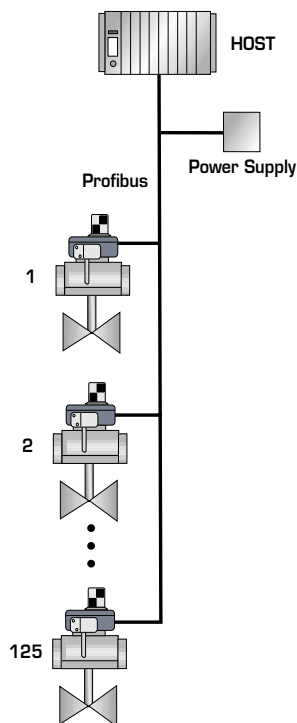




Network Monitors with Profibus® Interface Capability

Intellis™ 7200

Profibus® Network Systems



Profibus®

Started as a joint fieldbus project in 1987 between several companies (Siemens, Klockner-Moeller, Bosch and 10 other manufacturers). Today Profibus has an installed base of over 4 million devices in over 500,000 applications.

Intellis™ Profibus® Overview



WESTLOCK
Network Systems Group

Physical Media	Twisted pair for communications, two wires for power
Maximum Distance	1200m
Maximum Network Monitors per System	32 stations/segment 126 stations/system using repeaters
Maximum I/O Points per System	1000 Discrete 125 Analog
Current Consumption Per Network Monitor	120 mA
Interface Capability	All PLC's & DCS supporting the Profibus protocol
Communications Method	Peer to peer and cyclic master/slave
Error Checking	CRC
Network Topology	Linear preferred, drops allowed @ Baud rates below 500 kbd
Transmission Speed	9.6, 19.2, 93.75, 187.5, 500, 1500, 12000 kbps
Redundancy	No
Valve Specific Diagnostics	Yes

Westlock reserves the right to change product designs and specifications without notice, and is not responsible for errors and omissions.

Profibus®

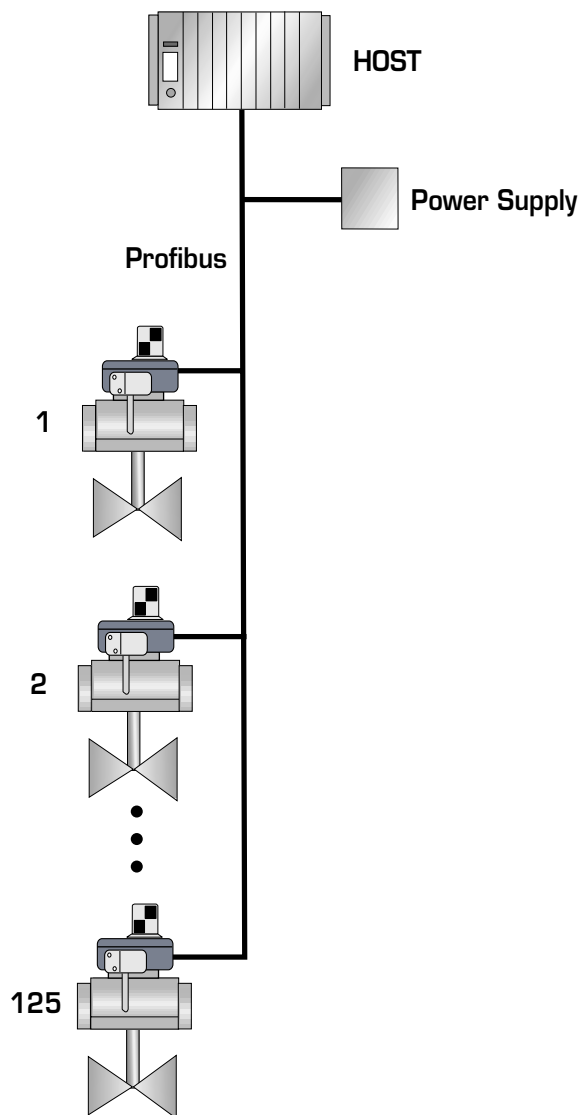
How The System Operates

Field Network

A Profibus field network consists of a group of Network Monitors interconnected by a common communications protocol (Profibus). The Profibus is a master-slave system.

Network Monitor

Each Network Monitor has an integrated I/O module onboard that is assigned an address from 1 to 126. The address number identifies one Network Monitor from all the other monitors in the system.



Network Interface

The Network Monitors interface with the host via a bus master. Data gathered by the master from the Profibus field network is communicated to the host processors via discrete and/or block transfers.

Number of I/O points on a single system.

Because each network may connect up to 125 Network Monitors, the total number of programmable I/O points comes to 1125 (750 discrete inputs/125 analog inputs/250 discrete outputs).

NETWORK MONITORS

A Profibus Network System is established by integrating an OnBoard I/O module directly within the Westlock Network Monitor. Each I/O module has the capability to accept input/output signals from automated valves, position sensors, solenoid valves, emissions monitors and external devices (level alarms, temperature and pressure sensors, flow switches, etc.)

Automated Valve Network Monitor



The Automated Valve Network Monitor couples directly to the pneumatic actuator. It houses three functional components; position sensors, low-power solenoid valve, and an OnBoard I/O module. The OnBoard I/O module is capable of accepting six discrete inputs, 1 analog input and two output devices.

ONBOARD I/O CARD

- INPUT 1:** Valve Position Sensor (open)
- INPUT 2:** Valve Position Sensor (closed)
- INPUT 3:** External Device
- INPUT 4:** External Device
- INPUT 5:** External Device
- INPUT 6:** External Device
- INPUT 7:** Analog position sensor
- OUTPUT 1:** Solenoid Valve (actuation control)
- OUTPUT 2:** Dual Coil application or External Device

External Device Network Monitor



An External Device Network Monitor is available for control or monitoring of non-valve related devices (sensors, alarms, actuators, indicating lights, etc.).

Depending upon the process layout, a wide range of options exist. Standard units are supplied with protective diodes and optical isolation features. External Device Network Monitors are available in **6 discrete input/1 analog input/2 discrete output** configurations. Power requirements for each external device are considered within the design parameters of the overall system.

Profibus®

Profibus specifies two types of masters, DP Master Class 1 (DPM1) and DP Master Class 2 (DPM2). DP permits mono or multi master systems. Multimaster systems may consist of multiple DPM1 masters and/or multiple DPM2 masters.

A DPM1 master is the central controller, which interfaces with a PLC, PC or DCS and cyclically exchanges information with the distributed slaves.

DPM2 masters are devices used for commissioning, maintenance and diagnostics, such as engineering and configuration tools.

The following lists Profibus-DP compatible PLC's and controllers:

- A-B PLC-5 with 1785-PFB interface module
- Bosch PLC with DESI-DP interface module
- GE-Fanuc series 90-70 with Profibus-DP interface module
- Mitsubishi MELSEC-A Family
- Modicon Quantum
- Siemens S7/300 and S7/400
- Siemens S5 with IM318 interface module
- SST for A-B's PLC-5 with SST-PFB-PLC5
- SST for A-B's SLC-500 with SST-PFB-SLC
- SST for GE's 90-70 with SST-PFB-GE
- SST for Reliance AutoMax with SST-PFB-REL
- SST provides the following interface cards - ISA, PC/104, PCI, PCMCIA, STD 32 and VME

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