



PG-106-105-AC JCI Metasys N2 to LonWorks Protocol Converter

PG-106-105-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-106-105-AC Gateway model supports JCI Metasys N2 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-106-105-AC can read data from your LonWorks devices and publish it as JCI Metasys N2 data. Also, it can write commands sent from the JCI Metasys N2 side to the LonWorks devices.

When configured as a JCI Metasys N2 client, the PG-106-105-AC can read data from your JCI Metasys N2 devices and publish it as LonWorks data. Also, it can write commands sent from the LonWorks side to the JCI Metasys N2 devices.

The PG-106-105-AC can be configured to behave as a server on both LonWorks and JCI Metasys N2 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-106-105-AC can be configured to behave as a client on both LonWorks and JCI Metasys N2 interfaces.

PG-106-105-AC gateways have benefitted system integrators worldwide with its powerful line of gateways. Additionally, PG-106-105-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-106-105-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 ²	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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JCI Metasys N2 Protocol Driver Description

PG-106-105-AC Mode	Comments	
Client	Nodes: 1 Only 1 client node allowed on Multidrop systems. Can communicate with: - N2Open - VMA 1400 series (AI, BI, AO, BO and custom types) -DX9100/XT9100	
Server	Nodes: 255	
Formal Driver Type	Serial	
	Client	
	Server	
Connection Information		
Connection type:	RS-485 (Two-wire, Half Duplex)	
Baud Rates:	9600 (N2 Standard)	
Data Bits:	8	
Stop Bits:	1	
Parity:	None	
Multidrop Capability:	Yes	
N2Open Functions:		
Data Type Supported		
PG-106-105-AC Data Type	Description	
Analog_Input	Analog Input (AI)	
Digital_Input	Binary Input (BI)	
Analog_Output	Analog Output (AO)	
Digital_Output	Binary Output (BO)	
Float_Reg	Internal Float value (ADF)	
Integer	Internal Integer value (ADI)	
Byte	Internal Byte value (BD)	
Read Operations Supported		
PG-106-105-AC As a Client		PG-106-105-AC As a Server
Read Current Value (all data types) direct read, Change-of –State (COS) poll		Read Current Value (all data types) direct read, Change-of –State (COS) poll
Read Attribute (all data types): direct read, specifying a legal attribute number		Read Attribute (all data types): direct read, specifying a legal attribute number
Identify Self Command		Identify Self Command
Read All Attributes (Optional): These commands are used to read all attributes of specified (Analog Input, Binary Input, Analog Output, Binary Output) object without specifying attribute number.		Read All Attributes (Optional): These commands are used to read all attributes of specified (Analog Input, Binary Input, Analog Output, Binary Output) object without specifying attribute number.

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Write (Control) Operations Supported	
PG-106-105-AC As a Client 2	PG-106-105-AC As a Server 2
Override Current Value (All data types) implemented as Write on PG-106-105-AC	Override Current Value (All data types) implemented as Write on PG-106-105-AC
Override Release (all data types)	Override Release (all data types)
Write Attribute (all data types) direct write, specifying a legal attribute number	Write Attribute (all data types) direct write, specifying a legal attribute number
Write characterize Attributes (Optional). These commands are used to set all attributes that characterize the specified (Analog Input, Binary Input, Analog Output or Binary Output) object without specifying an attribute number.	Write characterize Attributes (Optional). These commands are used to set all attributes that characterize the specified (Analog Input, Binary Input, Analog Output or Binary Output) object without specifying an attribute number.
Write Internal Parameter Command (Optional). This command is used to change the value attribute of internal parameter objects without specifying an attribute number.	Write Internal Parameter Command (Optional). This command is used to change the value attribute of internal parameter objects without specifying an attribute number.
Unsupported Functions and Data Types	
Function	Reason
Read Memory	Not Required
Diagnostics	
Warm Start	
Message	Not Required
Status Update	
Message	Not Required
Programming messages (download, upload)	
Time Synch Not supported	Time Synch PG-106-105-AC clocks are updated on receipt of this command.
VMA Functions:	
Data Types Supported	
PG-106-105-AC Data Type	Description
Analog_Input	Analog Input (AI)
Digital_Input	Binary Input (BI)
Analog_Output	Analog Output (AO)
Digital_Output	Binary Output (BO)
Float_Reg	Internal Float value (ADF)
Integer	Internal Integer value (ADI)
Byte	Internal Byte value (BD)
Read Operations Supported	
PG-106-105-AC As a Client	PG-106-105-AC As a Server
Read Current value (all data types)	Not Applicable

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Direct Read, Change-of-State (COS) poll		
Write (Control) Operations Supported		
PG-106-105-AC As a Client		PG-106-105-AC As a Server
Write/Override Current value (all data types) implemented as Write on PG-106-105-AC		Not Applicable
Override Release (AI and BI only) uses writes for outputs and internal values		
Unsupported Functions and Data Types		
Function		Reason
Programming messages(upload,download)		Not required – PG-106-105-AC is a data transfer device
DX9100 Functions:		
Data Types Supported		
PG-106-105-AC Data Type	Description	
	Supported sections of Address Map:	
	General control module	
	Programmable modules 1-12	
	Analog input modules 1-8	
	Analog output modules 1-2	
	Digital output modules 3-8	
	Extension modules 1-8	
	Time schedules 1-8	
	Optimal start/stop modules 1-2	
	Analog output modules 9-10	
	Auxiliary analog output modules 11-13	
Read Operations Supported		
PG-106-105-AC As a Client		PG-106-105-AC As a Server
Read of all points supported		Not Applicable
Write (Control) Operations Supported		
PG-106-105-AC As a Client		PG-106-105-AC As a Server
Write of all points supported		Not Applicable
DX9100 may not allow writes to specific values		
Unsupported Functions and Data Types		
Function		Reason
Programming messages		Not required – PG-106-105-AC is a data transfer device



LonWorks Protocol Driver Description

PG-106-105-AC Mode		Comments
Client		Nodes: 1 The PG-106-105-AC can only represent one LonWorks Device on the LonWorks Network. A LonWorks device is unique in terms of its Neuron Chip Identification Number.
Server		
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-106-105-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-106-105-AC as a Client	PG-106-105-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-106-105-AC as a Client	PG-106-105-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-106-105-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.

