Moniteur ASi Valve Position Controllers

ASi makes it simple. Moniteur's VPCs with encapsulated ASi 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. Moniteur can supply total ASi packages including power supplies, gateways, held-hand programmers, cable and quick disconnect connectors.

Moniteur's Advanced ASi 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. Moniteur's platform is available in many configurations:

► Housings in Aluminum, Hard Anodized Aluminum or SuperTough Zytel for General Purpose or Hazardous Areas

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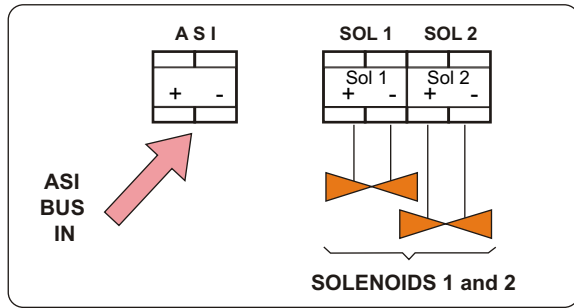
The Visual Indicator. Moniteur's High Visibility Valve Position Indication preferred by users worldwide are available in a wide variety of colors and flow patterns.

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 v2.1 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

Wiring Diagram

SOLENOIDS 1 and 2

Standard ASi 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 ± 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

Standard ASi 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

Intelligent Part Number System
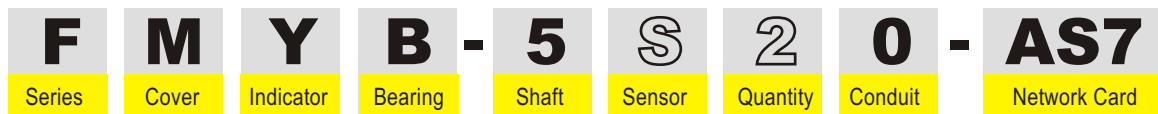
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Series	Cover	Indicator	Bearing	Shaft	Sensor	Quantity	Conduit	Network Card

Description	Code
Series:	
Watchman (Nema 4)	F
Survivor (Plastic Nema 4)	P
Sentinel (Ex-Proof)	A
Moniteur	
With Indicator	M
Flat Cover	F
Indicator Type (open/closed)	
No Indicator (Flat Cover)	N
Black / Yellow (Standard)	Y

Description	Code
Bearing	
Bronze	B
303 Stainless	S
Shaft	
Standard 303 SS	1
Standard 316 SS	3
Low Profile NAMUR 303 SS	5
Low Profile NAMUR 316 SS	7
NAMUR 303 SS	E
NAMUR 316 S	G

Description	Code
Switch/Sensor Type	
On Board Sensors	S
Sensor Quantity	2
Conduit Connection	
2 - 1/2" F NPT (F & P Series)	0
3 - 1/2" F NPT (F & P Series)	6
2 - 3/4" F NPT (A Series)	0
3 - 3/4" F NPT (A Series)	5
ASi	-AS7