

The Brad® HarshIO IP67 I/O modules provide a reliable solution for connecting industrial controllers to I/O devices in harsh environments



Brad® HarshIO Ethernet modules provide a reliable solution for connecting industrial controllers to I/O devices in harsh duty environments. Contained in an IP67 rated housing, Brad® I/O modules can be machine mounted and are able to withstand areas where liquids, dust or vibration may be present. This makes them ideally suited for many applications including material handling equipment and automated assembly machinery.

Advanced module features such as Built-in 2-port Ethernet switch, web-server capabilities and a flexible IP address setup method, make configuration and operation simple. Following traditional industrial fieldbus practices, standard M12 connectors from sensing devices or actuators plug directly into the I/O module. An environmentally sealed IP67 connection between the I/O module and the Ethernet network is created using the Brad® Ultra-Lock® connection system which is built into the Brad® HarshIO module.

Brad® HarshIO 600 eMB

112095 Brad® HarshIO 600 eMB
Ethernet Modbus
Digital I/O Modules
Classic 60.00mm

MODBUS TCP

FEATURES AND BENEFITS

- Rated IP67 for harsh environments
- Designed for direct machine mount applications
- Tested to vibrations and shocks
- Overmolded module electronics
- Metallic connectors
- 4-pole and 5-pole power connector versions
- Accepts standard M12 threaded or Brad® Ultra-Lock® connectors
- Standard hole housing pattern allows for interchangeability with popular I/O modules
- Supports PNP & NPN input devices
- Several I/O configurations to choose including fixed and user configurable versions
- Visible diagnostic LEDs provide maintenance personnel with the ability to easily determine I/O, module & network status
- Supports Modbus TCP/ UDP Server
- Advanced diagnostics
- Short-circuit diagnostics per I/O channel
- Complete module and channel diagnostics supported via Modbus
- Scrolling 4 characters status display for IP addressing and modules status
- IP addressing: BOOTP (default), DHCP, or static (through web interface, push button, or Modbus messaging)
- Built-in 2-port Ethernet switch, 10/100 Mbps auto-sensing and crossover capability
- Built-in web server for remote monitoring, configuration and diagnostics
- Configurable I/O capability (through Modbus commands)
- Watchdog with output reply state



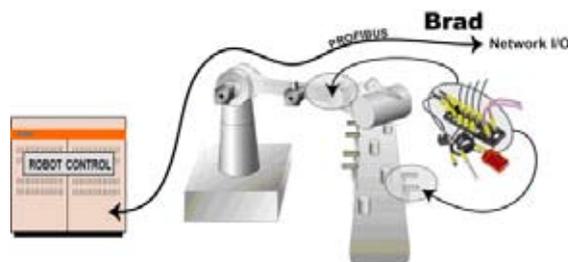
Brad® HarshIO 600 eMB I/O Module Classic

LED INDICATORS

- Module & Input Power (I):
Green - power present
Red - power fault
Off - power not connected
- Output Power (O):
Green - power present
Off - power not connected
- 4-Digit Display:
Informs about Ethernet address, I/O and Watchdog status
- Input/Output (Ix/Ox):
Green - input/output on
Red - input/output fault
Off - input/output off
- Ethernet Link (Port 1 & 2)
Solid Green– Ethernet link at 100 Mbit/s without activity
Flashing Green– Ethernet link at 100 Mbit/s with activity
Solid Yellow– Ethernet link at 10 Mbit/s without activity
Flashing Yellow – Ethernet link at 10 Mbit/s with activity

APPLICATIONS

- Machine tool industry
- Material handling systems
- Filling & packaging machines
- Steel industry

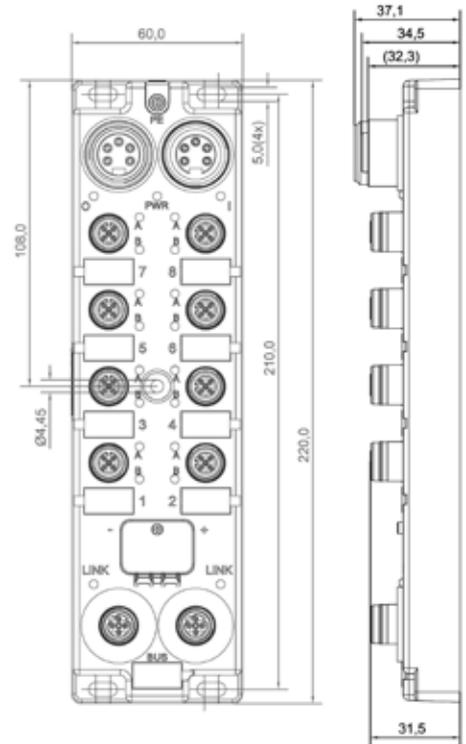


SPECIFICATIONS

- I/O Configurations:
 - 16 inputs
 - 14 inputs / 2 outputs
 - 12 inputs / 4 outputs
 - 8 inputs / 8 outputs
 - 16 I/O Universal & User configurable
- I/O Connectors:
 - Female, Ultra-Lock® M12, A-Coded, 5-pole
- Bus Connectors:
 - Male, M12 Ultra-Lock®, D-Coded, 4-pole
- Power Connectors:
 - Power In: Male Mini-Change®, 4-pole or 5-pole
 - Power Out: Female, Mini-Change®, 4-pole or 5-pole
- Power Requirements:
 - Module input power: 24V DC
 - Module output power: 24V DC (16 to 28V), 8.0A max per module
- Communication Rate:
 - 10/100 Mbps auto-sensing, auto detecting, full duplex
- IP Address Capabilities:
 - BOOTP (default), DCP, static
- Fieldbus Specifications:
 - Modbus TCP/UDP Server
- Input Type:
 - Compatible with dry contact, PNP or NPN, 2/3-wire sensors
 - Electronic short circuit protection
- Input Delay:
 - 2.5ms default or configurable through Modbus
- Input Device Supply:
 - 200mA per port at 25°C
- Output Load Current:
 - Maximum 2.0A per channel
 - Electronic short circuit protection
- Maximum Switching Frequency: 200Hz
- Housing Dimensions:
 - 60 x 220 x 20mm (2.36"x 8.66"x 0.78")
- Mounting Dimensions:
 - 37.50mm (1.48") horizontal on centers
 - 210mm (8.270") vertical on centers
 - Center hole
- Operating Temperature: -20 to +70°C
- Storage Temperature: -40 to +85°C
- RH Operating: 5 to 95% non-condensing
- EMC: IEC 61000-6-2
- Protection:
 - IP67 according to IEC 60529, NEMA 6P
- Vibration:
 - MIL-STD-202F, method 204D, condition A
- Mechanical Shock:
 - MIL-STD-202F, method 213B, condition B
- Thermal Shock: MIL-STD-1344A
- Approvals: CE, UL, cUL

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ORDERING INFORMATION

Order No.	Engineering No.	No. of Pins	No. of Ports	I/O Connectors	I/O Configurations		I/O Channels
					Input	Output	
1120955021	TCDEM-8DON-DYU	4-pin-power	8	M12 Ultra-Lock	16	0	NPN
1120955022	TCDEM-8C2N-DYU				14	2	
1120955023	TCDEM-8B4N-DYU				12	4	
1120955024	TCDEM-888N-DYU				8	8	PNP
1120955025	TCDEM-8DOP-DYU				16	0	
1120955026	TCDEM-8C2P-DYU				14	2	
1120955027	TCDEM-8B4P-DYU				12	4	
1120955028	TCDEM-888P-DYU				8	8	
1120955038	TCDEM-8YYX-DYU				16 I/O User Configurable	Configurable	
1120950007	TCDEM-8DON-D1U	5-pin-power	8	M12 Ultra-Lock	16	0	NPN
1120950005	TCDEM-8C2N-D1U				14	2	
1120950003	TCDEM-8B4N-D1U				12	4	
1120950001	TCDEM-888N-D1U				8	8	PNP
1120950008	TCDEM-8DOP-D1U				16	0	
1120950006	TCDEM-8C2P-D1U				14	2	
1120950004	TCDEM-8B4P-D1U				12	4	
1120950002	TCDEM-888P-D1U				8	8	
1120950009	TCDEM-8YYX-D1U				16 I/O User Configurable	Configurable	

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