



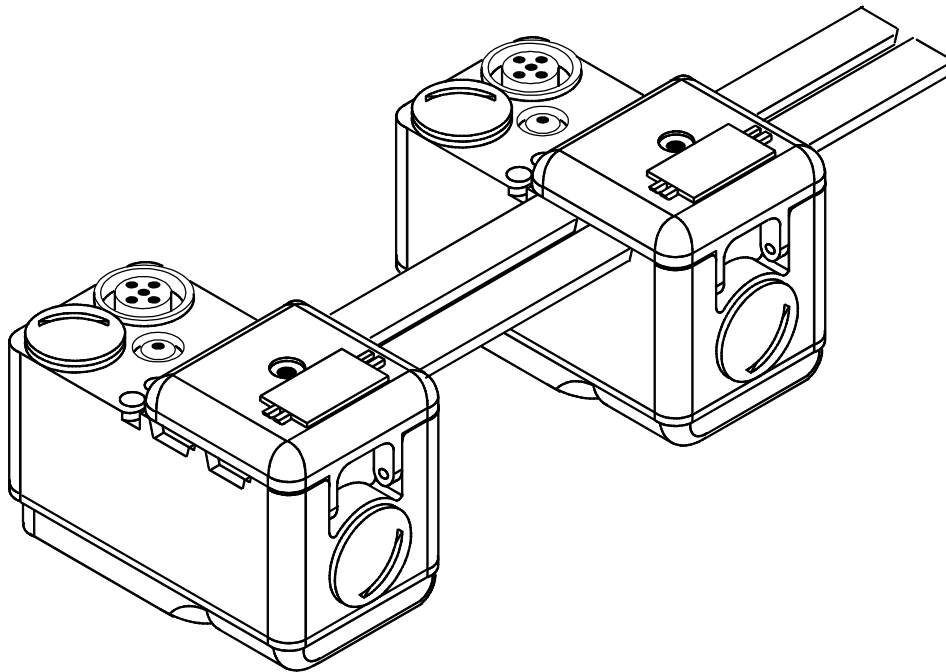
ASI Connectors For Switching Valves

For Use with Solenoid Operated Valves

Rated up to 2A 24V DC (8 to 38W)

DIN 43650 Coil Connectors Fitted

Available for Single and Double Solenoid Operated Valves



Suitable for all Vickers direct acting size 3 and size 5 switching valves (NG6 and 10) and two-stage pilot operated size 5, 7, 8, and 10 switching valves (NG11, 16, 25 and 32).

General Description

This connector has been produced to meet the increasing use of bus systems on industrial equipment.

The AS–Interface (Actuator Sensor Interface) is a cost–effective low level bus system suitable for simple switching I/Os such as on/off solenoids and switches (pressure, proximity, limit, etc.).

This ASI connector can be used to energize single or double solenoid valves, sizes 03 and 05 (NG6 and NG10) and, where these valves are used as pilot valves, two–stage valves up to size 10 (NG32). Double solenoid applications are catered for by the “second solenoid” connector which plugs into the M12 output of the ASI connector module.

The ASI module connector is fitted to one solenoid with a DIN 43650 coil while the second solenoid, if fitted, is connected with a purpose designed, pre–wired connector via an M12 plug in the module on to its own DIN coil.

Features and Benefits

Same ASI Bus System for Both Hydraulics and Pneumatics

- The ASI bus system already widely used in the pneumatics industry can now be applied to the hydraulic elements of the machine due to the Vickers ASI module connector capability for high power (2A) switching solenoids for hydraulic valves.

Simple Interface

- The module connector fits onto a standard DIN 43650 form A fitting on the valve coil providing a simple interface between the ASI bus and high power switching solenoids.

Minimizes Inventory and Accommodates Changes

- With a 2A switching capability the same module connector is suitable for both size 3 (NG6) 8 and 30W solenoids and size 5 (NG10) 38W solenoid valves ensuring that only one option is required.
- Single and double solenoid valves are supplied from the same module connector therefore easily accommodating changes to the valve configuration.

No Risk Assembly

- Simple pre–wired connectors are supplied to connect from the module to the second solenoid with a predetermined pin configuration to ensure ease of assembly.

External Switch Inputs Further Simplify Installation

- The module connector supplies power for 1 or 2 external switches and can receive inputs from them. These inputs are fed directly into the ASI bus without the need for further connectors.

Single Supply Cable for Many Valves

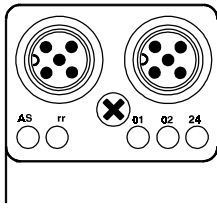
- The (black) ASI power cable has a 16A capacity, therefore a number of solenoids can be energized at the same time minimizing the need for additional power supplies.

Simple Addressing of the Module Connector

- Modules can be addressed through the ASI bus system from the bus master. Additionally each module has an addressing socket for an independent addressing device.

| | | |
|-----------------------|---------------------------------|--|
| Technical Data | ASI bus voltage | 29.5V DC +/-3% |
| | Maximum ripple | < 1% |
| | Polarity protection | Integrated |
| | ASI current usage (max) | 250 mA |
| | ASI specifications (IO/ID code) | 3/F |
| | Addressing | Addressing jack |
| Power Supply | Bus connection | ASI flat cable - yellow: 2 x 1,5 mm ² ASI+, ASI- |
| | Supply voltage range | 23-27.5V DC |
| | Maximum ripple | +/-10% |
| | Polarity protection | Integrated |
| Outputs | Power supply connection | ASI flat cable - black: 2 x 1,5 mm ² (External supply should be according to PELV9 IEC 64) |
| | Output voltage | Power supply minus 1,5V (typical) |
| | Current usage | 2A 100% ED |
| | Short circuit protection | Integrated |
| | Overload protection | 2A |
| | First solenoid connection | DIN 43650 (ISO 4400) A–form |
| Inputs | Second solenoid connection | M12 female 4 poles |
| | Input voltage | From ASI bus under IEC 1131-2 |
| | Auxiliary switches supply | Max 200 mA |
| | Short circuit protection | Integrated |
| | Overload protection | 200 mA |
| General Data | Auxiliary switch connection | M12 female 4 poles |
| | Housing | Flame retardant black plastic |
| | Protection | IP67 when completely fitted correctly |
| | Temperature range | -20° C to +70° C |

Installation Dimensions in mm (in)

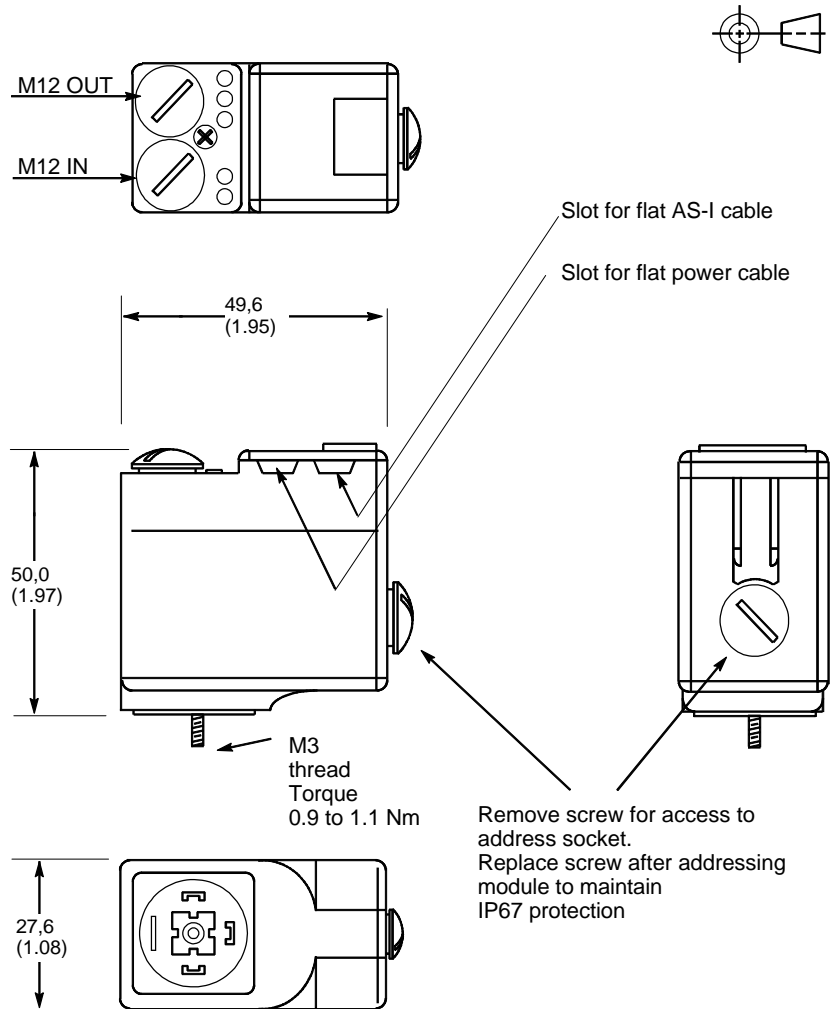


Detail showing light captions and M12 input and output connections after removal of protective screws. See typical electrical circuitry on next page (for light indications see table below).

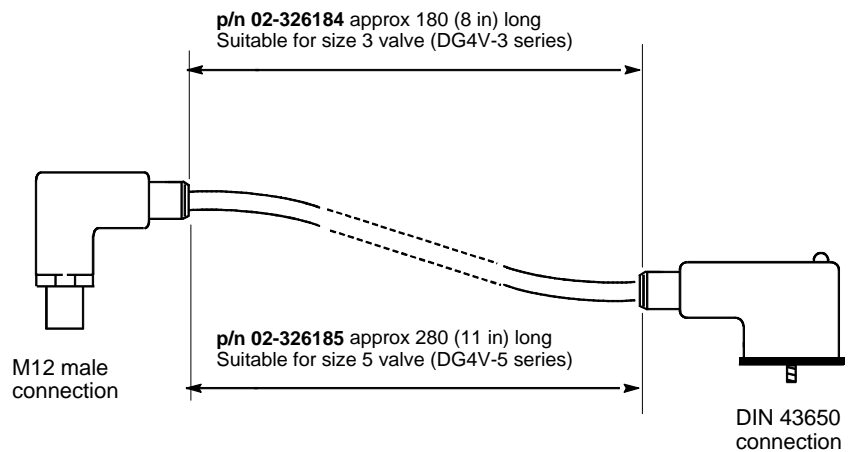
Light Indications

- = Off
- = On
- ◉ = Flashing

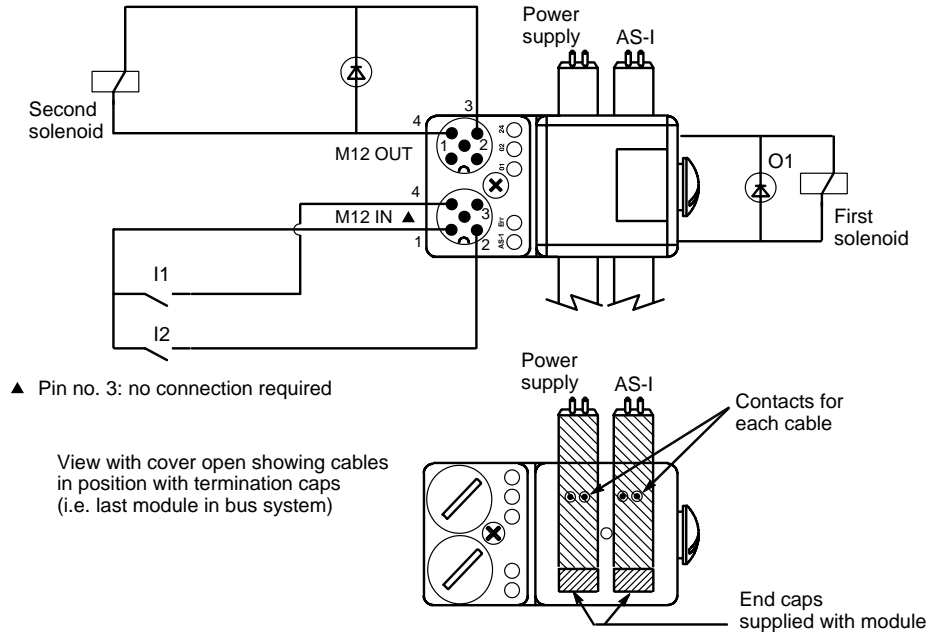
| AS-I (green) | Err (red) | Status |
|-----------------------|-----------|-------------------------------------|
| ○ | ○ | No AS-I bus |
| ○ | ● | No data transfer |
| ● | ○ | Module OK |
| ● | ◉ | Slave has address 0 |
| ◉ | ○ | Short circuit or overload (outputs) |
| 24V (yellow) | | Status |
| ○ | | No external power supply |
| ◉ | | External power supply OK |
| 01-02 (yellow) | | Status |
| ○ | | Output low |
| ◉ | | Output active |



Connectors for Second Solenoid



Electrical Circuitry of Typical Output and Input Connections



Installation

Module Connector

Both the ASI bus and the power supply are connected to the module connector by ASI flat-section cables and Vampire connections (i.e. pins in the module that penetrate the cable and connect with the relevant wires in the cables). Access to the cable guides is by unscrewing the small screw securing the cap and hingeing it open.

ASI bus connection: The flat-section **yellow** cable is laid through the cable guide furthest from the mounting screw.

Power supply connection: The flat-section **black** cable is laid through the cable guide nearest to the mounting screw.

The cables to the last module of an installation must be cut and the plug pieces

(supplied with each module) fitted to maintain IP67 specification. Close the cap and secure with the screw provided ensuring that the cap is fully closed.

Second Solenoid Connector

Connect to M12 output on module and DIN connector on solenoid.

Switch Inputs

Connect to M12 input on module.

Addressing the Module

The module connector functions as a slave to the ASI bus system and can be addressed together with all its inputs and outputs via the ASI bus master.

An addressing device is available (02-326186) that can be connected via the cable supplied to the addressing socket at the module if required.

The module's address is stored in its own memory and can be changed at least 14 times.

The module profile is written into its non-volatile memory by the master. The profile is described by the ID-code and the IO-code of the module. If at any time a module needs to be exchanged then an identical profile must be created.

Ordering

Order by the assembly numbers indicated:

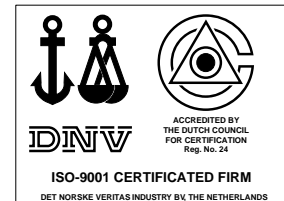
| | |
|----------------------------|-----------|
| ASI connector module | 02-326183 |
| Second solenoid connector | |
| 180 mm cable | 02-326184 |
| Second solenoid connector | |
| 280 mm cable | 02-326185 |
| Addressing device | 02-326186 |

Information contained in this catalog is accurate as of the publication date and is subject to change without notice. Performance values are typical values. Customers are responsible for selecting products for their applications using normal engineering methods.

Eaton Hydraulics

14615 Lone Oak Road
Eden Prairie, MN 55344-2287
Telephone: (888) 258-0222
Fax: (952) 974-7722
www.eatonhydraulics.com

46 New Lane, Havant
Hampshire PO9 2NB
England
Telephone: (44) 170-548-6451
Fax: (44) 170-548-7110



Quality System Certified
Products in this catalog are
manufactured in an
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