Brad® EtherNet/IP* CIP* Safety HarshIO Modules

molex®

Featuring CIP Safety technology, Brad® EtherNet/IP* CIP* Safety HarshIO Modules are designed for connecting industrial safety controllers to sensors and actuators in harsh duty environments

Features and Benefits

60mm-wide housing (235 x 60 x 46mm)	Delivers enhanced space savings. Designed for the space constraints of automotive assembly line applications
Automotive and machine-safety application orientation	Provides 12 safe inputs and 4 safe sourcing outputs (1A) and 12 safe inputs + 2 safe bipolar outputs (2A) module versions
Designed for safety applications up to Cat. 4/PLe	Supports wiring for single and dual channel safety I/O devices
Ethernet Media Redundancy and daisy-chaining	Enables DLR capabilities through a built-in 2-port Ethernet switch. Simplifies configuration and operation. Achieves cost savings by eliminating the need for multiple Ethernet switches
Overmolded memory key	Stores the module's configuration. Speeds up module replacement while eliminating special tools or recommissioning
TÜV and ODVA certified	Conforms to EN 61508 SIL3, Cat4 / PLe according to ISO 13849-1. Safe design with self-monitoring and diagnostics leds. Capable of mission times exceeding 20 years

Brad HarshIO IP67 EtherNet/IP* CIP* Safety Module

Enables connecting safety I/O on the machine over EtherNet/IP* Fieldbus

EtherNet/IP™

CIP Safety™

Applications

Machine Builders

- High-speed machines
- CNC machines
- Food processing
- Filling / bottling
- Plastic injection

Automotive Assembly Line

Material Handling

Food and Beverage Processing

Factory Automation

- Automotive
- Robotic & tool maker
- Material Handling
- Packaging

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Specifications

HARDWARE
Classic size (L x W x D): 238 x 60 x 48 mm
Operating Temperature: -20 to +70ºC
Storage Temperature: -40 to +70ºC
Housing material: PBT VALOX 420 SEO Black 7701

POWER
Power connector: Mini-Change, 4-pole or 5-pole, stainless steel
Module & Input power: 24V DC, -15/+20%
Output power: 24V DC, -15/+20%
2x Diagnostic LEDs (Logic/Input + Output) with detection of low and high voltage operation
Protected against power crossing

SAFETY INPUTS
12 safety inputs (PNP)
Diagnostic leds
Short Circuit Protection and Overcurrent Protection
Sensor power Supply: 700mA per port
Input delay (ON – OFF and OFF – ON)
Connector: M12, 5-pin, female, stainless steel

SAFETY OUTPUTS
4 safety solid state outputs with pulse test
Output Current:
   Sourcing PNP version: max. 1A per output
   Bipolar version: max. 2A per output
Diagnostic leds
Short Circuit Protection and Overcurrent Protection
Output delay (ON – OFF and OFF – ON)
Connector: M12, 5-pin, female, stainless steel

TEST OUTPUTS
12 test outputs
Can be configured for: Power Supply, Power Supply with Pulse, Standard Output, or Muting lamps
Short Circuit Protection
Overcurrent Protection

FIELDBUS
EtherNet/IP* CIP* Safety Adapter
I/O minimum update rate up: 10ms (RPI)
ACD: Yes
IP Address Capabilities: 3x Rotary switches, DHCP, Static, Stored
EDS file

ETHERNET SWITCH:
Network connector: 2x M12, 4-pin, female, D-Coded, stainless steel
2-port, 10/100 Mbps (auto-negotiation), full duplex, Storm Protection
Diagnostic LEDs (Speed, Activity)
DLR Client
Diagnostic web server

MEMORY KEY (FOR EASY RECOVERY)
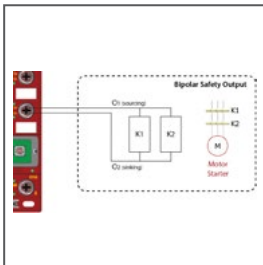Overmolded Memory key: Internal or M8

SHOCK AND VIBRATION
MIL-STD-202F, method 204D, condition A (Vibration)
MIL-STD-202F, method 213B, condition B (Mechanical Shock)
MIL-STD-1344A (Thermal Shock)

REGULATORY APPROVALS
TUV, ODVA
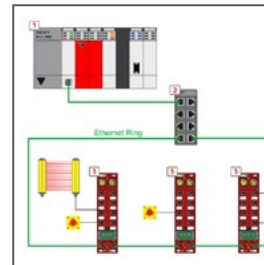CE, UL / cUL, RoHS, REACH
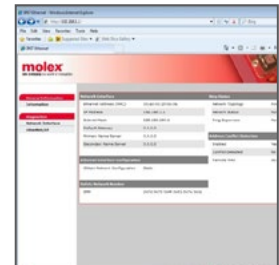
Advanced Features

Bipolar Safety Output
(1x output per port)

Software Network Configuration Tool (SNCT)

DLR (Ethernet Media Redundancy)

Integrated Web Server for diagnosis

Ordering Information

Order No.	Power Connector	Engineering No.	Description	Memory Key	I/O Configuration	
					Safety Inputs	Safety Outputs
112095-5107	Mini-Change™ 4-pole	TCDEC-8B4P-DYU-GW	EtherNet/IP* CIP* Safety HarshIO digital module	Internal Window Key	12 (PNP)	4 (PNP SOURCING)
112095-5108		TCDEC-8B4B-DYU-GW			12 (PNP)	2 (BIPOLAR)
112095-5127		TCDEC-8B4P-DYU-G8		M8 Key	12 (PNP)	4 (PNP SOURCING)
112095-5128		TCDEC-8B4B-DYU-G8			12 (PNP)	2 (BIPOLAR)
112095-5111	Mini-Change™ 5-pole	TCDEC-8B4P-D1U-GW		Internal Window Key	12 (PNP)	4 (PNP SOURCING)
112095-5112		TCDEC-8B4B-D1U-GW			12 (PNP)	2 (BIPOLAR)
112095-5129		TCDEC-8B4P-D1U-G8		M8 Key	12 (PNP)	4 (PNP SOURCING)
112095-5130		TCDEC-8B4B-D1U-G8			12 (PNP)	2 (BIPOLAR)

www.molex.com/link/harshio.html