## HART Series Products

## Modbus to HART Gateway



HART-710


## Dimensions

The HART-710 Gateway is specially designed for the master device of HART protocol. It allows the Modbus master device to access the HART slave devices. These HART devices may be a transmitter, an actuator, a current output device and so forth. In addition, we also provide the utility software for users to configure the HART-710. By using this module, users can integrate their HART device into Modbus network easily.

## Features

Support HART Short/Long frame- Support HART Burst mode
- Allow two HART Masters
- Working in point-to-point or multi-drop HART mode
- Connecting up to 15 HART modules
- Support Modbus RTU and ASCII format
- Support Modbus Slave mode
- Isolated COM 1:RS-232/422/485
- Provide LED indicators
- Built-in Watchdog
- 4KV ESD Protection


## Modbus Support

- Only the following Modbus commands are supported by the gateway.

| Code | Name | Descripion |
| :---: | :---: | :---: |
| 01 | Read Coil Status | Read the ONOFF stauls of discrete outputs in the slave |
| 02 | Read liput Status | Read the ONOFF status ofd discrete inputs in the slave |
| 03 | Read Holding Registers | Read the binary contents ofolding registers in the slave |
| 04 | Read Input Registers | Read the binay contents of inputregisters in the slave |
| 05 | Force Single Coil | Write a single outputto either ON or OFF in the slave |
| 06 | Preset Single Rejister | Write an integervalue into a single register in the slave |
| 15 | Force Multicic Coils | White each coil in the sequence of coils to either ON or OFF in the slave |
| 16 | Preset Multiti. Rejisters | White a block of contiguous registers in the slave |

## Utility Features

- Read/Write HART device by HART command
- Provide diagnostic Information
- Read/Write module configuration of the HART-710
- Show Modbus address of HART command



## Pin Assignments



Hardware Specifications

| Hardware |  |
| :--- | :--- |
| CPU | 32 bit, 100 MHz or compatible |
| SRAM/Flash/EEPROM | $64 \mathrm{~KB} / 512 \mathrm{~KB} / 16 \mathrm{~KB}$ |
| Watchdog | Watchdog IC |
| ESD Protection | 4 kV class A |
| UART Interface | RS-232(3 wire)/RS-422/RS-485 |
| COM 1 | 9-pin screwed terminal block |
| COM 1 Connector | $1200,2400,4800,9600,19200,38400,57600,115200$ |
| Baud Rate (bps) | Modbus RTU / Modbus ASCII |
| Protocol | 2 -pin screwed terminal block |
| HART Interface | 1 |
| HART Interface | Unregulated $+10 \sim+30$ Voc |
| HART Channel | Power reverse polarity protection, Over-voltage brown-out protection |
| Power | 1 W |
| Power supply | Drotection |
| Power Consumption | 72 mm x $35 \mathrm{~mm} \times 121$ mm (W x L x H) Detail |
| Mechanism | Installation |
| Dimensions | $-25{ }^{\circ} \mathrm{C} \sim+75^{\circ} \mathrm{C}$ |
| Environment | $-30{ }^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$ |
| Operating Temp. | $5 \% \sim 95 \%$ RH, non-condensing |
| Storage Temp. |  |
| Humidity |  |

## Applications



## Ordering Information

## HART-710 CR Modbus/HART Gateway (RoHS)

