

Moniteur Profibus Valve Position Controllers

Moniteur VPCs with encapsulated Profibus interface cards adapt your on/off automated valves to an advanced Profibus DP valve network. The Profibus protocol was developed in 1989 by a group of factory automation suppliers.

Profibus-DP is a device level bus that supports both analog and discrete signals. Profibus-DP has widespread usage for such items as remote I/O systems, motor control centers, and variable speed drives. Profibus-DP communicates at speeds from 9.6 Kbps to 12 Mbps over distances from 100 to 1,200 meters.

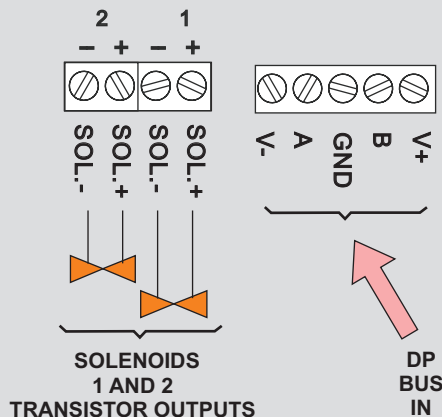
Moniteur's State-of-the-Art Profibus Platform Excels

- 1) **The Network Card.** A full function encapsulated network card for the Profibus DP protocol optimized for the functions of the VPC is included in the housing. The cards offer the following benefits:
 - A) Encapsulation of the electronics insures component reliability in corrosive, humid and dirty environments
 - B) Solid State position sensors are encapsulated on board, protecting them from the environment. These sensors are optimized for the card and are more stable than mechanical or reed switches in areas of high vibration.
 - C) Up to two transistor outputs for 24VDC on-board power, or up to two optional relays for control of devices requiring separate DC or AC power supplies, such as specialty high power AC solenoids using hydraulic fluid.
 - D) Addressing rotary switches are located directly on-board, allowing addressing of the units before or after the units have been fully installed and wired.
 - E) High visibility LEDs are located on-board for local indication of on-board sensors, auxiliary inputs, outputs and network state.
 - F) A unique network address
- 2) **The Enclosure.** Moniteur's platform is available in a wide variety of enclosure materials to match your hazardous or corrosive environment and provide long-term reliability.
 - A) Housings in Aluminum or SuperTough Zytel Thermoplastic for general purpose or hazardous areas
 - B) Moniteur's Engineered Loc-Ring Cam and Shaft Retention System assures stable output signals in difficult environments
 - C) Optional Junction boxes to facilitate maintenance of the automated valve without shutting the network down are available for general purpose or hazardous areas.
 - D) Optional 5-pin Female Mini plug connectors can be fitted to the conduit entries of the enclosures to speed installation in general purpose areas.
- 3) **The Visual Indicator.** Moniteur's High Visibility Valve Position Indication preferred by users worldwide, available in a wide variety of colors and flow patterns to match your process valve.
- 4) **The Solenoid Valve.** Low power solenoid valves optimized for the network card output, available pre-wired with the VPC or with direct NAMUR actuator mounting.

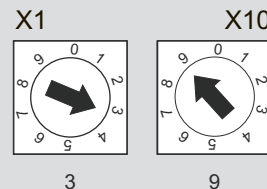
Profibus DP Technical Information

- Each network supports up to 32 devices per segment or 64 with repeaters
- Automatic baud rate up to 500K bit/sec.
- Up to 1000m maximum trunk length w/o repeaters
- Supports both discrete and analog signals
- I/O modules allow connection of conventional analog and discrete devices
- Interfaces available for many variable speed drives, motor control centers, and field devices
- Supports 32 devices per segment, 62 with repeaters
- Simple integration of new devices to an existing network
- Supports mono-master and multi-master systems

Wiring Diagram



Rotary Address Selection



Standard Profibus Network Card Specifications

Power

voltage 24Vdc $\pm 10\%$
current <40mA

Communication

type slave
communication polled
word 1 byte TX e 1byte RX
addressing 0 to 99, by rotary switch
transmission rate up to 500 Kbaud

Local Indication

green (light) active and allocated

On-Board Sensor Inputs (2) Hall effect solid-state

type sensors, (1) for each valve position
local indication red LEDs

Solenoid Output

type (2) transistor programmable to NO or NC
transistor rating 24VDC / 500 mA
indicator (2) red LEDs