Dialog BACnet Gateway

Manual & Specification

1. INTRODUCTION

1.1. GENERAL DESCRIPTION

The Dialog BACnet Gateway allows access to the Dialog points via BACnet IP.

The WOS Series of sensors are designed to replace a low voltage wall switch giving a 180° coverage pattern. The low voltage edition of the sensor gives the capability of operating and controlling the WP-PP20-D power pack and other Diode Pulse equipment.

1.2. SPECIFICATIONS

1.2.1 Dimensions & Mounting:

1.2.2 Power:

Low Voltage: 24 VAC ±25% class 2 source.

Frequency: 60 Hz

14.0 mA with Auxiliary Relay

1.2.3 Inputs:

BACnet: BACnet IP

1.2.4 Operation Temp:

14° to 140°F (-10° to 60°C)

Low temp and high humidity option [-L] products: PCB conformal coated for resistance to damp environments and operation to -40°C/F

1.2.5 Storage temp:

-14° to 140°F (-25° to 60°C)

* Application and Performance Specification Information Subject to Change without Notification.

2. Setup

2.1. Instance ID & Device Name

The Instance ID and Device Name are an editable via a writable property within a standard BACnet Client software.

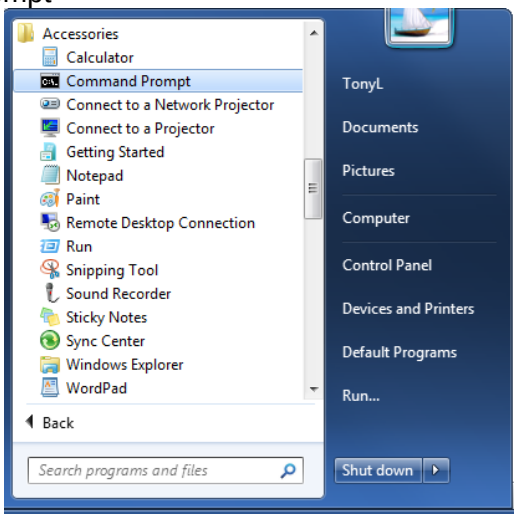
Default Values:

IP Address:	10.10.10.10
Subnet Mask:	255.255.255.0
Default Gateway:	10.10.10.255
Port:	0xBAC0
BBMD Address:	0.0.0.0
Object Name:	WNG-3131 BACnet IP Interface
Device ID:	104
Application Software version:	1.0.0
Firmware revision:	1.0.0

2.2. IP / MAC / BBMD address.

The following instruction is to get or change the IP/MAC/BBMD IP address.

1. Select <Command Prompt>



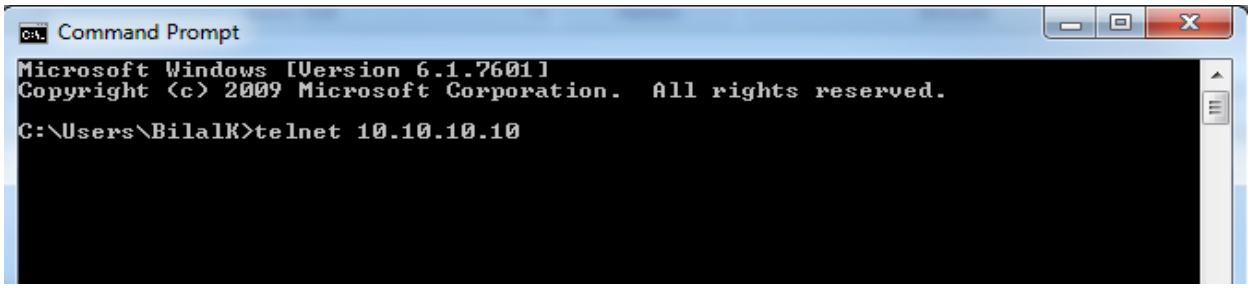
2. Start “Telnet”

   *If you are using Windows 7 you may need to enable the “Telnet” feature in the Control Panel “Turn Windows feature on or off”

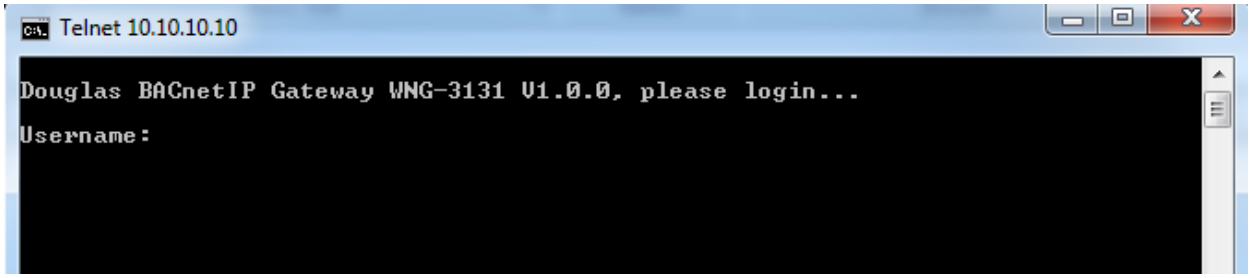
   a. Ensure that the PC’s IP address is 10.10.10.xxx and the Subnet address is 255.255.255.0

   b. 10.10.10.10 is the factory default address; enter the different IP address if it has been already changed.

   c. At the command prompt enter “telnet 10.10.10.10”

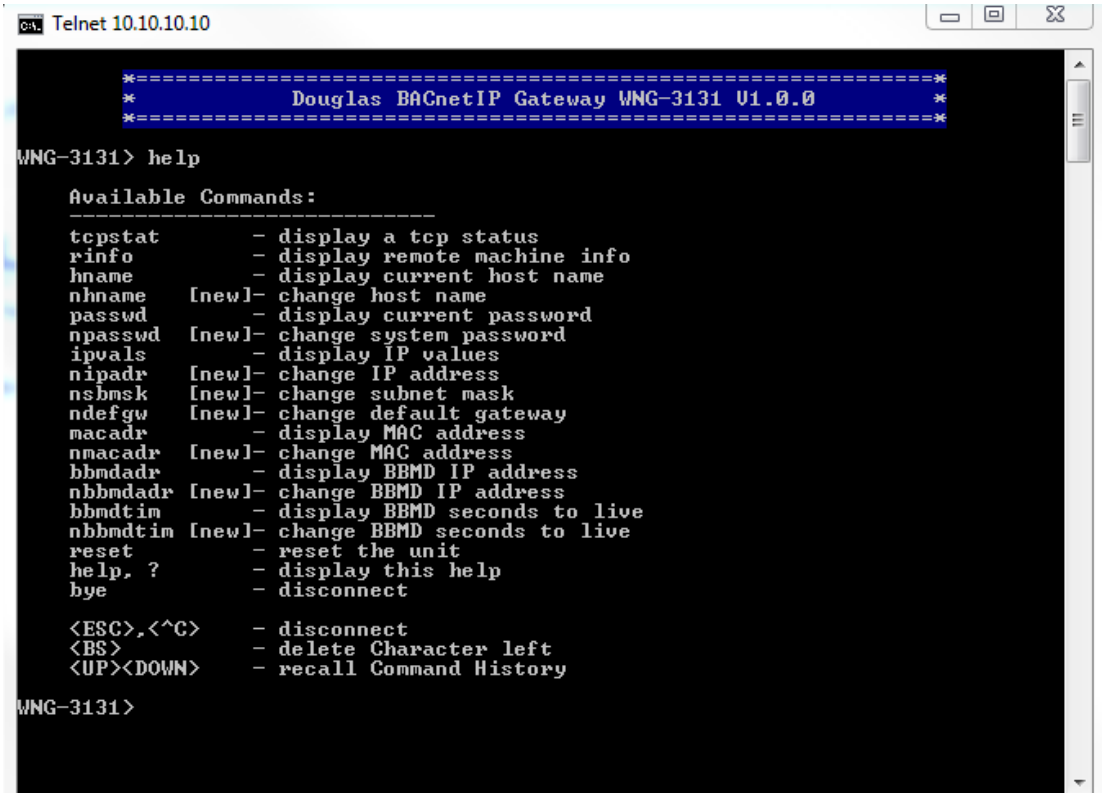


3. If the screen prompts for user and password;
   User: **admin**
   Password: **npdmwng3131 or dlc**



4. The screen below will displayed

5. Type “**help**” display the instruction below



6. BBMD is enabled by **default** and should be disabled if not used.
   a. To Disable the BBMD use Address 0.0.0.0, if the BBMD is not disabled it can cause devices to go OFFLINE intermittently if used on multiple devices within the same subnet.
7. The MAC addresses on the WNG-3131’s are all the same by default. If you have multiple Gateways on the same network you MUST change the MAC address so that they are unique.
   a. The command to change the MAC address while connected via Telnet is **nmacadr**
   b. Enter the new MAC address
   c. Check the default address by typing **macadr** then change the sixth hexadecimal digit to be unique.

3. BACnet Exposed Objects Description

3.1. Objects List

256 x Analog Inputs (percent) Analog Input 0 to 255 (Read – Write when Out Of Service)
NAME: Individual Dimming Status 01-1 to Individual Dimming Status 64-4
Possible values -> 0 to 100 %.

256 x Analog Values (percent) Analog Value 0 to 255 (Read and Write)
NAME: Individual Dimming Control 01-1 to Individual Dimming Control 64-4
Possible values -> 0 to 100 %.

64 x Analog Inputs (luxes) Analog Input 256 to 319 (Read – Write when Out Of Service)
NAME: Local Photo Sensor Status 1 to Local Photo Sensor Status 64
Possible values -> 0 to 65535.

64 x Analog Inputs (luxes) Analog Input 320 to 383 (Read – Write when Out Of Service)
NAME: Global Photo Sensor Status 1 to Global Photo Sensor Status 64
Possible values -> 0 to 65535.

128 x Multi-State Inputs (uint) Multi-State Input 0 to 127 (Read – Write when Out Of Service)
NAME: Group Status 1 to Group Status 128
Possible values -> 1 = OFF
2 = ON
3 = NA

128 x Multi-State Values (uint) Multi-State Value 0 to 127 (Read – Write)
NAME: Group Control 1 to Group Control 128
Possible values -> 1 = OFF
2 = ON
3 = NA

512 x Multi-State Inputs (uint) Multi-State Input 128 to 639 (Read – Write when Out Of Service)
NAME: Preset Local Status 1 to Preset Local Status 512
Possible values -> 1 = OFF
2 = ON
3 = NA

512 x Multi-State Values (uint) Multi-State Value 128 to 639 (Read – Write)
NAME: Preset Local Control 1 to Preset Local Control 512
Possible values -> 1 = OFF
2 = ON
3 = NA

512 x Multi-State Inputs (uint) Multi-State Input 640 to 1151 (Read – Write when Out Of Service)
NAME: Preset Global Status 1 to Preset Global Status 512
Possible values -> 1 = OFF
2 = ON
3 = NA

512 x Multi-State Values (uint) Multi-State Value 640 to 1151 (Read – Write)
NAME: Preset Global Control 1 to Preset Global Control 512
Possible values -> 1 = OFF
2 = ON
3 = NA
256 x Multi-State Inputs (uint) Multi-State Input 1152 to 1407 (Read – Write when Out Of Service)
NAME: Individual Status 01-1 to Individual Status 64-4
Possible values -> 1 = OFF
2 = ON
3 = NA

256 x Multi-State Values (uint) Multi-State Value 1152 to 1407 (Read – Write)
NAME: Individual Control 01-1 to Individual Control 64-4
Possible values -> 1 = OFF
2 = ON
3 = NA

256 x Multi-State Inputs (uint) Multi-State Input 1408 to 1663 (Read – Write when Out Of Service)
NAME: Occupancy Individual Status 1 to Occupancy Individual Status 256
Possible values -> 1 = Unoccupied
2 = Occupied
3 = NA

128 x Multi-State Inputs (uint) Multi-State Input 1664 to 1791 (Read – Write when Out Of Service)
NAME: Occupancy Group Status 1 to Occupancy Group Status 128
Possible values -> 1 = Unoccupied
2 = Occupied
3 = NA

512 x Multi-State Inputs (uint) Multi-State Input 1792 to 2303 (Read – Write when Out Of Service)
NAME: Occupancy Preset Local Status 1 to Occupancy Preset Local Status 512
Possible values -> 1 = Unoccupied
2 = Occupied
3 = NA

512 x Multi-State Inputs (uint) Multi-State Input 2304 to 2815 (Read – Write when Out Of Service)
NAME: Occupancy Preset Global Status 1 to Occupancy Preset Global Status 512
Possible values -> 1 = Unoccupied
2 = Occupied
3 = NA

4. BACnet Protocol Implementation Conformance Statement (PICS)

4.1. PICS Statement

BACnet Protocol Implementation Conformance Statement

Date: September 20th, 2012
Vendor Name: Douglas Lighting Controls
Product Name: BACnet IP Interface for Dialog Systems
Product Model Number: WNG-3131
Application Software Version: 1.0.0 **Firmware Revision:** 1.0.0 **BACnet Protocol Revision:** 10

Product Description:
This product allows controlling and supervising the Dialog Lighting from BACnet network.

BACnet Standardized Device Profile (Annex L):

☒ BACnet Application Specific Controller (B-ASC)

☒ BACnet Smart Sensor (B-SS)

☒ BACnet Smart Actuator (B-SA)

BACnet Interoperability Building Blocks Supported (Annex K):

☒ K.1.2 BIBB – Data Sharing – Read Property-B (DS-RP-B)

☒ K.1.4 BIBB – Data Sharing – Read Property Multiple-B (DS-RPM-B)

☒ K.1.8 BIBB – Data Sharing – Write Property-B (DS-WP-B)

☒ K.1.10 BIBB – Data Sharing – Write Property Multiple-B (DS-WPM-B)

☒ K.5.2 BIBB – Device Management – Dynamic Device Binding-B (DM-DDB-B)

☒ K.5.4 BIBB – Device Management – Dynamic Object Binding-B (DM-DOB-B)

☒ K.5.6 BIBB – Device Management – Dynamic Communication Control-B (DM-DCC-B)

☒ K.5.16 BIBB – Device Management – Reinitialize Device-B (DM-RD-B)

Segmentation Capability:
None

Standard Object Types Supported:

☒ Device Object

Dynamically Creatable:	No
Dynamically Deletable:	No
Supported Properties:	All Required
Optional Properties:	Location Description
Writable Properties:	Object_Identifier Object_Name

☒ Analog Input

Dynamically Creatable:	No
Dynamically Deletable:	No
Supported Properties:	All Required
Optional Properties:	Description Inactive_Text Active_Text
Writable Properties:	Out_Of_Service Present_Value if Out_Of_Service = True

☒ Analog Value

Dynamically Creatable:	No
Dynamically Deletable:	No
Supported Properties:	All Required
Optional Properties:	Description Inactive_Text Active_Text
Writable Properties:	Out_Of_Service Present_Value Relinquish Default

☒ Multi State Input

Dynamically Creatable:	No
Dynamically Deletable:	No
Supported Properties:	All Required
Optional Properties:	Description
Writable Properties:	Out_Of_Service Present_Value if Out_Of_Service = True

☒ Multi State Value

Dynamically Creatable:	No
Dynamically Deletable:	No
Supported Properties:	All Required
Optional Properties:	Description
Writable Properties:	Out_Of_Service Present_Value Relinquish Default

For each standard Object Type supported the following apply:
1) Does not support CreateObject
2) Does not support DeleteObject
3) Does support optional properties
4) Additional writeable properties exist
5) No proprietary properties exist
6) Range restrictions exist

Data Link Layer Options:

☒ BACnet/IP, 'DIX' Ethernet

Device Address Binding:
Not supported

Character Sets Supported:
Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

☒ ANSI X3.4	☐ IBM™/Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS X 0208