

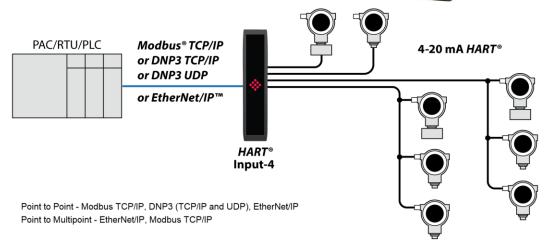
DATASHEET

4 Channel HART Input Module PLX51-HART-4I

The PLX51-HART-4I allows users to easily connect their existing HART-compatible field devices to EtherNet/IP™, Modbus® TCP/IP, and DNP3 Ethernet networks. The module can be used to connect HART Input devices such as process instruments into an Ethernet network.

The PLX51-HART-4I supports up to 4 channels of HART communication, as well as Analog 4-20 mA signals for real-time process variables to/from the HART-compatible device.





Features

- Support for point-to-point networks with EtherNet/IP, Modbus TCP/IP or DNP3 (TCP/UDP) protocols
- Support for point to multipoint networks with EtherNet/IP and Modbus TCP/IP protocols
- Support for automatic configuration in Multidrop mode for Logix Controllers
- Support for PCCC (AB-ETH) protocol, allowing legacy controllers to easily interface to HART modules
- Support for Factory Talk View for point to point and multidrop HART devices
- ◆ EtherNet/IP enables a HART device to be added directly into a Rockwell Automation® Logix I/O tree
- Modbus TCP/IP enables a HART field device to be viewed as a Modbus Slave device
- DNP3 converts a HART field device into a DNP3 Outstation (slave) supporting Secure Authentication
- Support for point-to-multipoint network, maximum of 7 devices with EtherNet/IP protocol
- DTM (Device Type Manager) / HART Pass-through is available for simplifying device configuration and management using an FDT frame
- Built-in webserver provides detailed diagnostics of system configuration and operation as well as field device diagnostics
- Can be used in a redundant ControlLogix® controller system
- Advanced Diagnostics automatically extracted and written to Logix Tag

Specifications

HART 4 Channel Input

Specification	Description
Number of Channels	4
ADC Resolution	12 bit
Input Impedence	247.5 Ω
Accuracy (Calibrated 25°C)	< 0.15 %
Accuracy (Uncalibrated)	< 0.30 %
Range	0 to 22 mA
Current limit	34 mA

EtherNet/IP

Specification	Description
Connector	RJ45
Conductors	CAT5 STP/UTP
ARP Connections	Max 20
TCP Connections	Max 20
CIP Connections	Max 10
Communication Rate	10/100 Mbps
Duplex Mode	Full / Half
Auto MDIX	Yes

Modbus TCP/IP

Specification	Description	
Function Codes	1: Read Coils	
Supported	2: Read Discrete Inputs	
	3: Read Holding Registers	
	4: Read Input Registers	

DNP3

Specification	Description
Mode Supported	DNP3 Outstation
Application Functions Supported	Read Write Select/Operate Direct-Operate Direct-Operate-No-Response Authentication Request Authentication Response
Unsolicited Response Supported	No
DNP3 Events Supported	No



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DNP3 Secure Authentication

Specification	Description
Key Change Method Supported	Pre-shared
MAC Algorithms Supported	HMAC SHA-1 encryption (4 octets, serial) – for legacy support
	HMAC SHA-1 encryption (8 octets, serial)
	HMAC SHA-1 encryption (10 octets, networked)
	HMAC SHA-256 encryption (8 octets, serial)
	HMAC SHA-256 encryption (16 octets, networked)
	AES-GMAC (12 octets)
Key Wrap Algorithms Supported	AES-128 Key Wrap
	AES-256 Key Wrap
Aggressive Mode Supported	No

Physical

Specification	Description
Enclosure Rating	IP20, NEMA/UL Open Type
Temperature	-20 to 70 °C
Earth connection	Yes, terminal based
Emissions	IEC61000-6-4
ESD Immunity	EN 61000-4-2
Radiated RF Immunity	IEC 61000-4-3
EFT/B Immunity	EFT: IEC 61000-4-4
Surge Immunity	Surge: IEC 61000-4-5
Conducted RF Immunity	IEC 61000-4-6

Hardware Specifications

Specification	Description
Enclosure	Plastic
Dimensions (H x W x D)	101 x 22.5 x 120 mm
Power Requirements	12 to 28 VDC 35mA @ 24 VDC - With no field devices attached 130mA @ 24 VDC - With 4 field devices at 22mA each 64mA @12 VDC - With no field devices attached 160mA @ 12 VDC - With 4 field devices at 22mA each
Power Consumption	0.9 W - With no field devices attached 3.1 W - With 4 field devices at 22mA each 4.3 W - With input channels shorted
Power Connector	3-way terminal
Connector (Analog)	2-way terminal
Conductors	24 to 18 AWG

Regulatory Approvals

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Ordering Information

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PLX51-HART-4I

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