

DeviceNet Valve Position Controllers

Moniteur VPCs with encapsulated DeviceNet interface cards adapt your on/off automated valves to an advanced DeviceNet valve network. Money and time can be saved as installation and maintenance are streamlined, reducing wiring runs and improving system diagnostics.

Based on the CAN protocol, the DeviceNet protocol was developed by Allen Bradley to provide industry with a simple and cost effective method of networking field devices. Moniteur supplies a full range of accessories including cable and quick-disconnect connectors to simplify installation.



Advanced DeviceNet 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 4.8w @ 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.

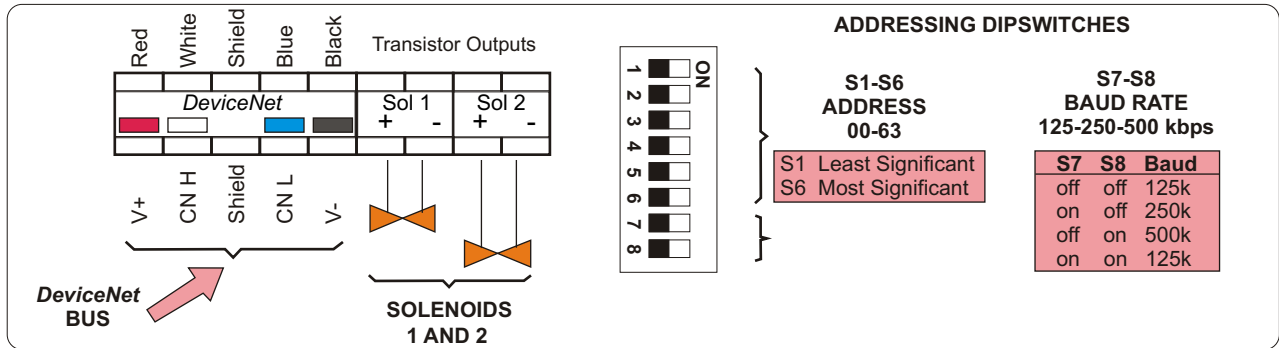
The Solenoid Valve. Low power solenoid valves optimized for the network card output are available with direct NAMUR actuator mounting or pre-wired to the VPC.

DeviceNet Technical Information

- ▶ Each Network Supports up to 64 Nodes or Addresses
- ▶ 125K, 250K, and 500K Baud Rates
- ▶ Maximum Trunk Length = 1640 feet
- ▶ Thick and Thin Cable Types
- ▶ Trunkline / Dropline Topology
- ▶ Supports Online Node Insertion and Removal

Zytel is a trademark of the DuPont Company

Wiring Diagram



Standard DeviceNet Network Card Specifications

Power

| | |
|---------|------------|
| Voltage | 24Vdc ±15% |
| Current | <70mA |

Communication

| | |
|-------------------|---------------------------------------|
| Type | Slave |
| Communication | Polled |
| Word | 1 byte TX - 1byte RX |
| Addressing | 0 to 63 Set by Dipswitch |
| Transmission Rate | 125-250-500 Kbs Baud Set by Dipswitch |
| Digital Filter | 25ms |

Configuration

| | |
|-----------------|--|
| Input - Byte 1 | Bit 0 - Sensor 1 Bit 1 - Sensor 2 |
| Output - Byte 1 | Bit 0 - Output 1 (sol. 1) Bit 1 - Output 2 (sol. 2) |

Local Indication

| | |
|------------------|---------------------------------------|
| Green (Light) | Active and Allocated |
| Green (Flashing) | Active and Allocated |
| Red (Flashing) | Wrong Baud Rate or Lost Communication |
| Red (Light) | Double Address or Lost Communication |

On-Board Sensor Inputs

| | |
|------------------|--|
| Type | (2) Hall Effect Solid-State Sensors, (1) for Each Valve Position |
| Local Indication | LEDs |

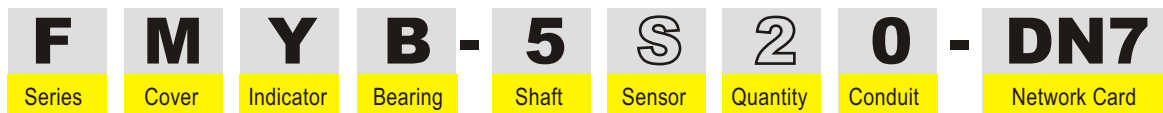
Auxiliary Inputs

| | |
|------------|---|
| Type | (2) Namur, by DIN19234 or Mechanical Switch |
| Voltage | 8Vdc ± 5% - Ripple 5% |
| Current | active <1mA Inactive >3mA |
| Indicator | (2) LEDs |
| Protection | Reversed Polarized |

Output

| | |
|-------------------|--|
| Type | (2) Transistor or Relay, Programmable NO or NC |
| Transistor Rating | 24VDC / 2 x 200 mA |
| Relay Voltage | 120 VAC, 220 VAC, 24 VDC |
| Relay Power | 0.30A |
| Indicator | (2) LEDS |

Intelligent Part Number System



| Description | Code | Description | Code | Description | Code |
|-------------------------------------|------|--------------------------|------|-------------------------------|------|
| <u>Series:</u> | | <u>Bearing</u> | | <u>Switch/Sensor Type</u> | |
| Watchman (Nema 4) | F | Bronze | B | On Board Sensors | S |
| Survivor (Plastic Nema 4) | P | 303 Stainless | S | <u>Sensor Quantity</u> | 2 |
| Sentinel (Ex-Proof) | A | <u>Shaft</u> | | <u>Conduit Connection</u> | |
| <u>Moniteur</u> | | Standard 303 SS | 1 | 2 - 1/2" F NPT (F & P Series) | 0 |
| With Indicator | M | Standard 316 SS | 3 | 3 - 1/2" F NPT (F & P Series) | 6 |
| Flat Cover | F | Low Profile NAMUR 303 SS | 5 | 2 - 3/4" F NPT (A Series) | 0 |
| <u>Indicator Type (open/closed)</u> | | Low Profile NAMUR 316 SS | 7 | 3 - 3/4" F NPT (A Series) | 5 |
| No Indicator (Flat Cover) | N | NAMUR 303 SS | E | <u>DeviceNet</u> | -DN7 |
| Black / Yellow (Standard) | Y | NAMUR 316 S | G | | |