

### PG-103-102-AA BACnet IP to BACnet MS/TP Protocol Converter

PG-103-102-AA 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-103-102-AA Gateway model supports BACnet IP and BACnet MS/TP protocols. It is a Bidirectional Converter that can be configured as a Client and/or a Server on either protocol interface.

When configured as a BACnet MS/TP client, the PG-103-102-AA can read data from your BACnet MS/TP devices and publish it as BACnet IP data. Also, it can write commands sent from the BACnet IP side to the BACnet MS/TP devices.

When configured as a BACnet IP client, the PG-103-102-AA can read data from your BACnet IP devices and publish it as BACnet MS/TP data. Also, it can write commands sent from the BACnet MS/TP side to the BACnet IP devices.

The PG-103-102-AA can be configured to behave as a server on both BACnet MS/TP and BACnet IP interfaces. This mode is useful when data exchange is required between a BACnet MS/TP client (for eg. SCADA) and a BACnet IP client (for eg. a Building Management System).

The PG-103-102-AA can be configured to behave as a client on both BACnet MS/TP and BACnet IP interfaces.

PG-103-102-AA gateways have benefitted system integrators worldwide with its powerful line of gateways. Additionally, PG-103-102-AA 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-103-102-AA.

#### 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

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



# **BACnet IP Protocol Driver Description**

	Connection type:	Internet Protocol (IP)
	Ethernet Speeds Supported:	10Base-T, 100BASE-T <sup>2</sup>
Driver Name: BACnet/IP	BBMD SUPPORTED:	Yes(Not supported on client
Driver Name. BAchet/IP		connections)
	Foreign Device:	Not Supported for client
	Registration:	Connections
PG-:	101-103-XX AS A BACnet IP C	LIENT
Read Operations Supported	Properties Supported	Comments and Limitations
	Present Value	Store value in Data Array
		location after scaling has beer
		applied
	Out_Of_Service	When using a Complex Data
		Object, the OOS property is
		fully supported. Return FALSE
		when not OOS or when using
		standard Data Arrays
	Units	Returns Units as specified in
		the Map Descriptor
	Reliability	When using a Complex Data
		Objects, returns "Unreliable
		Other" when the Node is
		offline, or when the data is old
		Returns FALSE if the Node is
Read Property		online or when using Standard
		Data Arrays
	Priority_Array	Returns Priority_Array of Map
		Descriptor
	Unsupported	This property is supported
	Protocol_Object_Type_Supported	This property is supported
	Protocol_Services_Supported	This property is supported
	Database_Revision	This property is supported and
		will change if a new
		configuration is downloaded t
		the FS
	Max_Master	This property is supported for
		the BACnet /MSTP DLL option
	Max_Info_Frames	This property is supported for
		the BACnet/MSTP DLL option
	Relinguish_Default	Returns Relinguish _Default



	As for Dood Dronorth	Transations can be defined to
	As for Read Property	Transactions can be defined to
		read multiple objects and
Dood Droporty Multiple		properties in a single
Read Property Multiple		ReadPropertyMultiple
		operation.
	ALL	Read Property Multiple of the
		ALL property is NOT supported
Write Operations	Properties Supported	Comments and Limitations
Supported		
Write Property		Send value in Data Array
Write Property Multiple	Present Value	location after scaling has been
		applied
	-101-103-XX AS A BACnet IP SE	EKVER
DEVICE OBJECT	Decementing Course and a d	
Read Operations	Properties Supported	Comments and Limitations
Supported	Object_Identifier	Returns Object ID with
	Object_identifier	Node ID as Object Instance
	Object_Name	Returns Node Name
	Object_Type	Returns Device Object type
	System_Status	Returns Normal
	Vendor_Name	
	Vendor Identifier	Returns PG-10XX Technologies Returns 37
	— —	Returns PG-10XX model
	Model_Name	Returns Kernel Version
	Firmware_revision	
	Application_sw_version	Returns DCC version
	Protocol_Version	Returns version 1
	Protocol_Revision	Returns version 1
	Protocol_Services_Supported	This property is supported
Deed Dreeventry	Protocol_Object_Type_Supported	This property is supported
Read Property	Protocol_Object_List	Returns a list of objects
		defined in the PG-10XX
	Max_APDU_Length_Accepted	For PG-10XX,the MAX APDU
		length for BACnet MSTP is 480
		bytes and for BACnet
		IP/BACnet Eth 1497 bytes
	Segmentation_Supported	Returns Segmantation NOT
		Supported
	APDU_Timeout	Returns the value as defined
		by the Node's "Timeout"
		paramater
	APDU_Retries	Returns the value as defined
		by the Node's "Retries"
		parameter
	Device_Address_Bindings	Returns an empty list



	May Master	This property is successful (
	Max_Master	This property is supported for
	May info From	the BACnet/MSTP DLL option
	Max_info_Frames	This property is supported for
	Description	the BACnet/MSTP DLL option
	Description	This property is supported
	Database_Revision	This property is supported and will change if a new
		configuration is downloaded to the PG-10XX
Read Property Multiple	Same properties as Read Property	Read Property Multiple is fully
		supported. Multiple objects
		with multiple properties can
		be specified
Write Operations Supported	Properties Supported	Comments and Limitation
	Max_Master	This Property is supported for the BACnet /MSTP DLL option
Write Property	Max_info_Frames	This Property is supported for
		the BACnet /MSTP DLL option
	Max_Master	This Property is supported for
	_	the BACnet /MSTP DLL option
Write Property Multiple	Max_info_Frames	This Property is supported for
		the BACnet /MSTP DLL option
Analog Input Object		
Read Operations	Properties Supported	Comments and Limitations
Supported		
	Object_Identifier	No Limitations
		Returns Map Descriptor Name
	Object_Name	needing map Beschptor name
	Object_Name Object_Type	Returns Analog Input Object
		· ·
	Object_Type	Returns Analog Input Object Type
	Object_Type	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data
	Object_Type Present_Value	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and
	Object_Type Present_Value	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as
Read Property	Object_Type Present_Value	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of
Read Property	Object_Type Present_Value	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification.
Read Property	Object_Type Present_Value	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data
Read Property	Object_Type Present_Value	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification.
Read Property	Object_Type Present_Value Status_Flags	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits.
Read Property	Object_Type Present_Value Status_Flags Event_State	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits. No Limitations
Read Property	Object_Type Present_Value Status_Flags	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits. No Limitations When using a Complex Data
Read Property	Object_Type Present_Value Status_Flags Event_State	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits. No Limitations
Read Property	Object_Type Present_Value Status_Flags Event_State	Returns Analog Input Object Type Returns value in Data_Array after scaling has been applied When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits. No Limitations When using a Complex Data Objects, returns Unreliable



		online or when using Standard
		Data Arrays
	Out_Of_Service	Fully supported when using a
		Complex data Object. Returns
		FALSE when not OOS or when
	Description	using standard Data Arrays
	Description Units	This property is supported Returns Units as specified in
	Onits	the Map Descriptor
Read Property Multiple	Same properties as Read Property	Read Property Multiple is fully
		supported. Multiple objects
		with Multiple properties can
		be specified
Write Operations	Droportion Supported	Comments and Limitations
Supported	Properties Supported	
Write Property	Present_Value	Writing to the Present Value is
Write Property Multiple		allowed if the Object is OOS
Data Charing Onerations	Droportion Curported	Comments and Limitations
Data Sharing Operations Supported	Properties Supported	Comments and Limitations
SubscribeCOV	Present_value	Subscription storage is non- volatile
COVNotification	Present_value	Confirmed and Unconfirmed
		1
Alarm and Event	Properties Supported	<b>Comments and Limitations</b>
<b>Operations Supported</b>		
EventNotification	Present_Value,Status	Confirmed and Unconfirmed
AcknowledgeAlarm		No limitations
Analas Output Object An	las Value Object	
Analog Output Object, Ana Read Operations	Properties Supported	Comments and Limitations
Supported	Figherites Supported	
	Object Identifier	No Limitations
	Object_Name	Returns "Map Descriptor
		Name"
	Object_Type	Returns Analog Output Object
		type
	Present_Value	Returns value in Data Array
Read Property		after scaling has been applied
	Status_Flags	When using Complex Data
		Objects returns the FAULT and OUT_OF_SERVICE fields as
		indicated in section 12.2.7 of
		the BACnet specification.
		When using standard Data



		Arrays returns FALSE for all bits
	Event_State	No Limitations
	Reliability	When using a Complex Data
	(tendomey	Objects, returns "Unreliable
		Other" when the Node is
		offline, or when the data is old
		Returns FALSE if the Node is
		online or when using Standard
		Data Arrays
	Out_Of_Service	Fully supported when using a
	Out_OI_Service	Complex Data Object. Returns
		FALSE when not OOS or when
		using standard Data Arrays
	Units	Returns Units as specified in
		the Map Descriptor
	Priority_Array	Returns Priority_Array of Map
		Descriptor
	Description	This property is supported
	Relinguish_Default	Returns Religuish _Default
Read Property Multiple	Same properties as Read Property	Read Property Multiple is fully
		supported. Multiple objects
		with multiple properties can
		be specified
Write Operations Supported	Properties Supported	Comments and Limitations
	Properties Supported	
Write Property	-	When using Complex Data Objects and OOS is TRUE, ther
Write Property Multiple		the write will not cause a
	Dura sent Malus	write-through operation to the
	Present_Value	Server side. If the OOS is FALS
		or when using standard Data
		Arrays then writes will always
		cause a write-through
		operation to the Server side
Data Sharing Operations	Proportion Supported	Comments and Limitations
Data Sharing Operations	Properties Supported	
Supported		
SubscribeCOV	Present_Value	Subscription storage is non-
<u></u>		volatile
	Present_Value	Confirmed and Unconfirmed
COVNOTIFICATION		
	Properties Supported	Comments and Limitations
COVNotification Alarm and Event Operations Supported	Properties Supported	Comments and Limitations
Alarm and Event Operations Supported		
Alarm and Event	Properties Supported Present_Value, Status	Comments and Limitations Confirmed and Unconfirmed No Limitations



Read Operations	Properties Supported	Comments and Limitations
Supported		
	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor Name"
	Object_Type	Returns Analog Input Object type
	Present_Value	Returns the binary value in the data array
	Status_Flags	When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits
	Event_State	No Limitations
Read Property	Reliability	When using a Complex Data Objects, returns "Unreliable Other" when the Node is offline, or when the data is old Returns FALSE if the Node is online or when using Standard Data Arrays
	Out_Of_Service	Fully supported when using Complex Data Object. Returns FALSE when not OOS or when using standard Data Arrays
	Polarity	Always returns "Normal"
	Active_Text	Returns Active Text as specified on the Map
	Description	Descriptor
	Description Inactive_Text	This property is supported Returns Inactive Text as specified on the Map Descriptor
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully supported. Multiple objects with multiple properties can be specified
Write Operations	Properties Supported	Comments and Limitations
Supported		
Supported Write Property	Present_Value	Writing to the Present Value is



Data Sharing Operations	Properties Supported	Comments and Limitations
Supported		
SubscribeCOV	Present_Value	Subscription storage is non- volatile
COVNotification	Present_Value	Confirmed and Unconfirmed
Alarm and Event	Properties Supported	Comments and Limitations
Operations Supported	Properties Supported	
Event Notification	Present_Value, Status	Confirmed and Unconfirmed
AcknowledgeAlarm		No Limitations
/ cknowledge/ lum		
Binary Output Object, Bina	ary Value Object	
Read Operations Supported	Properties Supported	Comments and Limitations
	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor Name"
	Object_Type	Returns Analog Input Object type
	Present_Value	Returns the binary value in the data array
	Status_Flags	When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits
	Event_State	No Limitations
Read Property	Reliability	When using a Complex Data Objects, returns "Unreliable Other" when the Node is offline, or when the data is old. Returns FALSE if the Node is online or when using Standard Data Arrays
	Out_Of_Service	Fully supported when using Complex Data Object. Returns FALSE when not OOS or when using standard Data Arrays
	Priority_Array	Returns Priority_Array of Map Descriptor
	Religuish_Default	Returns Current Relinguish_Default
	Description	This property is supported
	Active_Text	Returns Active Text as specified on the Map



		Descriptor
	Inactive_Text	Returns Inactive Text as
	_	specified on the Map
		Descriptor
		•
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully
		supported. Multiple objects
		with multiple properties can
		be specified
Write Operations	Properties Supported	Comments and Limitations
Supported		
Write Property		When using Complex Data
Write Property Multiple		Objects and OOS is TRUE, then
		the write will not cause a
		write-through operation to the
	Procent Value	downstream side. If the OOS is
	Present_Value	FALSE or when using standard
		Data Arrays when writes will
		always cause a write-through
		operation to the downstream
		side
Data Sharing Operations	Properties Supported	<b>Comments and Limitations</b>
Supported		
SubscribeCOV	Present_Value	Subscription storage is non-
		volatile
COVNotification	Present_Value	Confirmed and Unconfirmed
Alarm and Event	Properties Supported	Comments and Limitations
Operations Supported Event Notification	Present_Value, Status	Confirmed and Unconfirmed
AcknowledgeAlarm	Fresent_value, Status	No Limitations
AcknowledgeAlaim		
Multiple State Input Object		
Read Operations	Properties Supported	<b>Comments and Limitations</b>
Supported		
	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor
		Name"
	Object_Type	Returns Analog Input Object
	, _ ,,	type
Read Property	Present_Value	Returns unsigned Integer value
		in the data array
	Status_Flags	When using Complex Data
		Objects returns the FAULT and OUT_OF_SERVICE fields as



		the BACnet specification. When using standard Data
		Arrays returns FALSE for all bits
	Event_State	No Limitations
	Reliability	When using a Complex Data
		Objects, returns "Unreliable
		Other" when the Node is
		offline, or when the data is old.
		Returns FALSE if the Node is
		online or when using Standard
	Description	Data Arrays
	Description	This property is supported
	Out_Of_Service	When using a Complex Data
		Object, the OOS property is
		fully supported. Returns FALSE when not OOS or when using
		standard Data Arrays
	Number Of State	When using a Complex Data
	Number_or_state	Object, returns the number of
		states defined. When using
		Standard Data Arrays returns
		, the value of 5
	State_Text	When using Complex Data
		Objects returns the State Text
		Strings defined. When using
		Standard Data Arrays return
		"State_X" where "X" is the
		value stored in Data_Array and could be 0 to 4
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully
		supported. Multiple objects
		with multiple properties can
		be specified
	Properties Supported	Comments and Limitations
Write Operations	rioperties supported	
Supported		
Supported Write Property		Writing to the Present Value is
Supported	Present_Value	Writing to the Present Value is allowed if the Object is OOS
Supported Write Property Write Property Multiple	Present_Value	allowed if the Object is OOS
Supported Write Property Write Property Multiple Data Sharing Operations		-
Supported Write Property Write Property Multiple	Present_Value	allowed if the Object is OOS Comments and Limitations Subscription storage is non-
Supported Write Property Write Property Multiple Data Sharing Operations Supported SubscribeCOV	Present_Value Properties Supported Present_Value	allowed if the Object is OOS Comments and Limitations Subscription storage is non- volatile
Supported Write Property Write Property Multiple Data Sharing Operations Supported	Present_Value Properties Supported	allowed if the Object is OOS Comments and Limitations Subscription storage is non-



Operations Supported		
Event Notification	Present_Value, Status	Confirmed and Unconfirmed
AcknowledgeAlarm		No Limitations
	t, Multi-State Value Object	
Read Operations	Properties Supported	Comments and Limitations
Supported		
	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor Name"
	Object_Type	Returns Analog Input Object type
	Present_Value	Returns unsigned Integer value in the data array
	Status_Flags	When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bit
	Event_State	No Limitations
Read Property	Reliability	When using a Complex Data Objects, returns "Unreliable Other" when the Node is offline, or when the data is old Returns FALSE if the Node is online or when using Standard Data Arrays
	Out_Of_Service	Fully supported when using a Complex Data Object. Returns FALSE when not OOS or when using standard Data Arrays
	Number_Of_State	When using a Complex Data Object, returns the number of states defined. When using Standard Data Arrays returns the value of 5
	State_Text	When using Complex Data Objects returns the State Text Strings defined. When using Standard Data Arrays return "State_X" where "X" is the value stored in Data_Array and could be 0 to 4
	Description	This property is supported
	Priority_Array	Returns Priority_Array of Map Descriptor
	Religuish_Default	Returns Relinguish_Default



Read Property Multiple	Same properties as Read Property	Read property Multiple is fully supported. Multiple objects with multiple properties can be specified
Write Operations Supported	Properties Supported	Comments and Limitations
Write Property Write Property Multiple	Present_Value	When using Complex Data Objects and OOS is FALSE or when using standard data arrays, writes will trigger a write through operation to client side
Data Sharing Operations Supported	Properties Supported	Comments and Limitations
SubscribeCOV	Present_Value	Subscription storage is non- volatile
COVNotification	Present_Value	Confirmed and Unconfirmed
Alarm and Event Operations Supported	Properties Supported	Comments and Limitations
Event Notification	Present_Value, Status	Confirmed and Unconfirmed
AcknowledgeAlarm		No Limitations
Notification Class Object		
Read Operations Supported	Properties Supported	Comments and Limitations
••	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor Name"
	Object_Type	Returns Notification Class Object type
Read Property	Description	No Limitations
	Notification_Class	No Limitations
	Priority	No Limitations
	Ack_Required	No Limitations
	Description	This Property is supported
	Recipient List	No Limitations
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully supported. Multiple objects with multiple properties can be specified
Write Operations Supported	Properties Supported	Comments and Limitations



Write Property	Desinient list	RecipientList storage is non-	
Write Property Multiple	Recipient_List	volatile	
AddList	RecipientList	Used to subscribe to Alarm	
		and Event Notifications	
	-		
Unsupported Functions A	••		
BACnet Object Type not S	upported		
Averaging Object			
Calendar Object			
Command Object			
Event Enrollment Object			
File Object			
Group Object			
Life Safety Point Object			
Life Safety Zone Object			
Loop Object			
Notification Class Object uns	upported on Client side only		
Program Object			
Schedule Object			
BACnet Services not Supp			
	supported on Client side only		
File Access Services			
Virtual Terminal Services			
	ervices are not supported for BACn	et	
MSTP on the ProtoCessor			
	Arcnet, COV services are disabled b		
setting the Node_Option pro	perty to COV_Enable in the Nodes	section configuration file.	

# **BACnet MS/TP Protocol Driver Description**

	Connection type:	RS-485 (Two wire, half-duplex)
	Baud Rates:	9600,19200,38400 and 76800 <sup>3</sup>
Driver Name:	Data Bits:	7,8
BACnet/MSTP	Stop Bits:	1,2
	Parity:	Odd, Even, None
	Multidrop Capability:	Yes
PG-103-102-AA AS A BACnet MS/TP CLIENT		
Read Operations Properties Supported Comments and Limitati		Comments and Limitations
Supported		
	Present Value	Store value in Data Array
		location after scaling has been
Read Property		applied
	Out Of Service	When using a Complex Data
		When using a complex bata



		fully supported Deturn FALCE
		fully supported. Return FALSE when not OOS or when using
		standard Data Arrays
	Units	Returns Units as specified in
	OTITS	the Map Descriptor
	Reliability	When using a Complex Data
	Kenability	Objects, returns "Unreliable
		Other" when the Node is
		offline, or when the data is old.
		Returns FALSE if the Node is
		online or when using Standard
		Data Arrays
	Priority_Array	Returns Priority_Array of Map
	,,	Descriptor
	Unsupported	This property is supported
	Protocol_Object_Type_Supported	This property is supported
	Protocol_Services_Supported	This property is supported
	Database_Revision	This property is supported and
		will change if a new
		configuration is downloaded to
		the FS
	Max_Master	This property is supported for
		the BACnet /MSTP DLL option
	Max_Info_Frames	This property is supported for
		the BACnet/MSTP DLL option
	Relinguish_Default	Returns Relinguish _Default
	As for Read Property	Transactions can be defined to
	As for field in opency	read multiple objects and
		properties in a single
Read Property Multiple		ReadPropertyMultiple
		operation.
	ALL	Read Property Multiple of the
		ALL property is NOT supported
		· · · · · · · · · · · · · · · · · · ·
Write Operations	Properties Supported	<b>Comments and Limitations</b>
Supported		
Write Property		Send value in Data Array
Write Property Multiple	Present Value	location after scaling has been
		applied
DC 10	3-102-AA AS A BACnet MS/TP	
DEVICE OBJECT		JLNVLN
	Proportios Supported	Comments and Limitations
Read Operations	Properties Supported	
Supported	Object_Identifier	Returns Object _ID with
Read Property		Node_ID as Object Instance
		NOUE_ID as Object instance



Write Operations	Properties Supported	Comments and Limitation
		be specified
Read Property Multiple	Same properties as Read Property	Read Property Multiple is fully supported. Multiple objects with multiple properties can
	Database_Revision	This property is supported and will change if a new configuration is downloaded to the PG-10XX
	Description	This property is supported
	Max_info_Frames	This property is supported for the BACnet/MSTP DLL option
		the BACnet/MSTP DLL option
	Max_Master	This property is supported for
	Device_Address_Bindings	Returns an empty list
		by the Node's "Retries" parameter
	APDU_Retries	Returns the value as defined
		paramater
		by the Node's "Timeout"
	APDU_Timeout	Returns the value as defined
	Segmentation_Supported	Returns Segmantation NOT Supported
	Cognontation Supported	IP/BACnet Eth 1497 bytes
		bytes and for BACnet
		length for BACnet MSTP is 480
	Max_APDU_Length_Accepted	For PG-10XX, the MAX APDU
		defined in the PG-10XX
	Protocol_Object_List	Returns a list of objects
	Protocol_Object_Type_Supported	This property is supported
	Protocol_Services_Supported	This property is supported
	Protocol_Revision	Returns version 1
	Protocol_Version	Returns version 1
	Application_sw_version	Returns DCC version
	Firmware_revision	Returns Kernel Version
	Model_Name	Returns PG-10XX model
	Vendor_Identifier	Returns 37
	Vendor_Name	Returns PG-10XX Technologies
	System_Status	Returns Normal
	Object_Type	Returns Device Object type

Write Operations Supported	Properties Supported	Comments and Limitation
Weite Dressette	Max_Master	This Property is supported for the BACnet /MSTP DLL option
Write Property	Max_info_Frames	This Property is supported for the BACnet /MSTP DLL option
Write Property Multiple	Max_Master	This Property is supported for



		the BACnet /MSTP DLL option
	Max_info_Frames	This Property is supported for
		the BACnet /MSTP DLL option
Analog Input Object	Due v entire Course entre d	
Read Operations	Properties Supported	Comments and Limitations
Supported		<b>.</b>
	Object_Identifier	No Limitations
	Object_Name	Returns Map Descriptor Name
	Object_Type	Returns Analog Input Object Type
	Present_Value	Returns value in Data_Array after scaling has been applied
	Status_Flags	When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits.
Read Property	Event_State	No Limitations
	Reliability	When using a Complex Data Objects, returns Unreliable Other when the Node is offline, or when the data is old Returns FALSE if the node is online or when using Standard Data Arrays
	Out_Of_Service	Fully supported when using a Complex data Object. Returns FALSE when not OOS or when using standard Data Arrays
	Description	This property is supported
	Units	Returns Units as specified in the Map Descriptor
Read Property Multiple	Same properties as Read Property	Read Property Multiple is fully supported. Multiple objects with Multiple properties can be specified
Write Operations Supported	Properties Supported	Comments and Limitations
Write Property Write Property Multiple	Present_Value	Writing to the Present Value is allowed if the Object is OOS
Data Sharing Operations	Properties Supported	Comments and Limitations



Supported		
SubscribeCOV	Present_value	Subscription storage is non-
		volatile
COVNotification	Present_value	Confirmed and Unconfirmed
Alarm and Event	Properties Supported	Comments and Limitations
<b>Operations Supported</b>		
EventNotification	Present_Value,Status	Confirmed and Unconfirmed

Read Operations Supported	Properties Supported	Comments and Limitations
	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor Name"
	Object_Type	Returns Analog Output Object type
	Present_Value	Returns value in Data Array after scaling has been applied
	Status_Flags	When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits
	Event_State	No Limitations
Read Property	Reliability	When using a Complex Data Objects, returns "Unreliable Other" when the Node is offline, or when the data is old Returns FALSE if the Node is online or when using Standard Data Arrays
	Out_Of_Service	Fully supported when using a Complex Data Object. Returns FALSE when not OOS or when using standard Data Arrays
	Units	Returns Units as specified in the Map Descriptor
	Priority_Array	Returns Priority_Array of Map Descriptor
	Description	This property is supported
	Relinguish_Default	Returns Religuish _Default
Read Property Multiple	Same properties as Read Property	Read Property Multiple is fully supported. Multiple objects



		with multiple properties can be specified
Write Operations Supported	Properties Supported	Comments and Limitations
Write Property		When using Complex Data
Write Property Multiple	—	Objects and OOS is TRUE, then
		the write will not cause a
		write-through operation to the
	Present_Value	Server side. If the OOS is FALSE
		or when using standard Data
		Arrays then writes will always
		cause a write-through
		operation to the Server side
Data Sharing Operations	Properties Supported	Comments and Limitations
Supported		
SubscribeCOV	Present Value	Subscription storage is non-
	_	volatile
COVNotification	Present_Value	Confirmed and Unconfirmed
Alarm and Event	Properties Supported	Comments and Limitations
Operations Supported		
Event Notification	Present_Value, Status	Confirmed and Unconfirmed
AcknowledgeAlarm		No Limitations
Binary Input Object		
Read Operations	Properties Supported	Comments and Limitations
Supported		
	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor
		Name"
	Object_Type	Returns Analog Input Object
		type
	Present_Value	Returns the binary value in the
		data array
	Status_Flags	When using Complex Data
		Objects returns the FAULT and
Read Property		OUT_OF_SERVICE fields as
Read Property		indicated in section 12.2.7 of
Read Property		indicated in section 12.2.7 of the BACnet specification.
Read Property		indicated in section 12.2.7 of the BACnet specification. When using standard Data
Read Property	Event State	indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits
Read Property	Event_State Reliability	indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits No Limitations
Read Property	Event_State Reliability	indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits No Limitations When using a Complex Data
Read Property		indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits No Limitations
Read Property		indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits No Limitations When using a Complex Data Objects, returns "Unreliable



		online or when using Standard Data Arrays
	Out_Of_Service	Fully supported when using Complex Data Object. Returns FALSE when not OOS or when using standard Data Arrays
	Polarity	Always returns "Normal"
	Active_Text	Returns Active Text as specified on the Map Descriptor
	Description	This property is supported
	Inactive_Text	Returns Inactive Text as specified on the Map Descriptor
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully supported. Multiple objects with multiple properties can be specified
Write Operations Supported	Properties Supported	Comments and Limitations
Write Property Write Property Multiple	Present_Value	Writing to the Present Value is allowed if the Object is OOS
Data Sharing Operations Supported	Properties Supported	Comments and Limitations
SubscribeCOV	Present_Value	Subscription storage is non- volatile
COVNotification	Present_Value	Confirmed and Unconfirmed
Alarm and Event Operations Supported	Properties Supported	Comments and Limitations
Event Notification	Present Value, Status	Confirmed and Unconfirmed

Binary Output Object, Binary Value Object		
Read Operations	Properties Supported Comments and Limitation	
Supported		
	Object_Identifier	No Limitations
Read Property	Object_Name	Returns "Map Descriptor
		Name"
	Object_Type	<b>Returns Analog Input Object</b>
		type
	Present_Value	Returns the binary value in the



		data array
	Status Flags	When using Complex Data
		- ·
		Objects returns the FAULT and
		OUT_OF_SERVICE fields as
		indicated in section 12.2.7 of
		the BACnet specification.
		When using standard Data
		Arrays returns FALSE for all bits
	Event_State	No Limitations
	Reliability	When using a Complex Data
		Objects, returns "Unreliable
		Other" when the Node is
		offline, or when the data is old.
		Returns FALSE if the Node is
		online or when using Standard
		Data Arrays
	Out Of Service	Fully supported when using
		Complex Data Object. Returns
		FALSE when not OOS or when
		using standard Data Arrays
	Priority_Array	Returns Priority_Array of Map
		Descriptor
	Religuish_Default	Returns Current
		Relinguish_Default
	Description	This property is supported
	Active_Text	Returns Active Text as
		specified on the Map
		Descriptor
	Inactive_Text	Returns Inactive Text as
		specified on the Map
		Descriptor
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully
		supported. Multiple objects
		with multiple properties can
		be specified
Write Operations	Properties Supported	Comments and Limitations
Supported		
Write Property		When using Complex Data
Write Property Multiple		Objects and OOS is TRUE, then
		the write will not cause a
		write-through operation to the
	Present_Value	downstream side. If the OOS is
		FALSE or when using standard
		Data Arrays when writes will
		always cause a write-through
		operation to the downstream



		side
	•	
Data Sharing Operations	Properties Supported	Comments and Limitations
Supported		
SubscribeCOV	Present_Value	Subscription storage is non-
		volatile
COVNotification	Present_Value	Confirmed and Unconfirmed
Alarm and Event	Properties Supported	Comments and Limitations
Operations Supported		
Event Notification	Present_Value, Status	Confirmed and Unconfirmed
AcknowledgeAlarm		No Limitations
AcknowledgeAldIII		
Multiple State Input Object		
Read Operations	Properties Supported	Comments and Limitations
Supported		
-	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor
		Name"
	Object_Type	Returns Analog Input Object
		type
	Present_Value	Returns unsigned Integer value
		in the data array
	Status_Flags	When using Complex Data
		Objects returns the FAULT and
		OUT_OF_SERVICE fields as
Read Property		indicated in section 12.2.7 of
		the BACnet specification.
		When using standard Data
		Arrays returns FALSE for all bits
	Event_State	No Limitations
	Reliability	When using a Complex Data
		Objects, returns "Unreliable
		Other" when the Node is
		offline, or when the data is old
		Returns FALSE if the Node is
		online or when using Standard
	Description	Data Arrays This property is supported
	Out_Of_Service	When using a Complex Data
		Object, the OOS property is
		fully supported. Returns FALSE
		when not OOS or when using
		standard Data Arrays
	Number_Of_State	When using a Complex Data
		Object, returns the number of
		states defined. When using
		Standard Data Arrays returns



State_Text	the value of 5 When using Complex Data Objects returns the State Text
	<b>-</b> .
	Standard Data Arrays return "State_X" where "X" is the value stored in Data_Array and could be 0 to 4
Same properties as Read Property	Read property Multiple is fully supported. Multiple objects with multiple properties can be specified
Described and described	
Properties Supported	Comments and Limitations
Brosont Value	Writing to the Present Value is
Present_value	allowed if the Object is OOS
	1
Properties Supported	Comments and Limitations
Present_Value	Subscription storage is non- volatile
Present_Value	Confirmed and Unconfirmed
Properties Supported	Comments and Limitations
Present_Value, Status	Confirmed and Unconfirmed
	No Limitations
Properties Supported	Comments and Limitations
Object_Identifier	No Limitations
Object_Name	Returns "Map Descriptor Name"
Object_Type	Returns Analog Input Object type
Present_Value	Returns unsigned Integer value in the data array
Status_Flags	When using Complex Data Objects returns the FAULT and OUT_OF_SERVICE fields as indicated in section 12.2.7 of the BACnet specification. When using standard Data Arrays returns FALSE for all bits
	Properties Supported         Present_Value         Properties Supported         Present_Value         Present_Value         Present_Value         Present_Value         Present_Value         Properties Supported         Present_Value         Properties Supported         Properties Supported         Object_Identifier         Object_Identifier         Object_Type         Present_Value



Alarm and Event	Properties Supported	<b>Comments and Limitations</b>
COVNotification	Present_Value	Confirmed and Unconfirmed
SubscribeCOV	Present_Value	Subscription storage is non- volatile
Data Sharing Operations Supported	Properties Supported	Comments and Limitations
Write Property Write Property Multiple	Present_Value	When using Complex Data Objects and OOS is FALSE or when using standard data arrays, writes will trigger a write through operation to client side
Write Operations Supported	Properties Supported	Comments and Limitations
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully supported. Multiple objects with multiple properties can be specified
	Religuish_Default	Returns Relinguish_Default
	Priority_Array	Returns Priority_Array of Map Descriptor
	Description	Objects returns the State Text Strings defined. When using Standard Data Arrays return "State_X" where "X" is the value stored in Data_Array and could be 0 to 4 This property is supported
	Number_Of_State State_Text	When using a Complex Data Object, returns the number of states defined. When using Standard Data Arrays returns the value of 5 When using Complex Data
	Out_Of_Service	Fully supported when using a Complex Data Object. Returns FALSE when not OOS or when using standard Data Arrays
	Reliability	When using a Complex Data Objects, returns "Unreliable Other" when the Node is offline, or when the data is old. Returns FALSE if the Node is online or when using Standard Data Arrays



Operations Supported		
Event Notification	Present_Value, Status	Confirmed and Unconfirmed
AcknowledgeAlarm		No Limitations
Notification Class Object		
Read Operations	Properties Supported	<b>Comments and Limitations</b>
Supported		
	Object_Identifier	No Limitations
	Object_Name	Returns "Map Descriptor
		Name"
	Object_Type	Returns Notification Class
		Object type
Read Property	Description	No Limitations
	Notification_Class	No Limitations
	Priority	No Limitations
	Ack_Required	No Limitations
	Description	This Property is supported
	Recipient List	No Limitations
Read Property Multiple	Same properties as Read Property	Read property Multiple is fully supported. Multiple objects with multiple properties can be specified
Write Operations	Properties Supported	Comments and Limitations
•	· · · · · · · · · · · · · · · · · · ·	
Supported		
Supported Write Property	Recipient_List	RecipientList storage is non- volatile
Supported	Recipient_List	RecipientList storage is non-
Supported Write Property Write Property Multiple		RecipientList storage is non- volatile
Supported Write Property Write Property Multiple	Recipient_List	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple	Recipient_List	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Command Object	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Command Object Event Enrollment Object	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Command Object Event Enrollment Object File Object	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Command Object Event Enrollment Object File Object Group Object	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Calendar Object Event Enrollment Object File Object Group Object Life Safety Point Object	Recipient_List RecipientList RecipientList	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Command Object Event Enrollment Object File Object Group Object Life Safety Point Object	Recipient_List RecipientList nd Data Types upported	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Calendar Object Command Object Event Enrollment Object File Object Group Object Life Safety Point Object Life Safety Zone Object Loop Object	Recipient_List RecipientList nd Data Types upported	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions A BACnet Object Type not S Averaging Object Calendar Object Calendar Object Command Object Event Enrollment Object File Object Group Object Life Safety Point Object Life Safety Zone Object Loop Object Notification Class Object uns	Recipient_List RecipientList nd Data Types upported	RecipientList storage is non- volatile Used to subscribe to Alarm
Supported Write Property Write Property Multiple AddList Unsupported Functions Ai BACnet Object Type not S Averaging Object Calendar Object Calendar Object Command Object Event Enrollment Object File Object Group Object Life Safety Point Object Life Safety Zone Object Loop Object Notification Class Object uns Program Object	Recipient_List RecipientList nd Data Types upported	RecipientList storage is non- volatile Used to subscribe to Alarm



Alarm and Event Services unsupported on Client side only

File Access Services

Virtual Terminal Services

COV and EventNotification services are not supported for BACnet

MSTP on the ProtoCessor

For BACnet MSTP, PTP and Arcnet, COV services are disabled by default and may be enabled by setting the Node\_Option property to COV\_Enable in the Nodes section configuration file.

