

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



Brad® HarshIO PROFIBUS 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 visible LEDs, fixed or auto-configurable I/O versions 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 PROFIBUS network is created using the Brad® Ultra-Lock® connection system which is built into the Brad® HarshIO module.

## Brad® HarshIO 600 sPB

112038 Brad® HarshIO 600 sPB  
PROFIBUS  
Digital I/O Modules  
Classic 60.00mm



Brad® HarshIO 600 sPB I/O Module Classic

### FEATURES AND BENEFITS

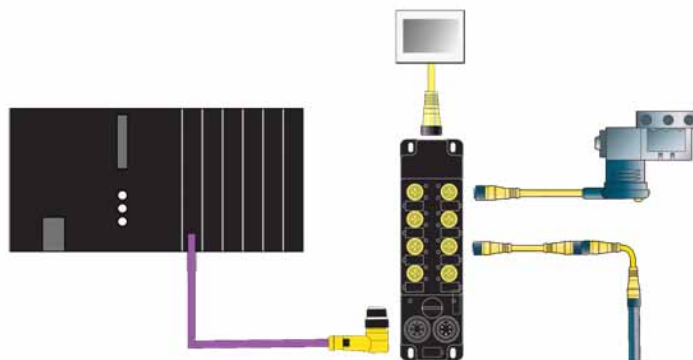
- PNO certified
- Rated IP67 for harsh environments
- Designed for direct machine mount applications
- Tested to vibrations and shocks
- Overmolded module electronics
- Metallic connectors
- Accepts standard M12 threaded or Brad® Ultra-Lock® connectors
- Standard hole housing pattern allows for interchangeability with popular I/O modules
- Supports PNP & NPN input devices
- Several I/O configurations to choose including fixed and auto-configurable versions
- Visible LEDs provide maintenance personnel with the ability to easily determine I/O, module & network status
- Advanced diagnostics
- Short-circuit diagnostics per I/O channel
- Complete module and channel diagnostics supported via PROFIBUS
- Supports PROFIBUS DP-V0 Slave up to 12 Mbps
- Module addressing: 1 – 99 by rotary switches or 1 – 125 by Set\_Slave\_Address command
- Built-in 2-port Profibus for bus wiring topology
- Configurable I/O capability (through PROFIBUS GSD file)

### LED INDICATORS

- Module & Input Power (I):  
Green - power present  
Off - power not connected
- Output Power (O):  
Green - power present  
Off - power not connected
- Digital Input/Output (Ix/Ox):  
Green - input/output on  
Red - input/output fault  
Off - input/output off
- PROFIBUS Network Status (NET):  
Green - running  
Red - module not configured
- I/O Module Diagnostics (MOD):  
Off - no fault  
Red - fault

### APPLICATIONS

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

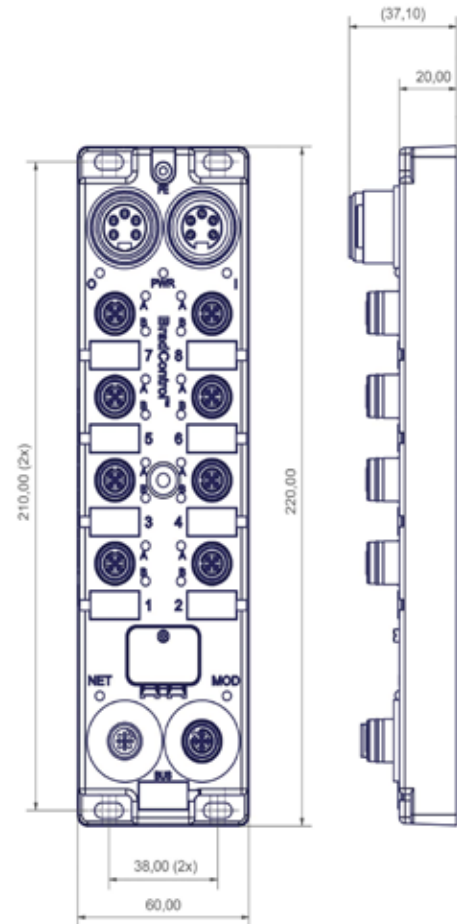


## SPECIFICATIONS

- I/O Configurations:
  - 16 inputs
  - 14 inputs / 2 outputs
  - 12 inputs / 4 outputs
  - 8 inputs / 8 outputs
  - 8 inputs + 8 configurable (inputs or outputs)
- I/O Connectors:
  - Female, Ultra-Lock® M12, A-Coded, 5-pole
- Bus Connectors:
  - Bus In: Male, M12, B-Coded, 5-pole
  - Bus Out: Female, M12, B-Coded, 5-pole
- Power Connectors:
  - Power In: Male Mini-Change®, 5-pole
  - Power Out: Female, Mini-Change®, 5-pole
- Power Requirements:
  - Module input power: 24V DC
  - Module output power: 24V DC (16 to 28V), 8.0A max per module
- Communication Rate:
  - Auto baud
  - All PROFIBUS baud rates up to 12 MBaud
- Address Settings:
  - 1 – 99 by 2 rotary switches, or 1 – 125 by Set\_Slave\_Address command
- Fieldbus Specifications:
  - PROFIBUS DP-V0 Slave according EN 50170
- Input Type:
  - Compatible with dry contact, PNP or NPN, 2/3-wire sensors
  - Electronic short circuit protection
- Input Delay:
  - 0.5ms default or configurable through PROFIBUS slave parameter
- Maximum Switching Frequency: 200Hz
- Housing Dimensions:
  - 60 x 220 x 20mm (2.36" x 8.66" x 0.78")
- Mounting Dimensions:
  - 23mm (0.91") horizontal on centers
  - 168mm (6.61") vertical on centers
  - Center hole
- Operating Temperature: -25 to +70°C
- Storage Temperature: -25 to +90°C
- RH Operating: 5 to 95% non-condensing
- EMC: IEC 61000-6-2
- Protection: IP67 according to IEC 60529
- Vibration: IEC 60068-2-6 conformance
- Mechanical Shock: 10G, 11ms, 3 axis
- Approvals: CE, UL, cUL, PNO Certification

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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			
112038-0030	TCDPB-8D0N-B1U	5-pin-power	8	M12 Ultra-Lock	16	0	NPN		
112038-0028	TCDPB-8C2N-B1U				14	2			
112038-0026	TCDPB-8B4N-B1U				12	4			
112038-0024	TCDPB-888N-B1U				8	8			
112038-0031	TCDPB-8D0P-B1U				16	0	PNP		
112038-0029	TCDPB-8C2P-B1U				14	2			
112038-0027	TCDPB-8B4P-B1U				12	4			
112038-0025	TCDPB-888P-B1U				8	8			
112038-5004	TCDPB-88UP-B1U							8 In + 8 Universal I/O	

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