



PG-131-100-BX Gamewell FCI to Modbus RTU Protocol Converter

PG-131-100-BX 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-131-100-BX Gateway model supports Gamewell FCI and Modbus RTU protocols. It is a Bi-directional Converter that can be configured as a Client on Gamewell FCI side and a Server/Client on Modbus RTU protocol interface.

When configured as a Gamewell FCI client, the PG-131-100-BX can read data from your Gamewell FCI fire panel and publish it as Modbus RTU data. Also, it can write commands sent from the Modbus RTU side to the Gamewell FCI fire panel.

When configured as a Modbus RTU client, the PG-131-100-BX can read data from your Modbus RTU devices and publish it as Gamewell FCI type data. Also, it can write commands sent from the Gamewell FCI side to the Modbus RTU devices.

The PG-131-100-BX can be configured to behave as a server on Modbus RTU interfaces. This mode is useful when data exchange is required between a Gamewell FCI client (for eg. SCADA) and a Modbus RTU client (for eg. a Building Management System).

The PG-131-100-BX can be configured to behave as a client on both Gamewell FCI and Modbus RTU interfaces.

PG-131-100-BX gateways have benefitted system integrators worldwide with its powerful line of gateways. Additionally, PG-131-100-BX 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-131-100-BX.

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



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-485 or RS-232	1
	Ethernet 10Base-T, 100BASE-T ²	1
	Mbus	-
	KNX	-
	LonWorks	-
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	



PG-131-100-BX Gamewell FCI Protocol Driver Description

Formal Driver Type
Serial
Passive Client

Connection Information	
Connection type:	RS-232 or RS-485 (with converter)
Baud Rates:	Gamewell Panel: 2400 Driver: 110;300;600;1200;2400;4800;9600;19200;28800;38400;57600;115200
Data Bits:	Gamewell Panel: 8 Driver: 7,8
Stop Bits:	Gamewell Panel: 1 Driver: 1,2
Parity:	Gamewell Panel: None Driver: Odd, Even, None
Multidrop Capability	No

Data Type Supported

Data Type	Type of Information Stored	Notes
Any	Stores Status Information	Status:?????. Stores non-zero value for any not –normal status.
Alarms	Stores Status Information	Status:ALARM sets array non-zero. NORMAL sets array to zero.
Faults	Stores Status Information	Status:FAULT sets array non-zero. NORMAL sets array to zero.
Events	Stores Status Information	Status:EVENT sets array non-zero. NORMAL sets array to zero.
Bus	Stores Status Information	Status:BUS sets array non-zero. NORMAL sets array to zero
Comm	Stores Status Information	Status:COMM sets array non-zero. NORMAL sets array to zero.
Control	Stores Status Information	Status:CONTROL sets array non-zero. NORMAL sets array to zero.
Ack	Stores Status Information	Status:ACK sets array non-zero. NORMAL sets array to zero.
Signal Silence	Stores Status Information	Status:SIG SIL sets array non-zero. NORMAL sets array to zero.
Troubles	Stores Status Information	Status:FAULT sets array non-zero. NORMAL sets array to zero. Status:EVENT and Action contains 'Supv. Event in ' sets array non-zero. Or Status:SUPV and any action.
Supervisories	Stores Status Information	NORMAL sets array to zero.
Action_Numbers	Stores Action information	Value based on contents of 'Action' Field



Action_Bits	Stores Action information	Sets bit whose offset is based on contents of 'Action' Field
Dump	Dump's ignored messages for user review.	

Supports:

Gamewell FCI E3 Series
Gamewell FCI 7100 Series
Gamewell-FCI 7200
Gamewell Serial Driver

Communications Functions

Supported Functions at a glance:

Listen. Driver listens passively for status messages, parses them looking for Node, Status, Circuit/Device and action information and stores data based on this information.

Write. Driver can send an Ack, Silence and Reset command. (To be provided in a later release.)

Supervision Query / Response

The driver clears its data arrays when the following messages is received.

Status:NORMAL 08/31/95 16:23

System Idle

Driver Limitations and Unsupported Features

The driver stores a value representing the type of status message received. A table of status types vs. Values is provided in the driver manual. Each message is inspected for circuit/device information. If none is present the message is assumed to report a status event for the panel. If the one or both are present then the circuit /device number is used to determine the storage location.

The driver can store a value to represent the status of a point (device / Circuit / panel) and/or a value to represent the 'action' that caused the most recent message to be sent.

For messages reporting a status event for a circuit / device the driver uses only the device number to determine the location to store the indicating value.

The driver does not maintain an event / alarm history.

The value zero will be used to represent normal

The driver is programmed with a list of status types and action types that it recognizes. In the event that unrecognized information is found, the driver will store special value to indicate this. The driver provides a method which allows the user to extend the list of recognized status types and actions.



Modbus RTU Protocol Driver Description

PG-131-100-BX 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
Formal Driver Type	Serial
	Client or Server
Connection Information	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)

Dimensions:

