# PG-102-106-AA BACnet MS/TP to JCI Metasys N2 Protocol Converter

PG-102-106-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-102-106-AA Gateway model supports BACnet MS/TP and JCI Metasys N2 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 JCI Metasys N2 client, the PG-102-106-AA can read data from your JCI Metasys N2 devices and publish it as BACnet MS/TP data. Also, it can write commands sent from the BACnet MS/TP side to the JCI Metasys N2 devices.

When configured as a BACnet MS/TP client, the PG-102-106-AA can read data from your BACnet MS/TP devices and publish it as JCI Metasys N2 data. Also, it can write commands sent from the JCI Metasys N2 side to the BACnet MS/TP devices.

The PG-102-106-AA can be configured to behave as a server on both JCI Metasys N2 and BACnet MS/TP interfaces. This mode is useful when data exchange is required between a JCI Metasys N2 client (for eg. SCADA) and a BACnet IP client (for eg. a Building Management System).

The PG-102-106-AA can be configured to behave as a client on both JCI Metasys N2 and BACnet MS/TP interfaces.

PG-102-106-AA gateways have benefitted system integrators worldwide with its powerful line of gateways. Additionally, PG-102-106-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-102-106-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

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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 | 2 |
| | RS-232 | - |
| | 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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## BACnet MS/TP Protocol Driver Description

| | | |
|---|---|---|
| **Driver Name: BACnet/MSTP** | Connection type: | RS-485 (Two wire, half-duplex) |
| | Baud Rates: | 9600,19200,38400 and 76800[3] |
| | Data Bits: | 7,8 |
| | Stop Bits: | 1,2 |
| | Parity: | Odd, Even, None |
| | Multidrop Capability: | Yes |
| | | |
| **PG-102-106-AA AS A BACnet MS/TP CLIENT** | | |
| **Read Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Read Property | Present Value | Store value in Data Array location after scaling has been 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 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 |
| | | |
| Read Property Multiple | As for Read Property | Transactions can be defined to read multiple objects and properties in a single ReadPropertyMultiple operation. |
| | ALL | Read Property Multiple of the ALL property is NOT supported |
| | | |
| **Write Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Write Property<br>Write Property Multiple | Present Value | Send value in Data Array location after scaling has been applied |
| | | |
| **PG-102-106-AA AS A BACnet MS/TP SERVER** | | |
| **DEVICE OBJECT** | | |
| **Read Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Read Property | Object_Identifier | Returns Object _ID with Node_ID as Object Instance |
| | Object_Name | Returns Node Name |
| | Object_Type | Returns Device Object type |
| | System_Status | Returns Normal |
| | Vendor_Name | Returns PG-10XX Technologies |
| | Vendor_Identifier | Returns 37 |
| | Model_Name | Returns PG-10XX model |
| | Firmware_revision | Returns Kernel Version |
| | Application_sw_version | Returns DCC version |
| | Protocol_Version | Returns version 1 |
| | Protocol_Revision | Returns version 1 |
| | Protocol_Services_Supported | This property is supported |
| | Protocol_Object_Type_Supported | This property is supported |
| | 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 |
| | 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 |
| | 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** |
| Write Property | 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 |
| 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** | | |
| **Read Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Read Property | 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. |
| | 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 | Present_Value | Writing to the Present Value is allowed if the Object is OOS |
| Write Property Multiple | | |
| | | |
| **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** |
| EventNotification | Present_Value,Status | Confirmed and Unconfirmed |
| AcknowledgeAlarm | | No limitations |
| | | |
| **Analog Output Object, Analog Value Object** | | |
| **Read Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Read Property | 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 |
| | 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 | Present_Value | When using Complex Data Objects and OOS is TRUE, then the write will not cause a write-through operation to the 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 |
| Write Property Multiple | | |
| | | |
| **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 |
| **Binary Input Object** | | |
| **Read Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Read Property | 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 |
| | 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 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<br>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 |
| AcknowledgeAlarm | | No Limitations |
| | | |
| **Binary Output Object, Binary Value Object** | | |
| **Read Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Read Property | 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 |
| | 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 Supported** | **Properties Supported** | **Comments and Limitations** |
| Write Property<br>Write Property Multiple | Present_Value | When using Complex Data Objects and OOS is TRUE, then the write will not cause a write-through operation to the 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 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 |
| | | |
| Multiple State Input Object | | |

| Read Operations Supported | Properties Supported | Comments and Limitations |
|---|---|---|
| Read Property | 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 |
| | 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 |
| | 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 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 |

| | | |
|---|---|---|
| **Write Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Write Property<br>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 |
| AcknowledgeAlarm | | No Limitations |
| **Multi-State Output Object, Multi-State Value Object** | | |
| **Read Operations Supported** | **Properties Supported** | **Comments and Limitations** |
| Read Property | 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 |
| | 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 |
| | 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<br>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** |
| Read Property | Object_Identifier | No Limitations |
| | Object_Name | Returns "Map Descriptor Name" |

| | | |
|---|---|---|
| | Object_Type | Returns Notification Class Object type |
| | 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 | Recipient_List | RecipientList storage is non-volatile |
| Write Property Multiple | | |
| AddList | RecipientList | Used to subscribe to Alarm and Event Notifications |
| | | |
| **Unsupported Functions And Data Types** | | |
| **BACnet Object Type not Supported** | | |
| 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 unsupported on Client side only | | |
| Program Object | | |
| Schedule Object | | |
| | | |
| **BACnet Services not Supported** | | |
| 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. | | |

# JCI Metasys N2 Protocol Driver Description

| PG-102-106-AA Mode | Comments |
|---|---|
| Client | Nodes: 1 Only 1 client node allowed on Multidrop systems. Can communicate with:<br>- N2Open<br>- VMA 1400 series (AI, BI, AO, BO and custom types)<br>-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-102-106-AA 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-102-106-AA As a Client** | **PG-102-106-AA 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. |
| | |

| Write (Control) Operations Supported | |
|---|---|
| **PG-102-106-AA As a Client 2** | **PG-102-106-AA As a Server 2** |
| Override Current Value (All data types) implemented as Write on PG-102-106-AA | Override Current Value (All data types) implemented as Write on PG-102-106-AA |
| 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 | Not Required |
| Message | |
| Status Update | Not Required |
| Message | |
| Programming messages (download, upload) | Not Required PG-102-106-AA is a data transfer device) |
| Time Synch<br>Not supported | Time Synch<br>PG-102-106-AA clocks are updated on receipt of this command. |

**VMA Functions:**

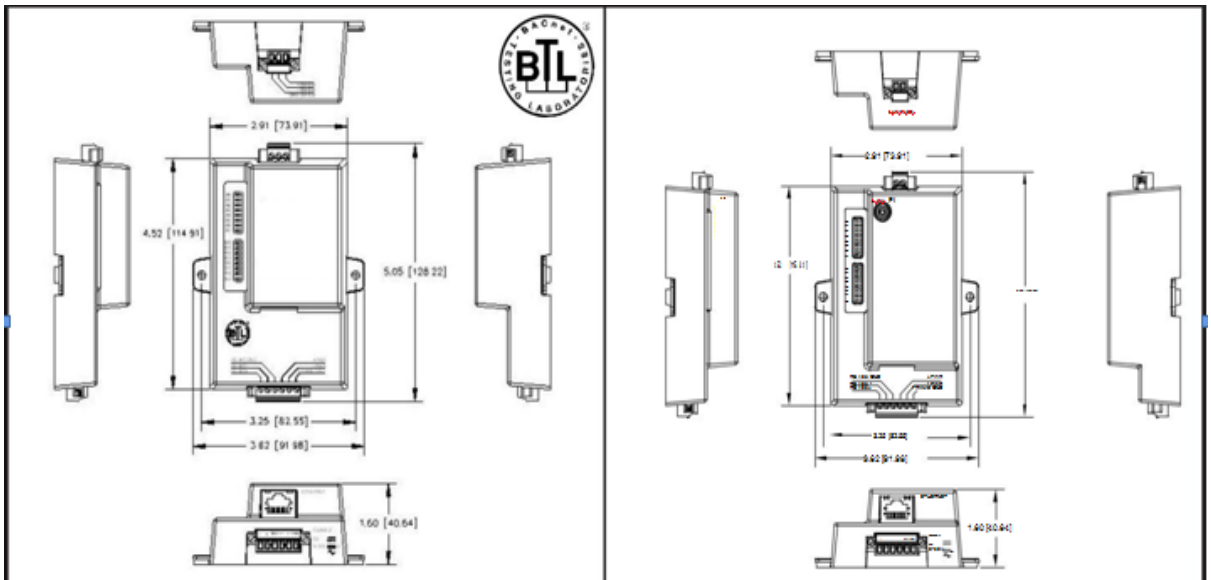
**Data Types Supported**

| **PG-102-106-AA 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-102-106-AA As a Client** | **PG-102-106-AA As a Server** |
|---|---|
| Read Current value (all data types) | Not Applicable |

| | |
|---|---|
| Direct Read, Change-of-State (COS) poll | |
| | |
| **Write (Control) Operations Supported** | |
| **PG-102-106-AA As a Client** | **PG-102-106-AA As a Server** |
| Write/Override Current value (all data types) implemented as Write on PG-102-106-AA | 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-102-106-AA is a data transfer device |
| **DX9100 Functions:** | |
| **Data Types Supported** | |
| **PG-102-106-AA 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-102-106-AA As a Client** | **PG-102-106-AA As a Server** |
| Read of all points supported | Not Applicable |
| | |
| **Write (Control) Operations Supported** | |
| **PG-102-106-AA As a Client** | **PG-102-106-AA 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-102-106-AA is a data transfer device |




| NON AC DIMENSIONS | AC DIMENSIONS |
|---|---|

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