PG- 135-100-AB Omron FINS to Modbus RTU Protocol Converter

PG-135-100-AB 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-135-100-AB Gateway model supports Omron FINS and Modbus RTU protocols. It is a Bi-directional Converter that can be configured as a Client on Omron FINS side and a Server/Client on Modbus RTU protocol interface.

When configured as a Omron FINS client, the PG-135-100-AB can read data from your Omron FINS fire panel and publish it as Modbus RTU data. Also, it can write commands sent from the Modbus RTU side to the Omron FINS fire panel.

When configured as a Modbus RTU client, the PG-135-100-AB can read data from your Modbus RTU devices and publish it as Omron FINS type data. Also, it can write commands sent from the Omron FINS side to the Modbus RTU devices.

The PG-135-100-AB can be configured to behave as a server on Modbus RTU interfaces. This mode is useful when data exchange is required between a Omron FINS client (for eg. SCADA) and a Modbus RTU client (for eg. a Building Management System).

The PG-135-100-AB can be configured to behave as a client on both Omron FINS and Modbus RTU interfaces.

PG-135-100-AB gateways have benefitted system integrators worldwide with its powerful line of gateways. Additionally, PG-135-100-AB 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-135-100-AB.

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	

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Omron FINS Protocol Driver Description

Connection Facts		
Mode	**Nodes**	**Comments**
Client	126	Omron Limit the set of permitted nodes to 126. They are numbered 1 to 126 corresponding to the last byte of the remote node IP address.
Server	20	The device can emulate a maximum of 20 Omron FINS servers.

Formal Driver Type	Ethernet
	Client or Server

Connection Information	
Connection Type:	Ethernet
Ethernet Speeds Supported:	10Base-T, 100Base-T[1]

PLC Types Supported		
PLC Type	**Vendor**	**Protocol**
CS1/CJ1 Series	Omron	FINS

Devices Tested	
Device	**Tested**
CJ1 Omron PLC	Factory

Connection Notes
Target device may be from CS or CJ series with Ethernet port 10Base-T or 100Base-T capable as appropriate.

Supported FINS Command Set

PLC Type	Memory Type	Command name	Description	Device Data Type	Format
CS1/CJ1 Series	I/O Memory	MEMORY AREA READ	Read the contents of consecutive I/O memory area words.	CIO WR HR AR DM EM	Word
		MEMORY AREA WRITE	Writes the contents of consecutive I/O memory area words.		
	Operating Mode Changes	RUN	Changes the CPU Unit's operating mode to RUN or MONITOR.	-	-
		STOP	Changes the CPU Unit's operating mode to PROGRAM		
	Time Data Access	CLOCK READ	Reads the present year, month, date, minute, second, and day of the week.	-	-
		CLOCK WRITE	Changes the present year, month, date, minute, second, or day of the week.		
	Status Reading	CPU UNIT STATUS READ	Reads CPU status, operating mode, other error messages and any text message.	-	-
		CYCLE TIME READ	Reads the CPU average, maximum and minimum cycle time.	-	-

PLC Status to Execute commands

PLC Type	Memory Type	Command name	Run Mode	Monitor Mode	Program Mode	Access right [2]	UM Read Protection[3]	DIP UM Protection***[4]
CS1/CJ1 Series	I/O Memory	MEMORY AREA READ	OK	OK	OK	OK	OK	OK
		MEMORY AREA WRITE	OK	OK	OK	OK	OK	OK
	Operating Mode Changes	RUN	OK	OK	OK	Disabled	OK	OK
		STOP	OK	OK	OK	Disabled	OK	OK
	Time Data Access	CLOCK READ	OK	OK	OK	OK	OK	OK
		CLOCK WRITE	OK	OK	OK	Disabled	OK	OK
	Status Reading	CPU UNIT STATUS READ	OK	OK	OK	OK	OK	OK
		CYCLE TIME READ	OK	OK	Disabled	OK	OK	OK

Unsupported FINS Commands

Memory Type	Commands	Description
Parameter Area	PARAMETER AREA READ	Read, Write and Clear of Parameters like PLC Setup Area,CPU Bus Unit Setup Area etc
	PARAMETER AREA WRITE	
	PARAMETER AREA FILL (CLEAR)	
Program Area	PROGRAM AREA READ	Read, Write and Clear memory for particular Program in PLC.
	PROGRAM AREA WRITE	
	PROGRAM AREA CLEAR	
Machine Configuration Area	CPU UNIT DATA READ	Reads CPU information (Model, Bus unit configuration etc)
	CONNECTION DATA READ	
Message Display Area	MESSAGE READ/CLEAR	Reads and Clears messages
Access Rights Area	ACCESS RIGHT ACQUIRE	Acquiring and releasing Access right.
	ACCESS RIGHT FORCED ACQUIRE	
	ACCESS RIGHT RELEASE	
Error Log area	ERROR CLEAR	Reads and Clear error messages or error log.
	ERROR LOG READ	
	ERROR LOG POINTER CLEAR	
File Memory Area	FILE NAME READ	File operations
	SINGLE FILE READ	
	SINGLE FILE WRITE	
	FILE MEMORY FORMAT	
	FILE DELETE	
	FILE COPY	
	FILE NAME CHANGE	
	MEMORY AREA–FILE TRANSFER	
	PARAMETER AREA–FILE TRANSFER	
	PROGRAM AREA–FILE TRANSFER	
	CREATE/DELETE DIRECTORY	
Debugging Area	FORCED SET/RESET	Forcefully sets-resets bits
	FORCED SET/RESET CANCEL	

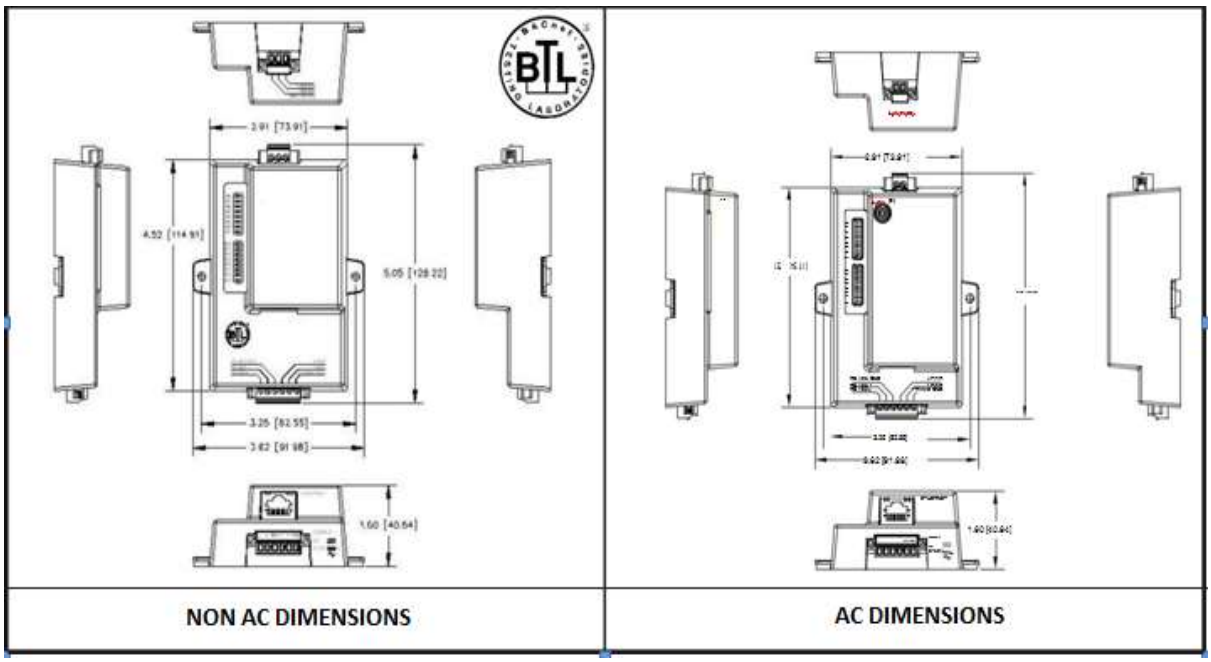
Unsupported Devices or Protocol Options

Device / Option	Details
CV Series	CV series PLC's or Ethernet Units (Cannot poll the Ethernet unit itself).
Socket Services.	This is an Omron protocol option that can be used to transfer data between Omron / other device . The Socket Services protocol is different from the FINS protocol and is not supported.

Modbus RTU Protocol Driver Description

PG-135-100-AB 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:



NON AC DIMENSIONS	AC DIMENSIONS