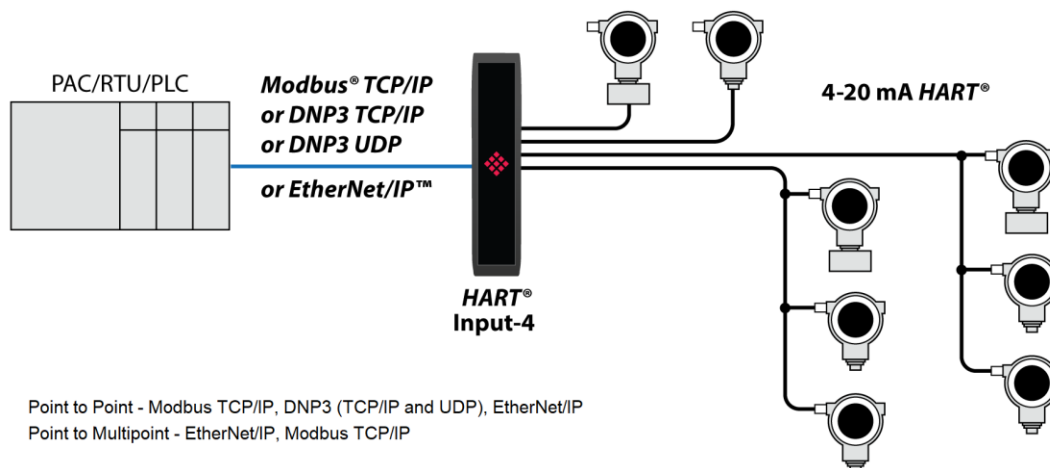


## 4 Channel HART Input Module PLX51-HART-4I

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 $\Omega$ |
| 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 Supported | 1: Read Coils<br>2: Read Discrete Inputs<br>3: Read Holding Registers<br>4: Read Input Registers |

### DNP3

| Specification                   | Description                                                                                                                          |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Mode Supported                  | DNP3 Outstation                                                                                                                      |
| Application Functions Supported | Read<br>Write<br>Select/Operate<br>Direct-Operate<br>Direct-Operate-No-Response<br>Authentication Request<br>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<br>HMAC SHA-1 encryption (8 octets, serial)<br>HMAC SHA-1 encryption (10 octets, networked)<br>HMAC SHA-256 encryption (8 octets, serial)<br>HMAC SHA-256 encryption (16 octets, networked)<br>AES-GMAC (12 octets) |
| Key Wrap Algorithms Supported | AES-128 Key Wrap<br>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<br>35mA @ 24 VDC - With no field devices attached<br>130mA @ 24 VDC - With 4 field devices at 22mA each<br>64mA @12 VDC - With no field devices attached<br>160mA @ 12 VDC - With 4 field devices at 22mA each |
| Power Consumption      | 0.9 W - With no field devices attached<br>3.1 W - With 4 field devices at 22mA each<br>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

To order this product, please use the following:

## 4 Channel HART Input Module

PLX51-HART-4I

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