

VALTORC ASi BUS VALVE POSITION INDICATOR



Valtorc makes it simple. Valtorc's Positioners with encapsulated ASi BUS interface cards adapt your on/off automated valves to an advanced 2-wire ASi valve network. Money and time will be saved as installation and maintenance are streamlined with reduced wiring and improved system diagnostics.

An ASi network can interface directly with your plant's PLCs or through other protocols such as DeviceNet, Foundation Fieldbus, Profibus or Modbus utilizing a gateway. Valtorc can supply total ASi packages including power supplies, gateways, hand-held programmers, cable and quick disconnect connectors.

Valtorc's Advanced ASi BUS Platform Improves Reliability

The Network Card. A full function encapsulated network card for the network protocol includes the following benefits:

- > Encapsulated electronics and position sensors ensures reliability in corrosive, humid and dirty environments.
- > Hall effect position sensors designed into the card provide optimum stability in areas of high vibration.
- > Two transistor outputs with a combined output of up to 4w @ 24VDC are available for your solenoid valves
- > High visibility LEDs are located on-board for local indication of on-board sensors, auxiliary inputs, outputs and network status.
- > Two additional inputs are available for local pressure or temperature switches.

The Physical Platform. Valtorc's platform is available in many configurations:

- > Housings in Aluminum, Hard Anodized Aluminum or SuperTough Zytel® for General Purpose or Hazardous Areas
- > Valtorc's proven Engineered Loc-Ring Cam and Shaft Retention System assures stable output signals in difficult environments over a multi-million cycle life.
- > Optional Mini and Micro plug connectors can be fitted to the conduit entries of the enclosures to speed installation.

The Visual Indicator. Valtorc's High Visibility Valve Position Indication preferred by users worldwide are available in a wide variety of colors and flow patterns.

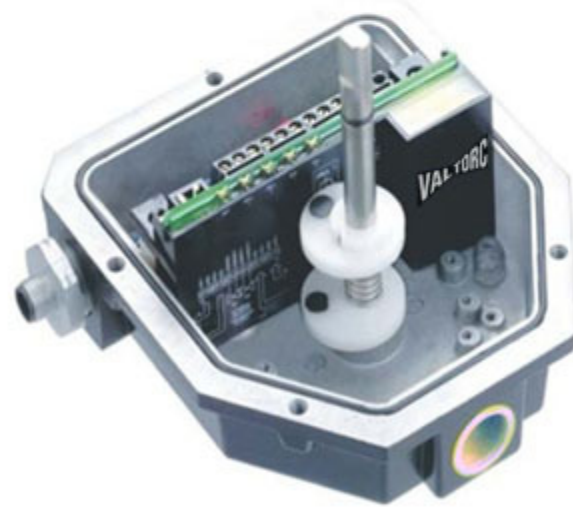
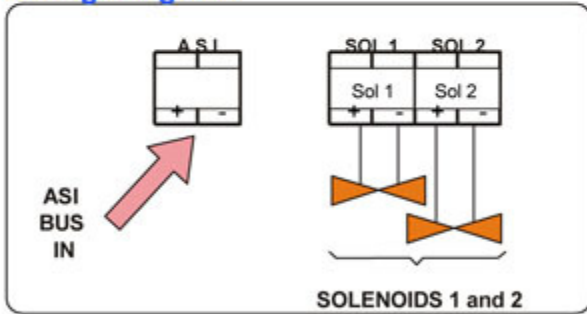
The Solenoid Valve. Low power solenoid valves optimized for the network card output are available with direct NAMUR actuator mounting or pre-wired to the VPC.

ASi BUS Technical Information

- > Supports up to 62 Addresses (1-31 A + B)
- > Baud Rate at 167Kbit (No Termination Required)
- > Scan Time < 10ms for a Fully Loaded System
- > Deterministic - Each Slave Adds 150 µs to the Scan Time
- > Can Be Installed in Any Topology
- > Bus Power and Communications Share the Same 2 wire Cable
- > Standard 16AWG or Special AS-Interface Flat Cable Can Be Used
- > 990 ft. Total Bus Length (with Maximum 2 Repeaters)
- > High Level of Noise and Temperature Immunity Makes ASi an Excellent Choice for the Process Plant Environment.
- > Each AS-Interface Node Requires its Own Unique Address (Master/Slave)
- > No Configuration Software Required
- > Nodes Can Be Addressed Using Buttons on Master, Hand-Held Programmer, or Through Serial Communications

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Wiring Diagram



Standard ASi BUS Bitmap Configuration

Data Bits	
Bit D0	Output Transistor #1
Bit D1	Output Transistor #2
Bit D2	Proximity Switch #1
Bit D3	Proximity Switch #2

Parameter Bits	
Bits P0, P1, P2, P3	Not Used

IO/IDs	
IO code	IO = B
ID code	ID = A
ID1 code	7 or F ID1=7 if Address=1A...31A ID1=F if Address=1B...31B
ID2 code	0

Other	
Address (from factory)	0
Watchdog	On
Parameter	7

Standard ASi BUS Network Card Specifications

Power	
Voltage	30Vdc (ASi Standard)
Current	<30mA
Local Indication	Green LEDs

Communication	
Type	Slave
Addressing	1 to 31 A/B (Total=62)
Cycle Time	Less Than 5ms

On Board Sensor Inputs	
Type	(2) Hall Effect Solid-State Sensors, (1) for Each Valve Position
Local Indication	Red LEDs (Each Input)

Auxiliary Inputs (Optional)	
Type	(2) Namur (DIN 19234) or Mechanical Switch
Voltage	8Vdc \pm 5% - Ripple 5%
Current	Active <1mA, Inactive >3mA
Local Indication	Red LED (Each Input)
Protection	Reverse Polarized

Output	
Type	(2) Transistor
Transistor Rating	2 x 120 mA @ 24 VDC Programmable NO or NC
Local Indication	Red LEDs