



The BradControl™ IP67 I/O modules with Ultra-Lock™ M12 connections provide a reliable solution for harsh environments.

AS-Interface® Digital I/O Modules

Features

- Compliance with AS-Interface® specification 2.1
- Flat cable network connection
- Compact design, easy to mount
- IP67 protection
- Actuator / Sensor connection via Ultra-Lock™ M12 Connector
- Diagnostic LEDs for network, auxiliary power, inputs & outputs
- Marking strips for user identification

Common AS-i Advantages

- Less installation effort required. Single flat cable used for both power and data transmission.
- Simple and inexpensive bus interface. Protocol specific ASICs implemented.
- Deterministic system behavior. Cyclic polling with a 10 ms maximum cycle time (150 µsec per slave).
- Configuration software not required. Automatic address mode.
- Reduced maintenance costs. Standardized components used.

Typical Applications

- Machine Tool Industry
- Material Handling Systems
- Robotic Applications
- Designed for harsh environments



AS-Interface® Functionality

The AS-Interface® network is a single Master-Slave system with cyclic polling. Each network supports up to 62 slaves, each with up to 4 Inputs and 3 Outputs. Up to 248 Inputs and 186 Outputs can be connected on each rung. Intelligent slaves with their own integrated AS-i ASIC are assigned their own slave address. A single flat cable transmits both power and information to each slave. In addition to the data exchange, AS-Interface® networks provide a detailed diagnostic interface regarding the power behavior of the network.

Description

The small BradControl™ AS-Interface® M12 modules are ideal for material handling equipment and robotic arms. Interface modules are available with 4 inputs, with 4 inputs and 2 outputs, and with 2 inputs and 2 outputs. The inputs can be connected with 2-wire dry contact and 3-wire PNP sensors.

The connector interface for the sensors/actuators is the new Ultra-Lock™ M12 connector. The Ultra-Lock™ connector system uses a NEW 'push & lock' method to provide Fast, Simple, and Secure connections in a fraction of the time taken with threaded connectors. The new system maintains backward compatibility with threaded M12 cables.

The electronic outputs are designed for 24 V DC and sourcing currents up to a maximum of 2A. The modules are connected directly to the AS-Interface® flat cable. Diagnostic LEDs indicate the actual switch function of each channel.

Summary:

- Ultra-Lock™ connectors with 5 poles for the inputs/outputs (I/O)
- 4 port modules with 4 In, 4 In / 2 Out or 2 In / 2 Out
- Diagnostic LEDs for network, auxiliary power and status of each I/O channel
- Degree of protection - IP67
- AS-Interface® Specification 2.1 supported
- AS-Interface® certificate



Other AS-i Solutions

Other I/O Modules

- IP65 Analog I/O Modules



Gateways

- Connect AS-Interface® to:
 - Profibus
 - DeviceNet
 - CANopen
 - Ethernet TCP/IP (Modbus TCP)
 - Serial (Modbus)



PLC Scanners

- Allen-Bradley ControlLogix®
- Allen-Bradley CompactLogix®
- Allen-Bradley SLC® 500



Accessories

- Power Supply
- Cable



Technical Data

Mechanical data	
Degree of protection:	IP67 according to IEC 60529
Ambient operating temperature:	-20° to +70°C (-4° to +158°F)
Housing material:	PA 6 GF
Electrical data	
→ Inputs	
Input	Dry contact or 3 wire PNP sensor
Voltage range	20-30 V (via AS-Interface® net)
Sensors power supply	Short-circuit protected (≤ 200 mA)
Status indicator per channel	LED yellow
Pin configuration M12	1: +24 V, 2: Signal B, 3: GND, 4: Signal A, 5: PE
→ Outputs	
Output	Sourcing
Voltage range	Via external auxiliary supply
Nominal voltage	24 V
Output current	Max. 2A
Total current per module	Max. 4 A
Status indicator per channel	LED yellow
Pin configuration M12	1: not used, 2: not used, 3: GND, 4: Signal, 5: PE
Power supply requirements	
Voltage	20 – 30 V (via AS-Interface® network)
Current consumption:	≤ 250 mA
Reverse polarity protection:	yes
AS-Interface® voltage:	LED green
Dimensions	
4 port module (LxWxH), M12:	120 x 54 x 34 mm (4.72 x 2.13 x 1.34 inches)

Ordering Information

Part Number	Format	Number of Inputs	Number of Outputs
TAS-440-CDU-00	M12	4	0
TAS-422-CDU-00	M12	2	2
TAS-442-CDU-00	M12	4	2

Related Products

Part Number	Description
TAS-4xx-CDU-00	I/O Module, IP67 Digital M12 (xx = inputs / outputs configuration; contact us)
TAS-PWR-4A	Power Supply, 230V/4A
8V4030	AS-i clamp with M12 female insert
8V4006-315	AS-i clamp with M12 field attachable straight
8V4007-315	AS-i clamp with M12 field attachable 90°
8V5030P03M010	AS-i clamp with cable straight, M12 straight
8V5031P03M010	AS-i clamp with cable straight, M12 90°
8V5032P03M010	AS-i clamp with cable 90°, M12 straight
8V5033P03M010	AS-i clamp with cable 90°, M12 90°

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