Brad® HarshIO 600 ePN with Fast Start-Up

HarshIO IP67 Ethernet Modules for PROFINET® featuring Fast Start-Up technology deliver significant operational advantages of speed and versatility for industrial robotic tool-change applications

Features

- IP67-rated, shock and vibration tested for direct on-machine mounting and harsh environments
- 4- or 5-pole 7/8" connectors
- Accepts standard M12 threaded or Brad® Ultra-Lock® connectors
- Standard hole housing pattern allows for interchangeability with popular I/O modules
- Choice of fixed I/O module versions
- Visible diagnostic LEDs provide maintenance personnel with the ability to easily determine I/O, module and network status
- Short-circuit diagnostics per I/O channel
- PROFINET® IO according spec. v2.3
- Complete module and channel diagnostics supported via PROFINET®
- Scrolling 4 characters status display for IP addressing and modules status
- IP addressing: DCP or static (through web interface)
- Built-in 2-port Ethernet switch, 10/100 Mbps auto-sensing and crossover capability
- Built-in web server for configuration, diagnostics, and GSD download
- Fast Start-Up capability to start and operate the module in less than 500ms
- Grounding isolation between input/logic ground and output ground for application using safety relays

Applications

Factory Automation
- All industries using robots for repetitive tasks with precision
- Machine tool industry
- Automotive
- Material handling systems
- Filling & packaging machines
- Steel industry

Typical System Architecture
Specifications

I/O Configurations:
- 16x inputs
- 12x inputs / 4x outputs
- 8x inputs / 8x outputs
- 16x outputs
- 16x User configurable Inputs/Outputs

I/O Connectors:
- Female, Ultra-Lock™ M12, A-Coded, 5-pole
- Male, Brad Ultra-Lock™ M12, D-Coded, 4-pole

Bus Connectors:
- Male, Brad Ultra-Lock™ M12, D-Coded, 4-pole

Power Connectors:
- Power In: Male Mini-Change®, 4- or 5-pole
- Power Out: Female, Mini-Change®, 4- or 5-pole

Power Requirements:
- Module input power: 24V DC (-15/ +20%)
- Module output power: 24V DC (-15/ +20%)
- 8.0A max per module

Fieldbus Specifications:
- PROFINET® IO-Device (according spec. v2.3)
- Conformance Class B (CC-B)
- I/O update rate up to 1ms
- Data access:
  - Cyclic (for I/O data)
  - Acyclic (for read/write alarms, module configuration and diagnostic)
- PROFIenergy
- SNMP V1/V2/V3

LLDP: Yes (Sender/Receiver)
MRP: Yes (Client)
Fast Start-Up: Yes
IDM: Yes

Upload GDS file: Yes (via integrated web)
IP Address Capabilities: DCP (default) or Static

Easy Replacement (based on DCP/LLDP)
Ethernet Switch:
- 2-port
- 10/100 Mbps (auto-negotiation), full duplex

Storm Protection

Input Type:
- Compatible with dry contact, PNP
- 2 or 3-wire sensors
- Electronic short circuit protection

Input Delay:
- 2.5ms default or configurable through PROFINET®

Input Device Supply:
- 140mA per port at 25°C

Output Load Current:
- Maximum 2.0A per channel
- Electronic short circuit protection
- Maximum Switching Frequency: 200Hz

Housing Dimensions: 600 x 220 x 20mm
Mounting Dimensions:
- 37.50mm horizontal on centers
- 210mm vertical on centers

Operating Temperature: -25 to +70°C
Storage Temperature: -40 to +90°C
RH Operating: 5 to 95% non-condensing
EMC: IEC 61000-6-2

Protection:
- IP67 according to IEC 60529, NEMA 6P
- Vibration: 7g (15.7Hz to 500Hz), 3 axis
- Mechanical Shock: 10g, 11ms, 3 axis
- Thermal Shock: MIL-STD-1344A

Approvals:
- CE, UL, cUL, RoHS, REACH
- PROFINET® conformance tested

LED INDICATORS

Module and Input Power (UB):
- Green – power present
- Off – power not connected

Output Power (UL):
- Green – power present
- Off – power not connected

4-Digit Display:
- Provides information about PROFINET® name, I/O Status, PLC connection, etc.

Ordering Information

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Engineering No.</th>
<th>Module Size</th>
<th>Power Connector</th>
<th>Ports</th>
<th>I/O Configurations</th>
<th>I/O Channels</th>
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<tbody>
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<td>Classic 60mm</td>
<td>7/8” 4-pole</td>
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<td>M12 Ultra-Lock®</td>
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