DATASHEET

Brad EtherNet/IP CIP Safety HarshIO Modules ›



Featuring CIP Safety technology, Brad EtherNet/IP CIP Safety HarshIO Modules are IP67 IO modules designed for connecting industrial safety controllers to sensors and actuators in harsh duty environments to permit the durable and reliable automation of safety systems.

FEATURES AND ADVANTAGES

Permits on-machine installation in harsh environments, withstanding shock, high vibration and high temperatures without the need for a protective cabinet

Module is IP67-rated for dust and water resistance, is potted with resin and uses metallic connectors

Helps ensure safety and reliability with TÜV- and ODVA-certified design

Conforms to EN 61508 SIL3 and Cat4 PLe according to ISO 13849-1 with a mission time exceeding 20 years

Enhances versatility and design flexibility with multiple options available

Options include 4- or 5-pin Mini-Change power connectors, 12 safe inputs plus 2 bipolar or 4 sourcing safe outputs, connection of single- or dual-channel safety devices and can connect to both standard and safety-rated sensors

Reduces commissioning time with Ultra-Lock™ M12 push-to-lock technology

Uses the fastest, easiest and most secure M12 connection solution and accepts both threaded cordsets and Ultra-Lock™ connectors

IP Rating	IP67
Current	1A (4 sourcing outputs) or 2A (2 bipolar outputs)
Voltage	24V DC, -15/+20%
Connectors	4- or 5-pole Mini-Change
Mounting	60mm on-machine
Operating Temperature	-25 to +70°C (industrial-grade) or 0 to +60°C (commercial-grade)

Speeds module replacement while eliminating special tools or recommissioning

Overmolded memory key stores the module's configuration

Enables the use of daisy-chain wiring to wire an entire application without switches

Integrated two-port switch design and DLR support for Ethernet redundancy permits cost savings thanks to simplified system design

Allows easy installation with Rockwell Automation-ready design

Full integration into RA Logix Designer™ with GuardLogix™ controllers (FW>v32); upload EDS file from module using RSLinx

Meets environmental demands with commercial- and industrial-grade options

Modules are available in commercial-grade options or industrial-grade options that are capable of operation in -25 to +70°C temperature ranges

Allows simple configuring and diagnosing HarshIO safety module using free Molex SNCT software

Features include HarshIO online discovery, copy-and-paste ability to and from RA Logix Designer™ (SNN, Signature), safety lock and password protection

Permits users to quickly and easily determine status

Diagnostic LEDs indicate network, IO and power conditions

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MARKETS AND APPLICATIONS

Automotive
Assembly lines
Body shops
Material handling equipment

Industrial Automation
Complex machines
CNC machines
Robotics
Agricultural and food industry equipment
Medical/pharmaceutical machines



Assembly Lines



CNC Machines



Robotics

SPECIFICATIONS

Reference Information
Designed in: Millimeters
TÜV Certified: Yes
ODVA Conforming: Yes
RoHS: Yes
CE: Yes
REACH: Yes
UL/cUL: Yes
China CCC: Yes
Industrial Grade Versions: Korean CC, UK CA

Physical
Dimensions: 238.00 x 60.00 x 48.00mm
Housing: IP67-rated
Operating Temperatures:
- Industrial-grade: -25 to +70°C
- Commercial-grade: 0 to +60°C

Storage Temperature: -40 to +70°C
Relative Humidity: 10 to 95%, non-condensing
Overmolded Memory Key: Internal or M8

Digital Inputs
Safety Inputs (PNP): 12
Test Pulses: 12
Diagnostic LEDs: Yes
Protection: Short circuit and overcurrent
Sensor Power Supply: 700mA per sensor
Input Delay: On-off and off-on
Connector: M12, 5-pin, female, Stainless Steel

Digital Outputs
Safety Outputs: 2 bipolar or 4 sourcing
Output Current (max.):
- Sourcing: 1A per channel
- Bipolar: 2A per dual channel (current sourcing/ current sinking pair)

Pulse Test: Configurable
Diagnostic LEDs: Yes
Protection: Short circuit and overcurrent
Output Delay: On-off and off-on

Standard Outputs or Pulse Test Output
Outputs: 12
Output Current: 700mA
Protection: Short circuit and overcurrent

Shock and Vibration
Vibration: MIL-STD-202F, method 204D
Mechanical Shock: MIL-STD-202F, method 213B
Thermal Shock: MIL-STD-1344A

Fieldbus
EtherNet/IP CIP Safety Adapter: Yes
ODVA CIP Safety I/O Generic Profiles: Yes
I/O Update Rate: Up to 10ms (RPI)
Data Access:
- Implicit messages (for I/O data)
- Explicit messages (for read/write module configuration and diagnostic)

ACD: Yes
IP Address Capabilities:
- DHCP, Static
- Address, EtherNet/IP 0xF5/0xF6 objects

EDS Upload Service: Yes

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

Power Requirements
Module Input Power: 24V DC (-15/+20%)
Module Output Power: 24V DC (-15/+20%), 8.0A max. per module

Ethernet Switch
Switch: 2-port, 10/100-Mbps (auto-negotiation), full duplex, Storm Protection
DLR Client: Yes

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ORDERING INFORMATION

Series No.	Power Connector	Description	Memory Key	Operating Temperature	I/O Inputs	I/O Outputs
112095	7/8″ 4-pin	Industrial-grade EtherNet/IP CIP Safety HarshIO Digital Module	Internal Window Key or External M8 Key	-25 to +70°C	12 (PNP)	4 (sourcing) or 2 (bipolar)
	7/8″ 5-pin					
	7/8″ 4-pin	Commercial-grade EtherNet/IP CIP Safety HarshIO Digital Module	Internal Window Key or External M8 Key	0 to +60°C		

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