



## **PG-100-105-AC Modbus RTU to LonWorks Protocol Converter**

PG-100-105-AC is highly powerful, superior, completely configurable and productive Building & Industrial Automation gateway for integrators to effortlessly interface devices to networks in commercial buildings and industrial plants.

PG-100-105-AC Gateway model supports Modbus RTU and LonWorks protocols. It is a Bi-directional Converter that can be configured as a Client and/or a Server on either protocol interface.

When configured as a LonWorks client, the PG-100-105-AC can read data from your LonWorks devices and publish it as Modbus RTU data. Also, it can write commands sent from the Modbus RTU side to the LonWorks devices.

When configured as a Modbus RTU client, the PG-100-105-AC can read data from your Modbus RTU devices and publish it as LonWorks data. Also, it can write commands sent from the LonWorks side to the Modbus RTU devices.

The PG-100-105-AC can be configured to behave as a server on both LonWorks and Modbus RTU interfaces. This mode is useful when data exchange is required between a LonWorks client (for eg. SCADA) and a BACnet IP client (for eg. a Building Management System).

PG-100-105-AC can be configured to behave as a client on both LonWorks and Modbus RTU interfaces.

PG-100-105-AC gateways have benefitted system integrators worldwide with its powerful line of gateways. Additionally, PG-100-105-AC gateway runs the same protocol conversion software on a productive and cost efficient platform backed by the experience, engineering expertise and technically proven support that integrators have come to expect from PG-100-105-AC.

### **Features**

- Ability to interface upto 1000 points
- DIN rail mount optional
- DIP switches to select baud rate or node ID on the fly
- Multi-configuration capability
- BACnet COV support for fast data communication while reducing the traffic over a BACnet network

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## Specifications

Environment	Operating Temperature: -40 to 75° C (-40 to 167°F)	
	Relative Humidity:5-90% RH non-condensing	
Power Requirements	9-30 VDC or 12-24 VAC	
	Current Draw @ 12V about 250Ma	
Physical Dimensions(HxWxD)	4.5x2.9x1.6 in. (11.5x7.4x4.1 cm)	
	0.4 lbs (0.2 Kg)	
Other	Configuration/Diagnostic utilities	
	Capacity: 1000 points	
	Table,Wall or DIN rail mount	
Communication Interfaces	RS-485	1
	RS-232	-
	Ethernet 10Base-T, 100BASE-T <sup>2</sup>	1
	Mbus	-
	KNX	-
	LonWorks	1
Approvals	TUV Approved to UL 916 and CSA C22.2 standards	
	BTL and LonMark certified	
	LonMark Certified	
	RoHS Compliant	
	GOST-R Certified	
	CE and FCC	

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## Modbus RTU Description

PG-100-105-AC Mode		Comments
Client		Nodes:1 Only 1 client node allowed on Multidrop systems
Server		Nodes:255 Actual electrical loading may reduce number of usable server nodes
<b>Formal Driver Type</b>		Serial
		Client or Server
<b>Connection Information</b>		Connection Type: RS-232 or RS-485(Two wire, half-duplex)
		Baud Rate: 110-115200, standard baud rates only
		Data Bits: 7,8
		Parity: Even, odd, None
		Multidrop Compatibility: Yes
Function Code Supported		
Function Codes		Description
01		Read Discrete Output Status (0xxxx)
02		Read Discrete Input Status (1xxxx)
03		Read Output Registers (4xxxx)
04		Read Input Registers (3xxxx)
05		Force Single Coil (0xxxx)
06		Preset Single Register (4xxxx)
15		Force Multiple Coils (0xxxx)
16		Preset Multiple Registers (4xxxx)

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## LonWorks Protocol Driver Description

PG-100-105-AC Mode		Comments
Client	Server	Nodes: 1 The PG-100-105-AC can only represent one LonWorks Device on the LonWorks Network. A LonWorks device is unique in terms of its Neuron Chip Identification Number.
Formal Driver Type	FieldBus	
	Client or Server	
Connection Information:		
Connection Type:	FTT-10 Free Topology Network Transceiver	
Baud Rates:	78125 bps (bits per second)	
Hardware Interface:	Built in LonWorks FTT-10 interface	
Data Types Supported		
PG-100-105-AC Data Type	Description	
Integers (Long, Short, signed, unsigned)	SNTVs and UNTVs can be presented, stored and moved into any data type	
Float		
Byte		
Bit		
Read Operations Supported		
PG-100-105-AC as a Client		PG-100-105-AC as a Server
Polled Network Variables:		Polled Network Variables:
-Send Network Variable Fetch		-Respond to Network Variable Fetch
-Send Network Variable Poll		-Respond to Network Variable Poll
Write (Control) Operations Supported		
PG-100-105-AC as a Client		PG-100-105-AC as a Server
Network Variables Updates:		Network Variables Updates:
-Send Network Variable Updates		-Accept Network Variable Updates
Unsupported Functions and Data Types		
Function	Reason	
Programming messages	PG-100-105-AC is a data transfer device, and as such, programming messages are not required	
Direct Memory Read/Writes under user control	The driver uses the Echelon MIP which handles direct memory read and writes	
LonMark File Transfer Protocol	The Driver does not support reading and writing remote Configuration Properties implemented as files. The Driver, therefore does not support the LonMark File Transfer Protocol	

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that is commonly used to access these remote files.

