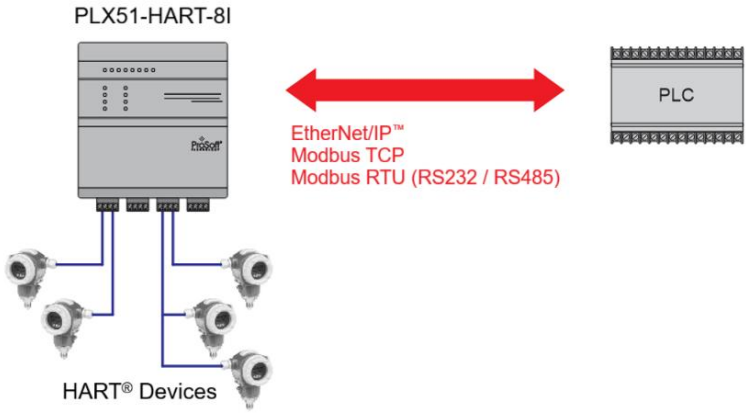
DATASHEET

PLX51-HART-8I
Isolated 8-Channel HART Input

The PLX51-HART-8I supports the interfacing of HART devices on each of the 8 analog HART channels with either EtherNet/IP™ (Target or Originator) or Modbus® Client/Server (TCP, RTU232, RTU485) protocols. Each channel supports both voltage and current input options (e.g., 4-20mA, Voltage, etc.), with or without HART communication enabled.

The PLX51-HART-8I supports up to 8 HART devices per channel (multidrop).





Features

- **HART Input Channels:** Supports 8 isolated HART input channels, accommodating up to 8 HART devices per channel, for a total of 64 HART devices.
- **Communication Interfaces:** Operates with EtherNet/IP (target or originator) and Modbus TCP, RTU232, or RTU485 (client or server).
- **Custom HART Commands:** Allows for custom acyclic HART commands to all connected HART devices.
- **Analog Input Options:** Supports various analog input ranges including 0-20mA, 4-20mA, 0-10Vdc, and 0-20mA or 4-20mA with an external resistor.
- **Network Redundancy:** Equipped with dual Ethernet ports for Linear or Device-Level-Ring (DLR) topology.
- **Simplified Configuration:** Facilitates easier setup and configuration through auto-generated .L5X files that can be imported into the controller.

HART

Specification	Description
HART Devices per Channel	Max 8 (total of 64 HART devices per PLX51-HART-8I module)
Configurable Update Rate	Supported
Configurable HART Requests	Supported
Burst Mode	Supported
Pass-through Requests	Supported
Device Type Manager (DTM)	Available

Analog Input Channel

Specification	Description
Number of Channels	8
ADC Resolution	12-bit
Input Impedance	250 Ω
Accuracy (calibrated 25°C)	< 0.15 %
Accuracy (uncalibrated)	< 0.30 %
Current Range	0–22mA
Current Limit	34mA
Voltage Range	0–10Vdc
Voltage Limit	11Vdc
Isolated	Yes
Input Filter	Supported
Input Types Supported	Voltage Current 0-20mA Current 4-20mA Current 0-20mA (with external Resistor) Current 4-20mA (with external Resistor)
Analog Scaling	Supported

Ethernet

Specification	Description
Connector	RJ45
Conductors	CAT5 STP/UTP
ARP Connections	Max 200
TCP Connections	Max 200
CIP Connections	Max 20
Communication Rate	10/100 Mbps
Duplex Mode	Full / Half
Auto MDIX support	Yes
Embedded Switch	Yes, 2x Ethernet Ports
Device Level Ring (DLR)	Supported
Network Time Protocol (NTP)	Supported
1588 Precision Time Protocol (PTP)	Supported

EtherNet/IP™

Specification	Description
EtherNet/IP Target	
Class 1 Cyclic Connection Count	8
EtherNet/IP Originator	
Class 1 Cyclic Connections Supported	Yes
Class 3 / UCMM Connections Supported	Yes
Class 1 Connection Count	10
Class 3 / UCMM Target Device Count	10
Class 3 / UCMM Mapping Count	50

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Modbus

Specification	Description
Client	
Modes Supported	Modbus TCP, Modbus RTU232, Modbus RTU485
Modbus RTU485 Termination	125 Ω - Software Enabled
Max. Modbus Server Devices	20
Max. Modbus Mapping	100
Mapping Ranges	Holding Register 0 to 65535 Input Register 0 to 65535 Input Status 0 to 65535 Coil Status 0 to 65535
Base Offset	Modbus (Base 0) PLC (Base 1)
Configurable Modbus TCP Port	Yes
Data Reformatting Supported	BB AA BB AA DD CC CC DD AA BB DD CC BB AA
Server	
Modes Supported	Modbus TCP, Modbus RTU232, Modbus RTU485 (simultaneous)
Modbus RTU485 Termination	Software set
Mapping Ranges	Holding Register 0 to 65535 Input Register 0 to 65535 Input Status 0 to 65535 Coil Status 0 to 65535
Base Offset	Modbus (Base 0) PLC (Base 1)
Configurable Modbus TCP Port	Yes

Serial Port (RS232/RS485)

Specification	Description
RS232	
RS232 Connector	9-way terminal (shared with RS485)
RS232 Conductor	24 – 18 AWG
Electrical Isolation	1000Vdc
Baud Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	None, Even, Odd
Data bits	8
Stop bits	1
RS485	
RS485 Connector	9-way terminal (shared with RS485)
RS485 Conductor	24 – 18 AWG
Electrical Isolation	1500 Vrms for 1 minute.
Baud Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	None, Even, Odd
Data bits	8
Stop bits	1

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Electrical

Specification	Description
Power requirements	Input: 10 – 32Vdc, (200mA @ 24Vdc)
Voltage Fluctuations	Voltage fluctuations < ±10% Transient Over-voltages up to the levels of OVERVOLTAGE CATEGORY I
Power consumption	5.1 W 470 mA maximum
Connector	3-way terminal
Conductors	24 – 18 AWG
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

Note: The DC power supply or DC power source used by the PLX51-HART-8I must be classified as Limited Energy Circuits and Safety Extra Low Voltage (SELV).

Environmental

Specification	Description
Enclosure Rating	IP20, NEMA/UL Open Type Indoor use only
Temperature	-4°F to 149°F (-20°C to 65°C)
Relative Humidity	5% to 90% - No condensation
Pollution Degree	2
Altitude	< 2000 m

Hardware Specifications

Specification	Description
Enclosure	Plastic
Dimensions (H x W x D)	101 x 22.5 x 120 mm (110 x 75.2 x 117.4)
Power Requirements	12 to 28Vdc (10 to 32Vdc) 121mA @ 24Vdc 35mA @ 24Vdc - With no field devices attached 130mA @ 24Vdc - With 4 field devices at 22mA each 64mA @ 12Vdc - With no field devices attached 160mA @ 12Vdc - With 4 field devices at 22mA each
Power Consumption	3.1 W 300 mA maximum 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

Agency Approvals & Certifications

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Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms. For a complete list of products, visit our website at: www.prosoft-technology.com

Ordering Information

To order this product, please use the following:

PLX51-HART-8I

Isolated 8-Channel HART Input

To place an order, please contact a local ProSoft distributor.

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