Digital
TEDIO-8D0P-808	112103-5000	IP67 IO-Link* Digital I/O Hub, 8x M12 ports	16x Inputs
TEDIO-8B4P-808	112103-5001		12x Inputs + 4x Outputs

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