Programmable Industrial HART Gateway with HART Pass Through:

- DIN Rail or Panel Mounted compact Single channel HART Gateway Pass Through

- PLC1 Serial port in any combination of RS232 / RS422 / 2 or 4 wire RS485 / CMOS

- Connects HART device to PLC / SCADA or any serial device. In addition allows configuration software to connect HART device.

- Allows data sharing between HART field devices and other network devices

- Allows multidropping of HART devices.

- Transformer isolation and capacitive coupling for HART devices.
  This simplifies loop connection which eliminates Grounding effect.

- Low power consumption

- Common Programming software for the entire Gateway family.........FREE!!
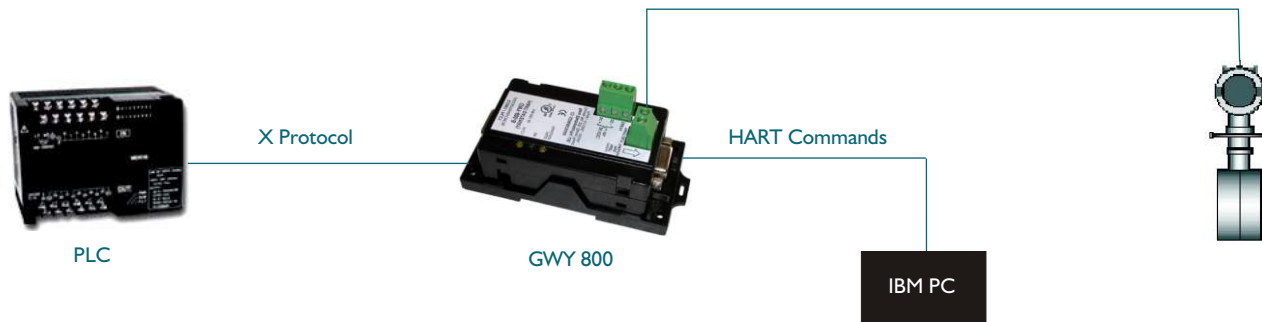
- CE with UL certification

Possible Applications :

GWY-800 connects various HART field devices to other serial devices irrespective of their protocols. At the same time, the user can connect configuration software for HART devices.
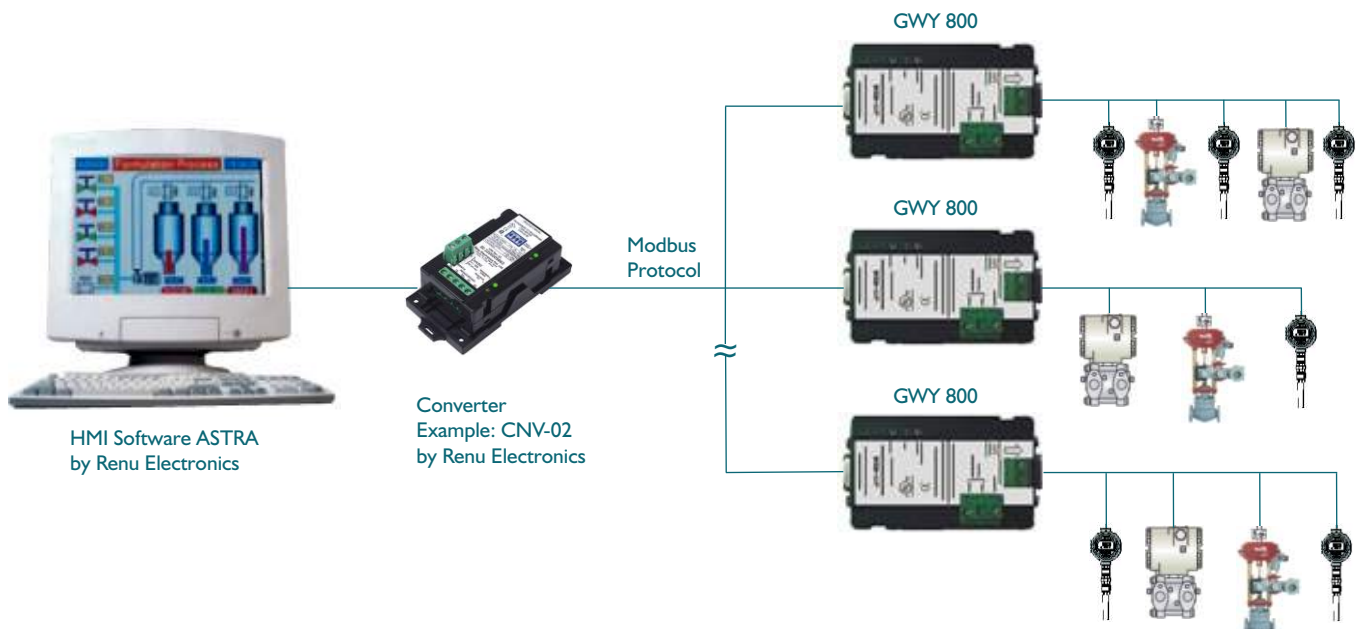
1. PLC to HART Transmitter Communication

PLC   X Protocol   GWY 800   HART Commands

IBM PC

2. HART Transmitters as slaves on Modbus network using single GWY-800

GWY 800

HMI Software ASTRA
by Renu Electronics

3. HART Transmitters as slaves on Modbus network using multiple GWY-800

GWY 800

GWY 800

GWY 800

Modbus Protocol

HMI Software ASTRA
by Renu Electronics

Converter
Example: CNV-02
by Renu Electronics

* Images not to Scale.

GWY-800 Operations :

Gateway 800 is a protocol converter as well as a HART modem. It converts the HART digital signal to a serial communication protocol (e.g. Modbus). This allows various HART field devices to interface directly with serial protocol (Modbus) based monitoring and control systems. Serial protocol can be master or slave configurable from the set up software. At the same time it allows to communicate the PC based configuration software with HART field devices. Gateway operates in point to point as well as in multi drop HART network mode.

All HART process information, including primary, second, third and fourth process variable data is converted to serial protocol (Modbus) and available to the host system. Using the Field Device Status Byte data that is available in HART's digital information, the gateway can transmit, via serial link, diagnostic data including smart device configuration changed; primary and non primary variables out of limits; primary variable analog output fixed; cold start; field device malfunction; and more HART status data available.

System requirements for Gateway Setup Software are:
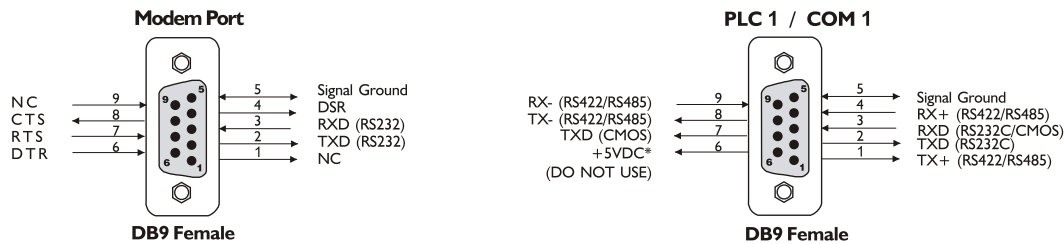Programming software is common for the entire Gateway family.

Windows Version	:	Microsoft Windows XP / 2000, Windows 7 / VISTA
Processor	:	PENTIUM or higher
Hard disk Space	:	5 MB or more
RAM	:	64 MB or more
Display resolution	:	800 X 600 (VGA) or better
Display colors	:	16 bit color

Other Accessories required for the GWY-800 configuration and to use in actual application:
1. Gateway Configuration / Connecting Cable.**
2. Gateway Setup Software .
3. Devices with communication cables.

Communication Ports :

The GWY-800 has two communication ports, PLC1 / COM1 and MODEM. PLC1 / COM1 is compatible to RS232 / RS422 / RS485 and CMOS signal levels. MODEM port has RS232 signals. The Pin-outs of these ports are as shown below:

Modem Port

N C	9	
C T S	8	
R T S	7	
D T R	6	
	5	Signal Ground
	4	DSR
	3	RXD (RS232)
	2	TXD (RS232)
	1	NC

DB9 Female

PLC 1 / COM 1

RX- (RS422/RS485)	9	
TX- (RS422/RS485)	8	
TXD (CMOS)	7	
+5VDC* (DO NOT USE)	6	
	5	Signal Ground
	4	RX+ (RS422/RS485)
	3	RXD (RS232C/CMOS)
	2	TXD (RS232C)
	1	TX+ (RS422/RS485)

DB9 Female

Do not use pin no. 6 of PLC1 / COM1.
**Refer our website (www.renuelectronics.com) for your specific Cable requirements*

Protocols supported for :

GWY-800 currently support following devices on COM1 Port :

- Modbus RTU (Master)
- ABB (Modbus RTU)
- Delta DVP Series (Modbus RTU)
- GE Fanuc Series 90-30, VersaMax
- Omron Host Link
- Toshiba T1, T2, T3 (Link Port)
- Siemens-S7-200 PPI
- Xtra Drive PLCs on COM1 side.

- Modbus RTU (Slave)
- AB DF1 Full Duplex (Micrologix /SLC5/0x / PLC5/30)
- IDEC Micro^3 / C, IDEC MicroSmart, IDEC Open Net
- Messung NEXGEN 2000 / NEXGEN 4000 / NEXGEN 5000 (Modbus RTU)
- Telemecanique 17, 47 & 67 Series
- Toshiba ASD
- Yaskawa Drives

It can also support following Devices on request:

- Baldor Drives
- Keyence KV
- Messung XMP-8
- Taian TP02 Series
- USS Protocol

- Crouzet
- LG MasterK 80S-300S
- Mitsubishi FX
- Twido

New Device drivers are constantly added. Please contact factory for more information.

We welcome an opportunity to develop new, custom drivers and customization of Gateway products.
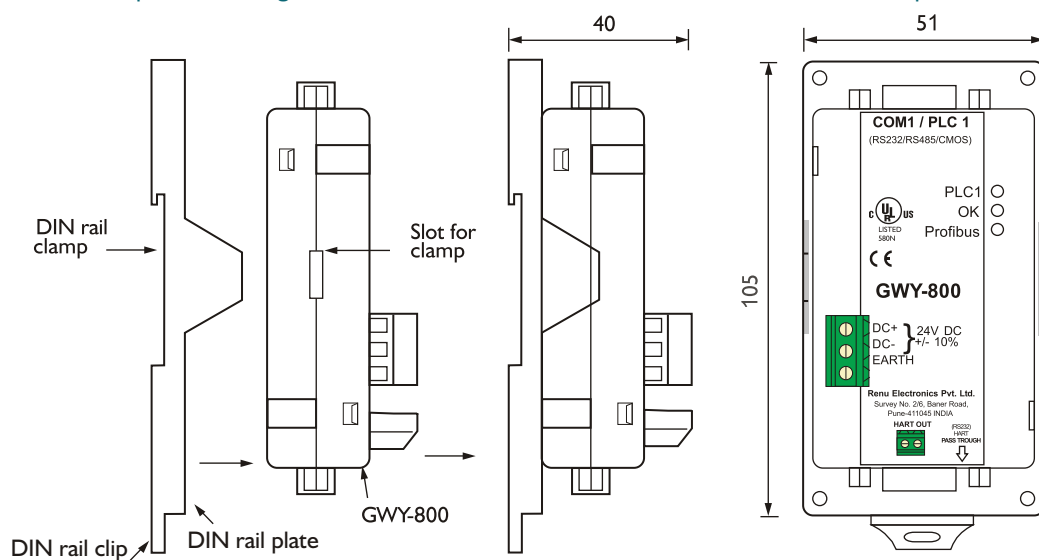
Specifications :

Power	:	+24V DC ± 10%, 100mA max
LED's	:	3 LED's for status indication
Communication Ports	:	3 Communication ports with
PLC1	:	RS232 / RS422 / RS485 / CMOS
PLC2	:	HART Port
Pass Through Port	:	RS232
		(Isolation between communication ports and Power supply, through DC-DC coupler is 1 KV)
PLC1	:	Connects to PC for setup download or connects to PLC1 at runtime.
PLC2	:	Connects to HART devices .
(HART Port)		(Isolation between HART devices and communication port ,through transformer is 1.5KV)
Pass Through Port	:	Connects to Field Care, Pact ware S/W
Temperature	:	Operating : 0° to +60° C
		Storage : -20° to +80° C
Humidity	:	10% to 90% (Non condensing)
Mounting	:	DIN rail or back panel mounting
Dimensions (DIN rail)	:	105mm(L) X 40mm(D) X 51mm(W)
Weight	:	125 gm approx.
Certifications	:	CE and UL
Immunity to ESD	:	as per IEC61000-4-2
Immunity to Fast Transients	:	as per IEC61000-4-4
Immunity to Radiated electromagnetic field	:	as per IEC61000-4-3
Immunity to Conducted disturbances	:	as per IEC61000-4-6
Surge	:	as per IEC61000-4-5
Radiated emission	:	as per EN61000-6-4

Models :

Series/Model	Technology	Protocol
GWY-00	Serial	Various
GWY-100	LonWorks	LonTalk
GWY-300	CANBUS	CAN (J1939/CANopen)
GWY-500	Profibus	Profibus-DP-V0
GWY-610	Ethernet	Modbus TCP/IP
GWY-800	HART	HART
GWY-900	GSM	Various

Dimensions :

GWY-800 units are shipped with a separate DIN rail plate which can be attached to the unit, if desired. User can use the unit with or without the DIN rail plate. Following sketch shows dimensional details of GWY-800 with the DIN rail plate.

All dimensions are in mm.

(Specifications subject to change without prior notice. DS-GWY-800: Rev.8)