

Profibus DP Protocol Overview

Intellis 7200

Profibus DP is a powerful networking solution that reduces the cost and time required to install and wire industrial automation devices. A single Profibus system will accommodate up to 126 stations, typically 124 slaves with 992 discrete I/O points and 124 analog points. Profibus has the capability to interconnect complex and simple devices from multiple vendors on the same network.



Profibus started as a joint Fieldbus project in 1987 between several companies (Siemens, Klockner-Moeller, Bosch, and 10 other manufactures).

The Profibus User Organization (PNO) was founded in 1989. The PNO oversees the Profibus specification and conformance testing of Profibus products. It is open to any manufacturer or user of this protocol with a worldwide membership of over 1100 companies.

Physical Media	Twisted pair for communications and two wires for power
Maximum Distance	1,200m trunk
Maximum Network Monitors per System	32/segment, 126/system using repeaters
Maximum I/O Points per System	1125 / system
Current Consumption Per Network Monitor	120 mA typical
Interface Capability	All PLC's & DCS w/ Profibus DP interface
Communications Method	Peer to peer and cyclic Master/slave
Error Checking	CRC check
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
Valves Specific Diagnostics	Yes