Brad® EtherNet/IP® CIP® Safety HarshIO Modules

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**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>60mm-wide housing (235 x 60 x 46mm)</td>
<td>Delivers enhanced space savings. Designed for the space constraints of automotive assembly line applications.</td>
</tr>
<tr>
<td>Automotive and machine-safety application orientation</td>
<td>Provides 12 safe inputs and 4 safe sourcing outputs (1A) and 12 safe inputs + 2 safe bipolar outputs (2A) module versions.</td>
</tr>
<tr>
<td>Designed for safety applications up to Cat. 4/PLe</td>
<td>Supports wiring for single and dual channel safety I/O devices.</td>
</tr>
<tr>
<td>Ethernet Media Redundancy and daisy-chaining</td>
<td>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.</td>
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<tr>
<td>Overmolded memory key</td>
<td>Stores the module’s configuration. Speeds up module replacement while eliminating special tools or recommissioning.</td>
</tr>
<tr>
<td>TÜV and ODVA certified</td>
<td>Conforms to EN 61508 SIL3, Cat 4 / PLe according to ISO 13849-1. Safe design with self-monitoring and diagnostics LEDs. Capable of mission times exceeding 20 years.</td>
</tr>
</tbody>
</table>

**Applications**

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

**Factory Automation**
- Automotive
- Robotic & tool maker
- Material Handling
- Packaging

**Automotive Assembly Line**

**Material Handling**

**Food and Beverage Processing**

CIP (Common Industrial Protocol) is a trademark of Open DeviceNet Vendor Association (ODVA).
EtherNet/IP is a trademark of Open DeviceNet Vendor Association (ODVA).
GuardLogix, RSLogix and RSLinx are trademarks of Rockwell Automation.
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

Ordering Information

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Power Connector</th>
<th>Engineering No.</th>
<th>Description</th>
<th>Memory Key</th>
<th>I/O Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>112095-5107</td>
<td>TCDEC-8B4P-DYU-GW</td>
<td>TCDEC-8B4B-DYU-GW</td>
<td>EtherNet/IP* CIP* Safety HarshIO digital module</td>
<td>Internal Window Key</td>
<td>Safety Inputs: 12 (PNP) SAFETY INPUTS</td>
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<tr>
<td>112095-5108</td>
<td>TCDEC-8B4P-DYU-GW</td>
<td>TCDEC-8B4B-DYU-GW</td>
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<td>Internal Window Key</td>
<td>Safety Outputs: 4 (PNP SOURCING)</td>
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<tr>
<td>112095-5127</td>
<td>TCDEC-8B4P-DYU-G8</td>
<td>TCDEC-8B4B-DYU-G8</td>
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<td>MB Key</td>
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<td>TCDEC-8B4P-DYU-G8</td>
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<td>112095-5111</td>
<td>TCDEC-8B4P-D1U-GW</td>
<td>TCDEC-8B4B-D1U-GW</td>
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<td>Internal Window Key</td>
<td>Safety Inputs: 12 (PNP) SAFETY INPUTS</td>
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<td>112095-5112</td>
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<td>TCDEC-8B4B-D1U-GW</td>
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<td>Internal Window Key</td>
<td>Safety Outputs: 4 (PNP SOURCING)</td>
</tr>
<tr>
<td>112095-5129</td>
<td>TCDEC-8B4P-D1U-G8</td>
<td>TCDEC-8B4B-D1U-G8</td>
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<td>MB Key</td>
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<td>MB Key</td>
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</table>

www.molex.com/link/harshio.html