DATASHEET

EtherNet/IP to HART Analog Gateway

5208-DFNT-HART / 5228-DFNT-HART

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The HART Analog Input Gateway provides a clean way to integrate HART Analog instruments with existing controller platforms on an EtherNet/IP network. The gateway works well for field applications where it can be installed closer to HART instrument, saving on copper cable and installation costs. The gateway also saves valuable rack space for other in-chassis options. The gateways provide extremely fast channel update times (all channels updating simultaneously in 67 ms) making the HART Analog Input Gateway ideal for applications where high speeds and point-to-point connectivity are required. These gateways are available in 4 and 8 Analog input channel options.

EtherNet/IP

The EtherNet/IP protocol is one of the primary connectivity tools to the different Rockwell Automation platforms. The Explicit Messaging aspect of the protocol (only) has been implemented in the ProLinx® units to provide the data transfer link between the ProLinx units and the Rockwell Automation® hardware.

General Protocol Information	
Messaging	PCCC on CIP Explicit Messaging supported
Miscellaneous	125 word read and write data lengths Floating point data supported

EtherNet/IP Server Specifications

In Server mode, the module accepts commands from one or more clients to read/write data stored in the module's internal registers.

EtherNet/IP Server Specifications	
Connections	Five independent TCP server sockets permit remote clients to interact with all data contained in the module.
Data File	Data Table File Start - Fixed at N10 Data Table File Size - 100 or 1000 words
CIP Services Supported	0x4C - CIP Data Table Read 0x4D - CIP Data Table Write

EtherNet/IP Client Specifications

In Client mode, the module controls the read/write data transfer between the gateway and other EtherNet/IP devices. Data transfer can be initiated and executed without any ladder programming being required in the Rockwell Automation hardware.

EtherNet/IP Client Specifications	
General	One client
Command List	Support for 100 commands, each configurable for command, IP address, register to/from addressing and word/bit count.
Polling of command list	User configurable polling of commands, including disabled, continuous and on change of data (write only).

HART Analog

The HART Analog Protocol exists in 4 and 8 channel implementations. This driver can be configured on an individual channel basis to operate as a HART Master Station and supports all the available HART commands including Universal, Common Practice and Device Specific Commands. Each HART channel is independently configured to interface with the internal database in the module.

The auto-poll mode allows the module to automatically collect data from each HART instrument on the channel and store the data in the module's database without the use of user commands. The module automatically generates HART commands 0, 3, 13, 14 and 15.

General Parameters	
Communication parameters	Number of HART Preambles: 2 to 50 Enable Handheld: Y or N Primary Master: Y or N
Configurable Parameters per Channel	Auto-Poll Enable, Short / Long Address Retries, Retries After Error Poll Time After Error, Number of Commands, Slave List Error Pointer

HART Driver	
Command List	Up to 100 fully configurable commands per channel
Polling of command list	User configurable polling of commands, including disabled, continuous, on change of data (write only) and dynamically user or automatic enabled.

Isolated HART Analog Input Specifications	
Input Range	Current: 4 to 20mA with HART
Resolution	16bits
Input Filter	First Order Sync: 10 Hz
Current Input Resistance	247.6 ohms +/- 1%
Open circuit detection time	1/2 second maximum
Over current	+/-40mA continuous, maximum
Common Mode Noise Rejection	105dB

Isolated HART Analog Input Specifications	
Calibrated Accuracy @ 25°C	4 to 20 mA: 0.05% of reading
Input Isolation Voltage	2500 V RMS per UL 1577, transformer isolated
24V DC Isolation Voltage	1500 VDC

HART® is a registered trademark of the HART Communication Foundation

Configuration

ProSoft Configuration Builder (PCB) provides a quick and easy way to manage module configuration files and view module and network diagnostics. PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations to new projects.

General Specifications

The ProLinx® Communication Modules provide connectivity for two or more dissimilar network types. The modules, encased in sturdy extruded aluminum, are stand-alone DIN-rail mounted protocol gateways, providing communication between many of the most widely used protocols in industrial automation today.

Hardware Specifications

Specification	Description
Power Supply Input	24 VDC nominal 18 to 32 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	1-4 ch: 190 mA max@ 32 VDC max 5-8 ch: 250 mA max@ 32 VDC max
Operating Temperature	-20 to 50°C (-4 to 122°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5% to 95% (non-condensing)
Dimensions	Standard: 5.20H x 2.07W x 4.52D in. (13.2cmH x 5.25cmW x 11.48cmD) Extended: 5.20H x 2.73W x 4.52D in. (13.2cmH x 6.934cmW x 11.48cmD)
LED Indicators	Power and Module Status Application Status HART Channel Activity (Green)
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
HART Interface	Four or eight HART Point-to-Point channels (5x08 = 4 inputs; 5x28 = 8 inputs) Screw terminals for each channel

Specification	Description
Electrical Isolation	1500 Vrms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991
Common Mode Rejection	105db @ DC
Over current	+/- 40mA continuous, maximum
Overvoltage Protection	All HART Inputs: 90V 3-electrode gas discharge tube, surge arrestor: 30V MOV for voltage protection, 300mA poly switch resettable fuse for over current protection
Accuracy	4 to 20 mA: 0.05% of reading @ 25°C
24VDC loop output power	1 Internal 24VDC supply for each 4 channels. Screw terminals for Isolated 24VDC loop power May be used to provide HART loop power
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4 ft RS-232 configuration cable 2.5mm screwdriver CD (docs and Configuration utility) RS-422/485 DB-9 to Screw Terminal Adaptor (1 or 4, depending on ports, serial protocol modules only) HART Terminal Block connector
Certifications	CE, cULus (Class I, Div 2, Groups ABCD), and ATEX

Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

Compatible products in this product line also include:

Modbus TCP/IP to HART Analog Gateway

(5208-MNET-HART / 5228-MNET-HART)

DF1Master/Slave to HARTAnalog Gateway

(5108-DFCM-HART / 5128-DFCM-HART)

Visit our web site at http://www.prosoft-technology.com for a complete list of products.

Ordering Information

To order this product, please use the following:

5208-DFNT-HART / 5228-DFNT-HART	EtherNet/IP to HART Analog Gateway

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to http://www.prosoft-technology.com

Distributors:
Place your order by email or fax to:

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Specifications are subject to change without notice.

August 06, 2008