Model
GWY- MPI
GWY- HMI

PROTOCOL CONVERTER

INSTRUCTION SHEET

This sheet has important information on how the Unit is used. Please read through this manual thoroughly before using the Unit. And after reading this manual, please keep this manual in a place where others can easily access for future reference.

Renu Electronics Pvt. Ltd.

Operating Precautions

You must allow sufficient leeway in ratings and performance and provide proper fail-safe and other safety measures when using the Unit in any of the following applications. Be sure also to consult your OMRON representative before actually attempting any of these applications.

1. Applications under conditions or environments not specified in user manuals.
2. Applications for nuclear reactor control, train facilities, aviation facilities, motorised vehicles, furnaces, medical equipment, amusement equipment and safety equipment.
3. Applications strongly related to human life or property, particularly those requiring safety.

Operating conditions

Operating temperature:	0°C to 60°C
Storage temperature:	-20°C to 80°C
Humidity:	10% to 90%RH, Non-condensing
Weight :	approx. 125 gramms

External Dimensions

The size of the Protocol converters is
105mm (length) * 51mm (width) * 40mm (height).

Safety Precautions

■ Definition of Precautionary Information

⚠ WARNING Not following a precaution given as a “Warning” may result in fatal or serious injury.

■ Warnings

⚠ WARNING Do not attempt to take the Unit apart and do not touch any internal parts while power is being supplied. Doing either of these may result in electric shock.

Precautions

1. When unpacking the Units, check carefully for any external scratches or other damage. Also, shake the Units gently and check for any abnormal sound.
2. Always tighten the connector screws after connecting communication cables.
3. Double-check all the wiring before turning on the power supply.
4. Confirm that the system will respond safely before turning the power supply on or off.
5. Do not attempt to disassemble, repair, or modify the Units in any way.
6. Dispose of the Units, according to local ordinances as they apply.

Correct Use

1. Do not install the Unit in any of the following locations.
   - Locations subject to rapid changes in temperature.
   - Locations subject to temperatures or humidities outside the range specified in the specifications.
   - Locations subject to condensation as the result of high humidity.
   - Locations object to splashing chemicals or solvents.
   - Locations subject to corrosive or flammable gasses.
   - Locations subject to strong shock or vibration.
   - Locations outdoors subject to direct wind and rain.
   - Locations subject to strong ultra-violet light.
2. Take appropriate and sufficient countermeasures when installing systems in the following locations.
   - Locations subject to static electricity or other forms of noise.
   - Locations subject to strong electromagnetic or magnetic fields.
   - Locations close to power supply lines.
   - Locations subject to possible exposure to radioactivity.
3. Do not use benzene, paint thinner or other volatile solvents, and do not use chemically treated cloths.

1. Parts and Functions

The GWY-MPI and GWY-HMI are protocol converters that allow OMRON HMI terminals to be connected to other brands of PLC. The GWY-MPI is specially designed for usage with Siemens S7-300 and S7-400 PLC's. This unit converts the OMRON 3964R protocol into Siemens MPI protocol.

The GWY-HMI allows you to connect OMRON HMI to other brands of PLC (Allen Bradley, Siemens, Schneider, etc.)

The following diagram shows the outline of the GWY-MPI and GWY-HMI and explains the location and functions of the different parts.

2. How to use the GWY-MPI

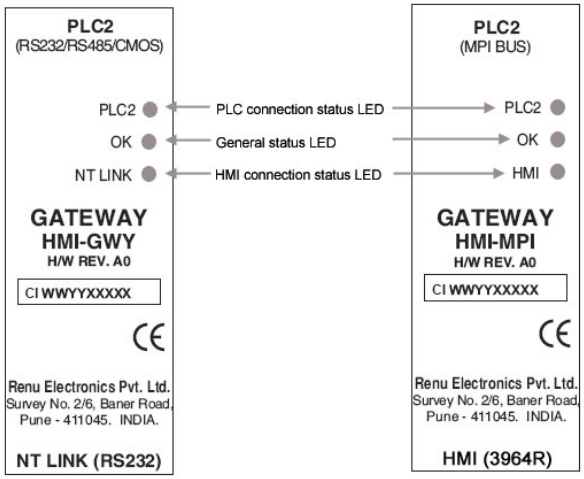
The GWY-MPI protocol converter is based on the Profibus chip. When connected, the unit will be powered by the OMRON NS terminal. The unit will convert the 3964R protocol into MPI protocol and vice versa. The unit is developed in such a way that it is a plug and play unit. There is no need for any programming of the protocol converter.
NT-Link baudrate will be auto-detected, MPI baudrate is set to 187500 Baud. The GWY-MPI can read maximum 128 words and write maximum 110 words.

3. How to use the GWY-HMI

The GWY-MPI protocol converter is based on the Profibus chip. When connected, the unit will be powered by the OMRON terminal. The GWY-HMI needs to be programmed using the GWY-SETUP SW. With this SW you can create a project (mapping) which allows you to link addresses and coils of NON-OMRON products to OMRON HMI terminals.

■ Top of the unit.

The following image shows the label of the GWY-MPI and GWY-HMI and explains the location and functions of the different parts.

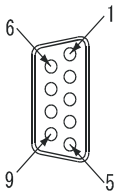


4. Connector and Pin Layout

■ NTlink Connector

- *GWY-MPI and GWY-HMI*
  (cable with DB9, Male)

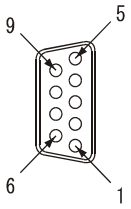
Pin Number	Name	
2	RXD	Transmit Data
3	TXD	Receive Data
4	RTS	Internally shorted
5	CTS	
9	GND	Ground



■ PLC Port connector

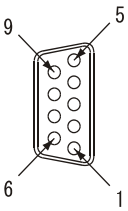
- *GWY-MPI (DB9, Female)*

Pin Number	Name	
1,2,4,6, 7 and 9		DO NOT USE
3	B	
5	GND	Circuit Ground
8	A	



- *GWY-HMI (DB9, Female)*

Pin Number	Name	
1	TXA	RS422/RS485
2	TXD	RS232
3	RXD	RS232
4	RXA	RS422/RS485
5	RXB	RS422/RS485
6	5V DC	Do NOT use
7	TXD	CMOS
8	TXB	RS422/RS485
9	GND	Ground



5. Installation on a Panel

The GWY-MPI and GWY-HMI can be connected in to a panel by means of:

- mounting the unit on a DIN-rail
- fixation of the unit using screws

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