User Manual

Revision 1.000
English

BACnet Master / HTTP/REST Client - Converter

(Order Code: HD67G13-IP-B2, HD67G13-IP-G43-B2, HD67G13- IP-G43-E-B2, HD67G13-IP-G43-VPN-B2, HD67G13-IP-G43-E-VPN-B2, HD67G13-MSTP-B2, HD67G13-MSTP-G43-B2, HD67G13-MSTP-G43-E-B2, HD67G13-MSTP-G43-VPN-B2,HD67G13-MSTP-G43-E-VPN-B2)

For Website information:
www.adfweb.com?Product=HD67G13-IP-B2
www.adfweb.com?Product=HD67G13-IP-G43-B2
www.adfweb.com?Product=HD67G13-IP-G43-E-B2
www.adfweb.com?Product=HD67G13-IP-G43-VPN-B2
www.adfweb.com?Product=HD67G13-IP-G43-E-VPN-B2
www.adfweb.com?Product=HD67G13-MSTP-B2
www.adfweb.com?Product=HD67G13-MSTP-G43-B2
www.adfweb.com?Product=HD67G13-MSTP-G43-E-B2
www.adfweb.com?Product=HD67G13-MSTP-G43-VPN-B2
www.adfweb.com?Product=HD67G13-MSTP-G43-E-VPN-B2

For Price information:
www.adfweb.com?Price=HD67G13-B2

Benefits and Main Features:

- Power Supply 18…35V DC and 8…24 V AC
- Temperature range: -40°C/+85°C (-40°F/+185°F)

For others HTTP/REST products, see also the following links:

Converter HTTP/REST Client to

www.adfweb.com?Product=HD67G03	**(Serial)**
www.adfweb.com?Product=HD67G05	**(Modbus Master)**
www.adfweb.com?Product=HD67G07	**(Modbus Slave)**
www.adfweb.com?Product=HD67G09	**(Modbus TCP Master)**
www.adfweb.com?Product=HD67G11	**(Modbus TCP Slave)**
www.adfweb.com?Product=HD67G15	**(BACnet Slave)**
www.adfweb.com?Product=HD67G20	**(CAN)**
www.adfweb.com?Product=HD67G22	**(CANopen)**
www.adfweb.com?Product=HD67G24	**(DALI)**
www.adfweb.com?Product=HD67G26	**(DeviceNet Master)**
www.adfweb.com?Product=HD67G28	**(DeviceNet Slave)**
www.adfweb.com?Product=HD67G30	**(DMX)**
www.adfweb.com?Product=HD67G32	**(EtherNet/IP Master)**
www.adfweb.com?Product=HD67G34	**(EtherNet/IP Slave)**
www.adfweb.com?Product=HD67G36	**(J1939)**
www.adfweb.com?Product=HD67G38	**(KNX)**
www.adfweb.com?Product=HD67G40	**(NMEA0183)**
www.adfweb.com?Product=HD67G42	**(NMEA2000)**
www.adfweb.com?Product=HD67G44	**(PROFIBUS Master)**
www.adfweb.com?Product=HD67G46	**(PROFIBUS Slave)**
www.adfweb.com?Product=HD67G48	**(PROFINET Master)**
www.adfweb.com?Product=HD67G50	**(PROFINET Slave)**
www.adfweb.com?Product=HD67G52	**(SNMP Manager)**
www.adfweb.com?Product=HD67G54	**(SNMP Agent)**
www.adfweb.com?Product=HD67G56	**(OPC UA Client)**
www.adfweb.com?Product=HD67G58	**(OPB UA Server)**
www.adfweb.com?Product=HD67G60	**(Ethernet)**
www.adfweb.com?Product=HD67G62	**(IEC 61850 Client)**
www.adfweb.com?Product=HD67G64	**(IEC 61850 Server)**
www.adfweb.com?Product=HD67G66	**(MQTT)**
www.adfweb.com?Product=HD67G68	**(MQTT Broker)**

Do you have an your customer protocol?
www.adfweb.com?Product=HD67003

Do you need to choose a device? do you want help?
www.adfweb.com?Cmd=helpme

INDEX:

UPDATED DOCUMENTATION:

Dear customer, we thank you for your attention and we remind you that you need to check that the following document is:

- Updated
- Related to the product you own

To obtain the most recently updated document, note the "document code" that appears at the top right-hand corner of each page of this document.

With this "Document Code" go to web page www.adfweb.com/download/ and search for the corresponding code on the page. Click on the proper "Document Code" and download the updates.

REVISION LIST:

Revision	Date	Author	Chapter	Description
1.000	02/02/2026	Ln	All	First release version

WARNING:

ADFweb.com reserves the right to change information in this manual about our product without warning.
ADFweb.com is not responsible for any error this manual may contain.

TRADEMARKS:

All trademarks mentioned in this document belong to their respective owners.

SECURITY ALERT:

GENERAL INFORMATION

To ensure safe operation, the device must be operated according to the instructions in the manual. When using the device, legal and safety regulation are required for each individual application. The same applies also when using accessories.

INTENDED USE

Machines and systems must be designed so the faulty conditions do not lead to a dangerous situation for the operator (i.e. independent limit switches, mechanical interlocks, etc.).

QUALIFIED PERSONNEL

The device can be used only by qualified personnel, strictly in accordance with the specifications.
Qualified personnel are persons who are familiar with the installation, assembly, commissioning and operation of this equipment and who have appropriate qualifications for their job.

RESIDUAL RISKS

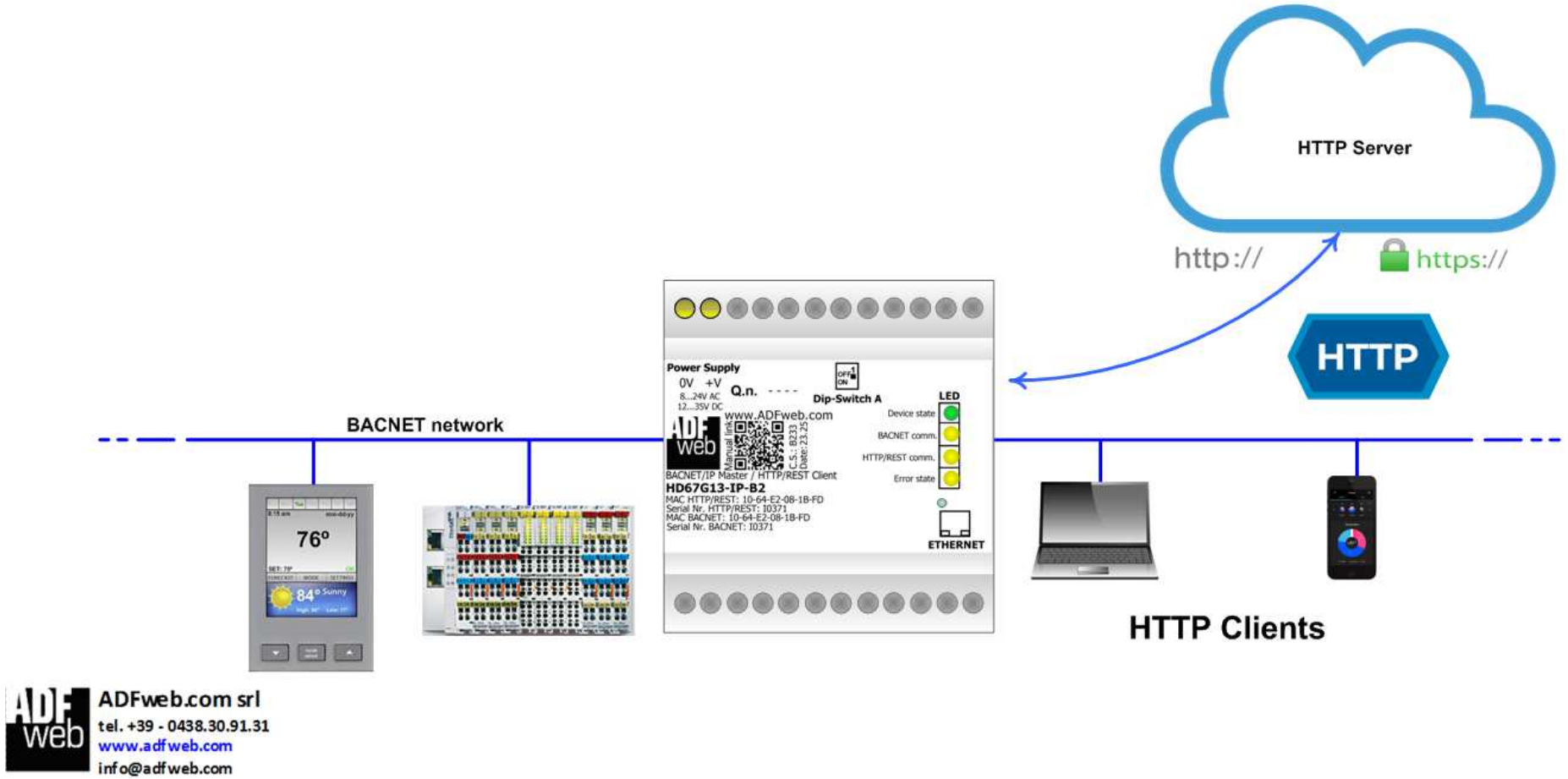
The device is state-of-the-art and is safe. The instruments can represent a potential hazard if they are inappropriately installed and operated by untrained personnel. These instructions refer to residual risks with the following symbol:

This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

CE CONFORMITY

The declaration is made by our company. You can send an email to support@adfweb.com or give us a call if you need it.

EXAMPLE OF CONNECTION:



CONNECTION SCHEME:

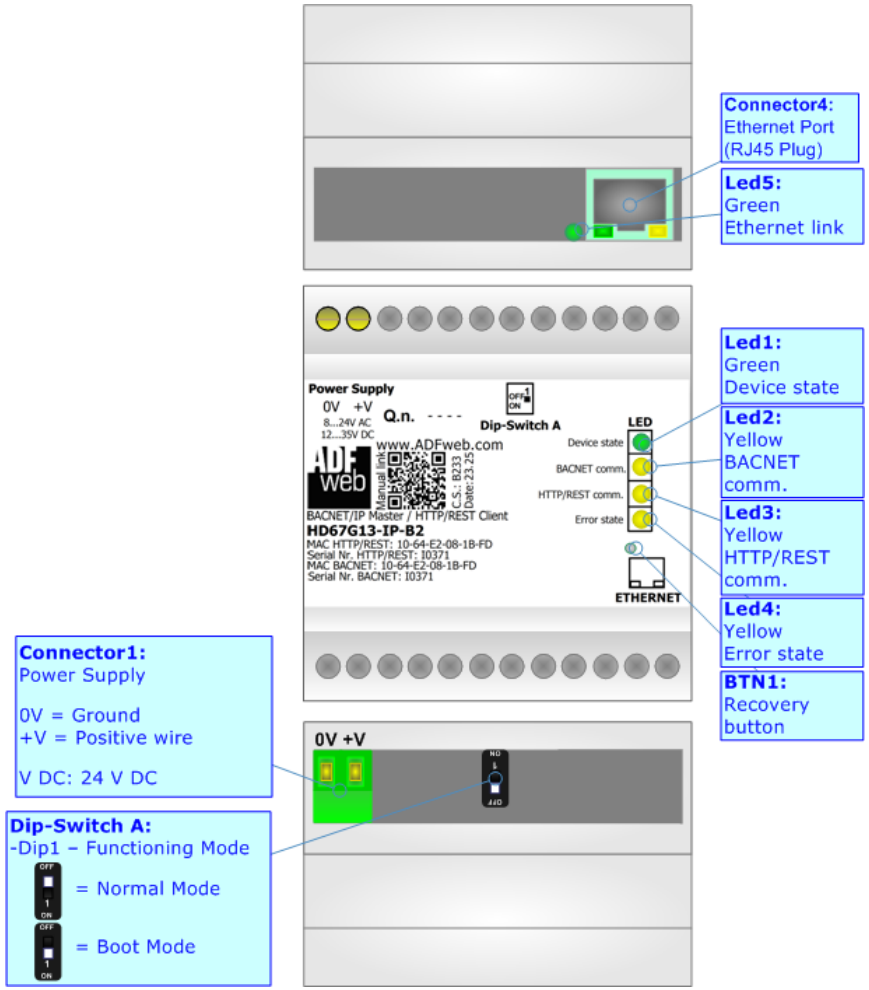


Figure 1a: Connection scheme for HD67G13-IP-B2

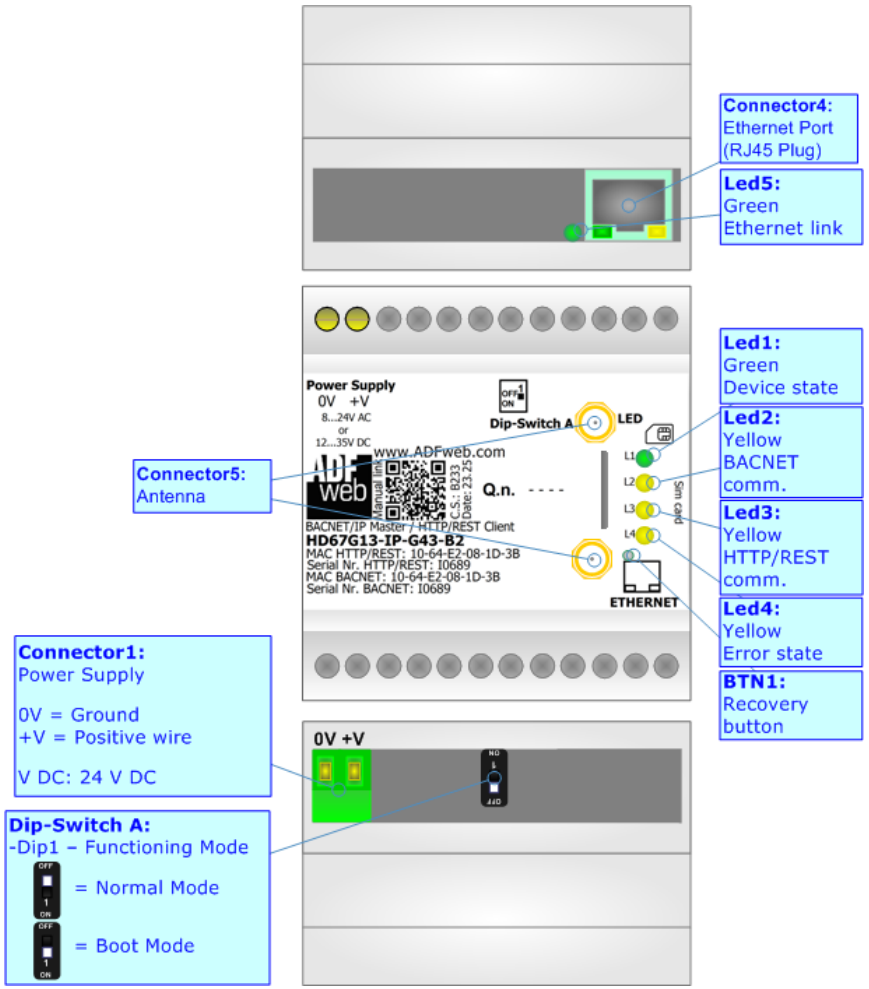


Figure 1b: Connection scheme for HD67G13-IP-G43-x-xxx-B2

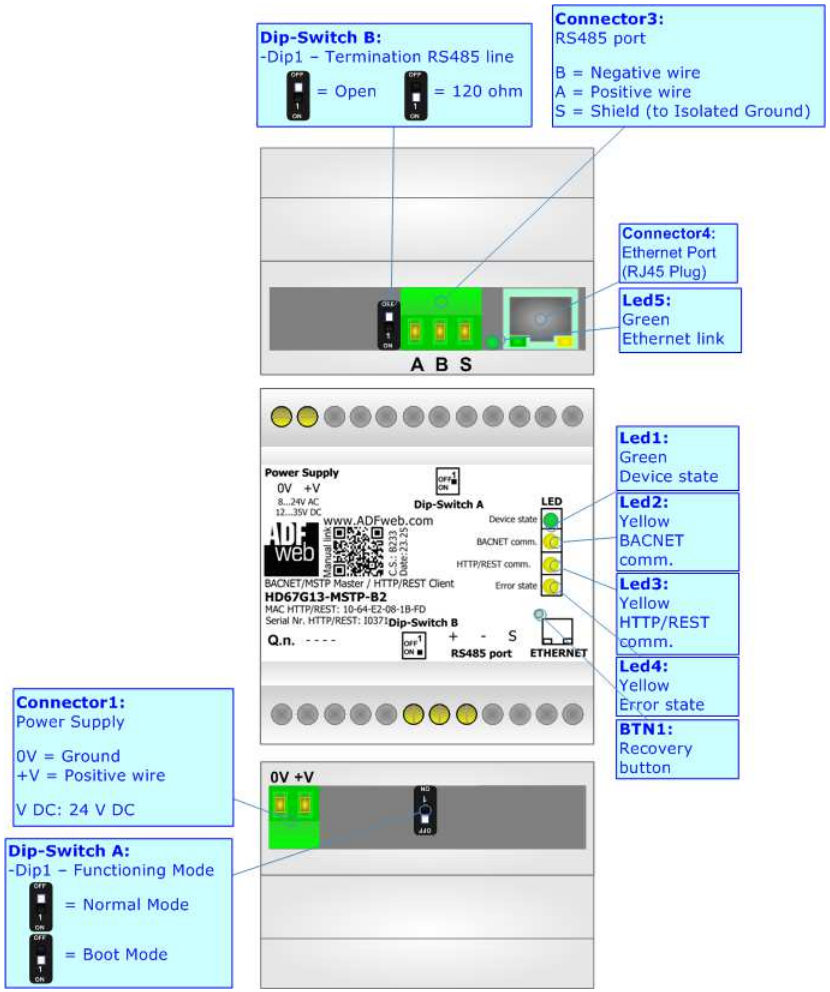


Figure 1c: Connection scheme for HD67G13-MSTP-B2

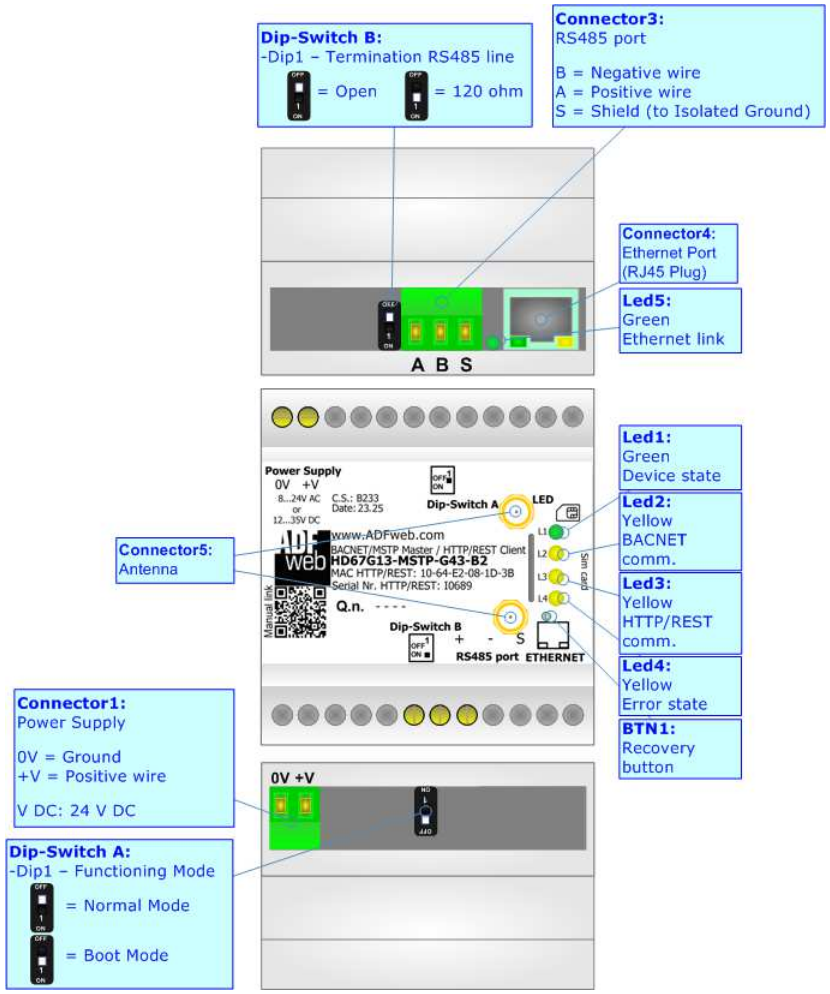


Figure 1d: Connection scheme for HD67G13-MSTP-G43-x-xxx-B2

CHARACTERISTICS:

The HD67G13-xxx-x-xxx-B2 is a BACnet Master / HTTP/REST Client.

It allows the following characteristics:

- Electrical isolation between Ethernet and Power Supply;
- Mountable on 35mm Rail DIN;
- Wide power supply input range: 12…35V DC and 8…24V AC;
- Wide temperature range: -40°C / +85°C [-40°F / +185°F].

CONFIGURATION:

You need Compositor SW67G13 software on your PC in order to perform the following:

- Define the parameter of HTTP/REST;
- Define the parameter of BACnet line;
- Define the list of HTTP/REST servers to communicate with BACnet slaves;
- Define the endpoints of the HTTP/REST servers;
- Update the device.

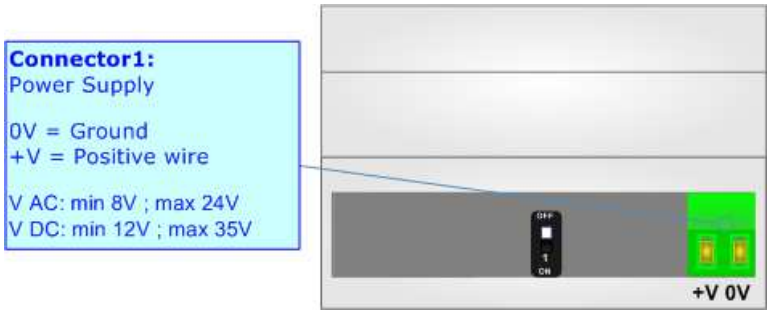
POWER SUPPLY:

The devices can be powered at 8…24V AC and 12…35V DC. For more details see the two tables below.

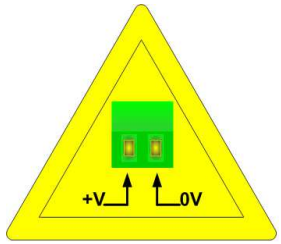
VAC ~		VDC ⎓	
Vmin	**Vmax**	**Vmin**	**Vmax**
8V	**24V**	**12V**	**35V**

Consumption at 24V DC:

Device	Consumption [W/VA]
HD67G13-xxx-x-xxx-B2	5



Caution: Not reverse the polarity power

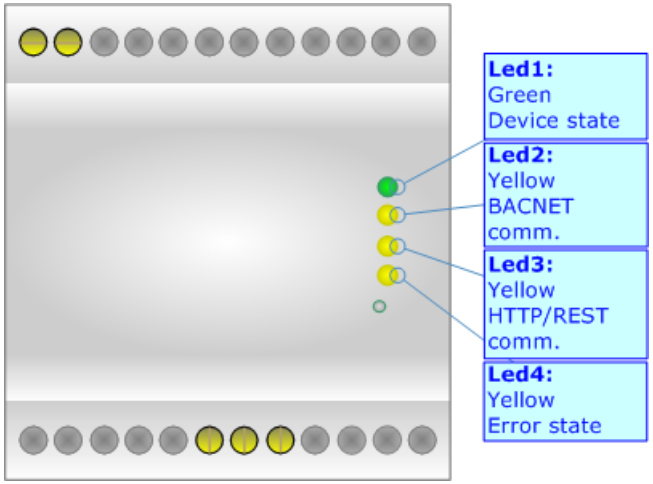


HD67G13-xxx-x-xxx-B2

LEDS:

The device has got four LEDs that are used to give information of the functioning status.
The various meanings of the LEDs are described in the table below.

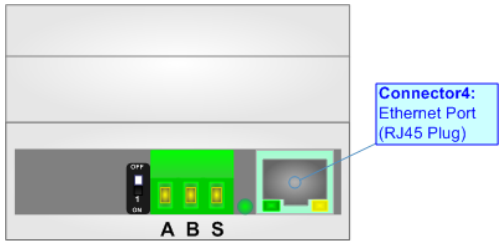
LED	Normal Mode	Recovery Mode
1: Device State (green)	Blinks slowly (~1Hz)	Blinks quickly
2: BACnet comm. (yellow)	Blinks when BACnet communication is running	Blinks quickly
3: HTTP/REST comm. (yellow)	Blinks when a HTTP/REST request is received	Blinks quickly
4: Error State (yellow)	**ON:** an error occurs **OFF:** no errors	Blinks quickly



ETHERNET:

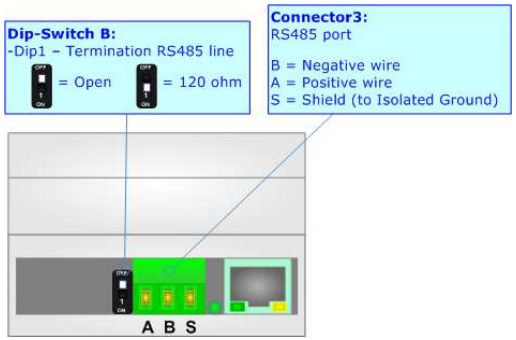
The Ethernet port is used for programming the device, for HTTP/REST communication and for BACnet/IP communication.
The Ethernet connection must be made using Connector4 of HD67G13-xxx-x-xxx-B2 with at least a Category 5E cable. The maximum length of the cable should not exceed 100m. The cable has to conform to the T568 norms relative to connections in cat.5 up to 100 Mbps. To connect the device to an Hub/Switch is recommended the use of a straight cable, to connect the device to a PC is recommended the use of a cross cable.

The interface has two different MAC Addresses, one for HTTP/REST and one for BACnet/IP side.



RS485 (HD67G13-MSTP-XXX SERIE):

For terminate the RS485 line with a 120Ω resistor it is necessary to put ON dip 1, like in figure.

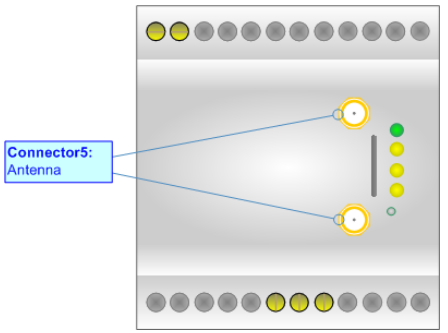


The maximum length of the cable should be 1200m (4000 feet).
Here some codes of cables:

- Belden: p/n 8132 – 2x 28AWG stranded twisted pairs conductor + foil shield + braid shield;
- Belden p/n 82842 - 2x 24AWG stranded twisted pairs conductor + foil shield + braid shield;
- Tasker: p/n C521 - 1x 24AWG twisted pair conductor + foil shield + braid shield;
- Tasker: p/n C522 - 2x 24AWG twisted pairs conductor + foil shield + braid shield.

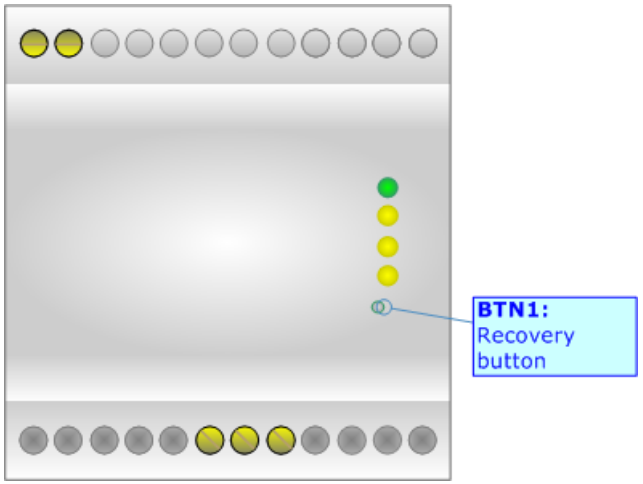
MOBILE:

The HD67G13-G43-x-xxx-B2 uses LTE module. The Antenna connector is a SMA Female ('Female Outer Shell' and 'Female Receptacle') so the Antenna must have a SMA Male connector. The physical SIM card type is Micro-Sim.



RECOVERY BUTTON:

In order to recover the device in case of wrong firmware updating or any error that compromises correct functioning of the device, it is necessary to press the BTN1. After pressing, the device will be switched in Recovery Mode and it will be possible to update again the firmware or reset the device using the default IP address 192.168.2.206 via webserver.



USE OF ADFWEB DISCOVERY TOOL SOFTWARE:

To discover the device into the network and see its IP Address, use the available software that runs with Windows called "ADFweb Discovery Tool". It is downloadable from here: www.adfweb.com/download/filefold/ADFweb_Discovery_Tool.zip.
The software works with MSWindows (XP, Vista, Seven, 8, 10, 11; 32/64bit).

USE OF COMPOSITOR SW67G13:

To configure the Converter, use the available software that runs with Windows called SW67G13. It is downloadable on the site www.adfweb.com and its operation is described in this document. The software works with MS Windows (XP, Vista, Seven, 8, 10, 11; 32/64bit).

When launching the SW67G13, the window below appears (Fig. 2).

Note:
It is necessary to have installed .Net Framework 4.

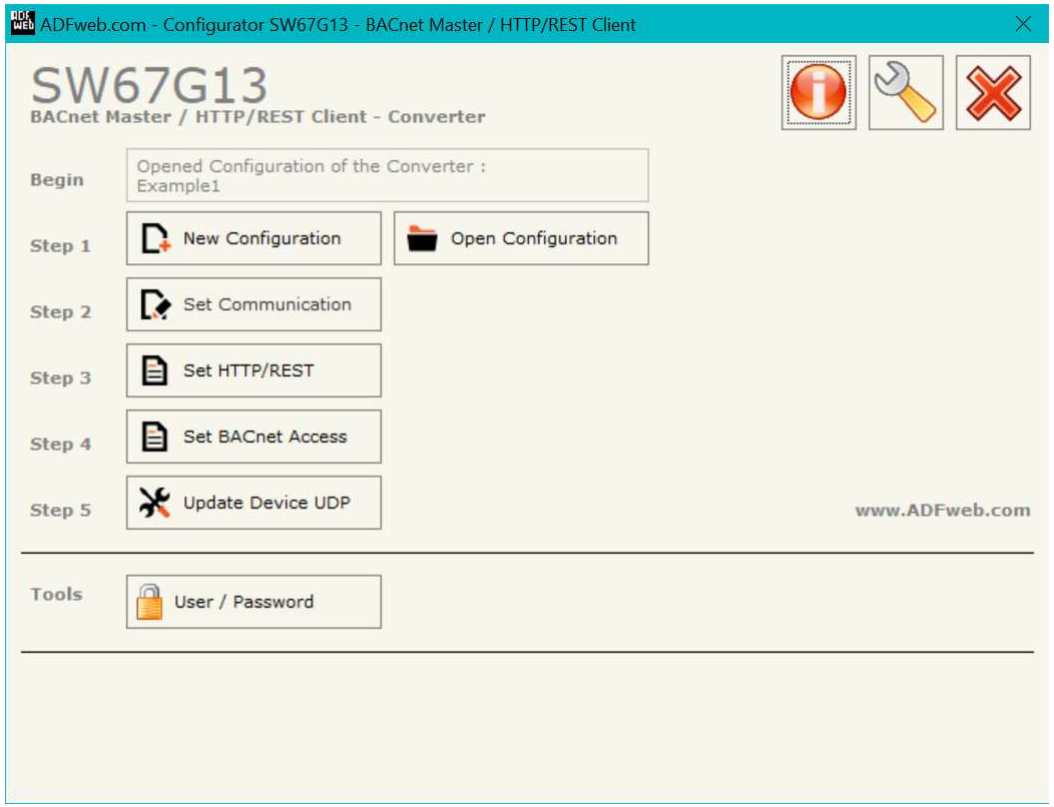
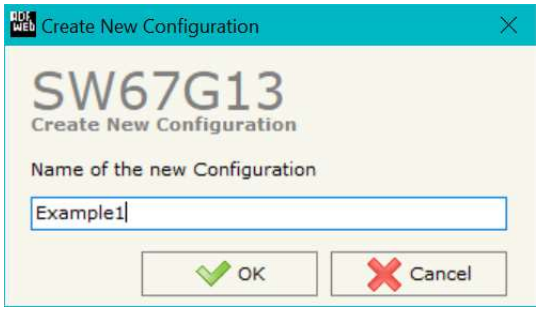


Figure 2: Main window for SW67G13

NEW CONFIGURATION / OPEN CONFIGURATION:

The "**New Configuration**" button creates the folder which contains the entire device's configuration.



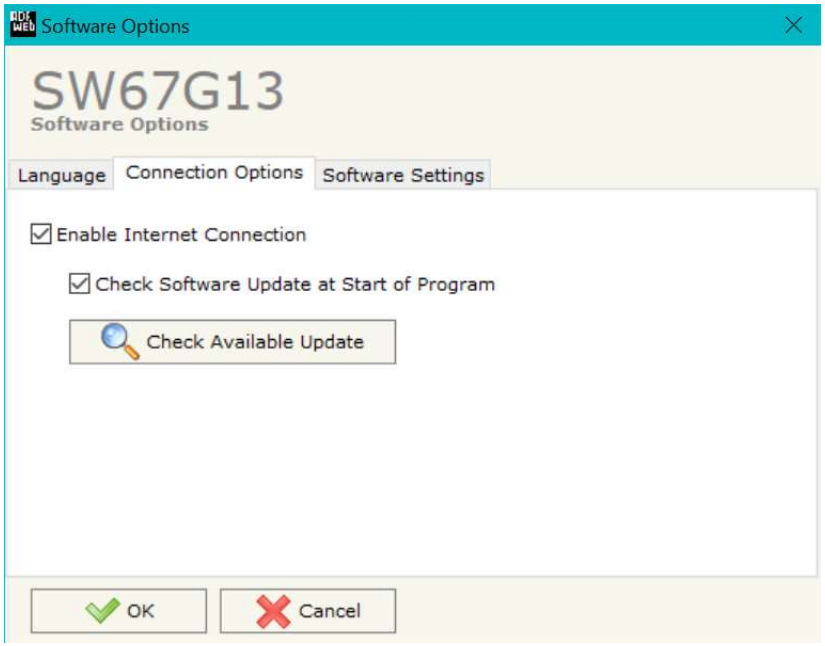
A device's configuration can also be imported or exported:

- To clone the configurations of a Programmable "BACnet Master / HTTP/REST Client - Converter" in order to configure another device in the same manner, it is necessary to maintain the folder and all its contents;
- To clone a project in order to obtain a different version of the project, it is sufficient to duplicate the project folder with another name and open the new folder with the button "**Open Configuration**".

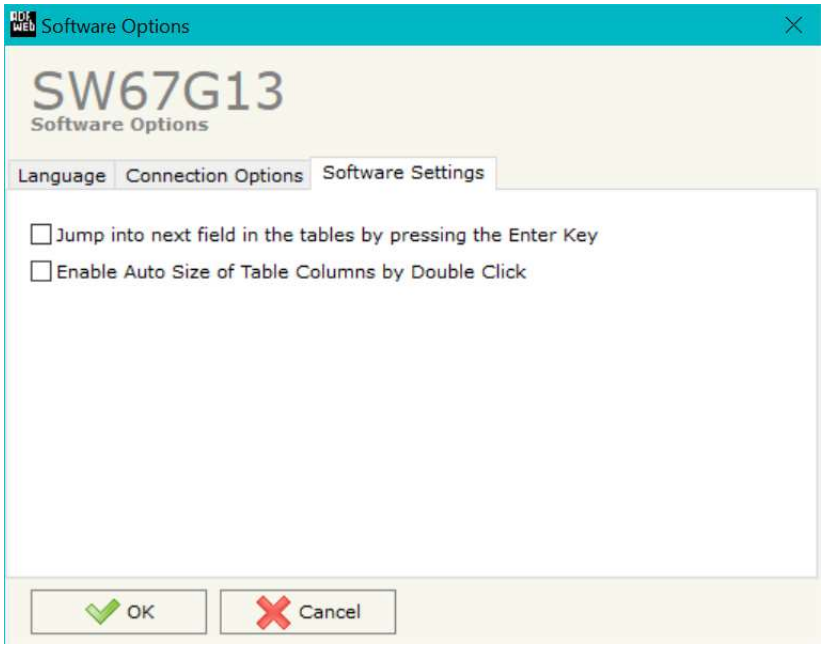
SOFTWARE OPTIONS:

By pressing the "**Settings**" ( ) button there is the possibility to change the language of the software and check the updatings for the compositor.

In the section "Language" it is possible to change the language of the software.



In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website.
Checking the option "**Check Software Update at Start of Program**", the SW67G13 check automatically if there are updatings when it is launched.



In the section "Software Settings", it is possible to enable/disable some keyboard's commands for an easier navigation inside the tables contained in the different sections of the software.

SET COMMUNICATION:

By Pressing the "**Set Communication**" button from the main window for SW67G13 (Fig. 2) the window "Set Communication" appears (Fig. 3).
This window is divided in two sections, one for configuring the HTTP/REST network and the other for the BACnet network.

HTTP/REST Client section

HTTP/REST Client → Select Product Code:

This section is used to select the product in use. It is possible to have:

- HD67G13-IP-B2;
- HD67G13-IP-G43-B2;
- HD67G13-IP-G43-E-B2;
- HD67G13-IP-G43-VPN-B2;
- HD67G13-IP-G43-E-VPN-B2;
- HD67G13-MSTP-B2;
- HD67G13- MSTP-G43-B2;
- HD67G13- MSTP-G43-E-B2;
- HD67G13- MSTP-G43-VPN-B2;
- HD67G13- MSTP-G43-E-VPN-B2.

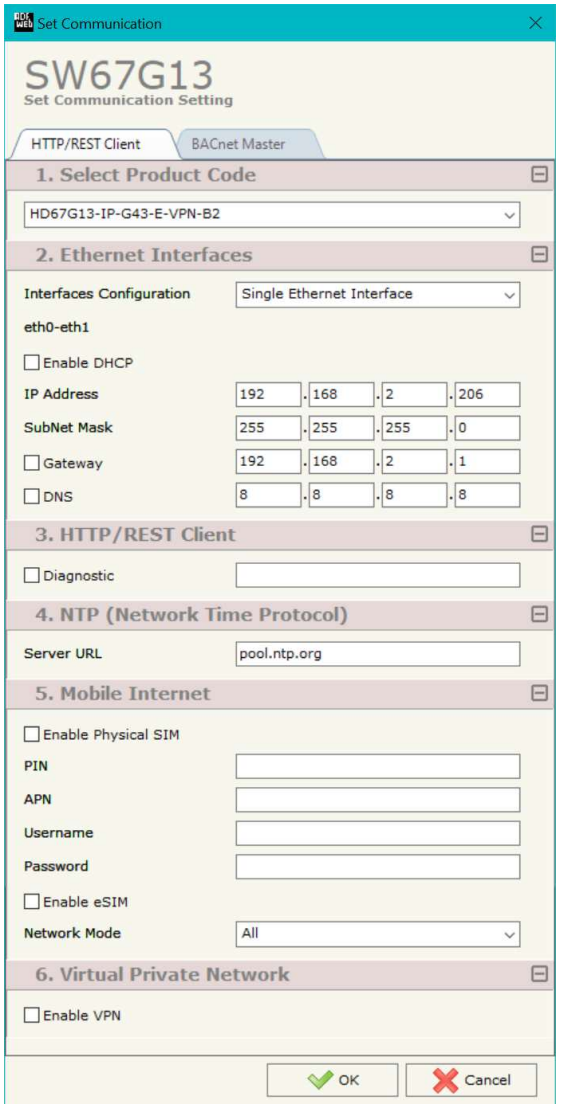


Figure 3a: "Set Communication → HTTP/REST" window

HTTP/REST Client → Ethernet Interfaces:

This section is used to define the general parameters of Ethernet. The means of the fields are:

- In the field "**Interfaces Configuration**", it is possible to define the hardware settings of the Ethernet interfaces. For the hardware version with a single Ethernet port, it is mandatory to set "Single Ethernet Interface";
- In the field "**Enable DHCP**", it is possible to enable the DHCP Client to obtain automatically the IP Address from a DHCP Server in the network;
  - If "Enable DHCP" option is active, it is possible to configure the "**Default IP Address**" and "**Default SubNet Mask**" to set a static IP Address if a DHCP

    Server is not present;
  - If "Enable DHCP" option is active, it is possible to configure the "**Host Name**" for the Ethernet interface of the converter;
- In the field "**IP Address**", the IP address of the converter is defined;
- In the field "**SubNet Mask**" the Subnet Mask of the converter is defined;
- In the field "**Gateway**" the default gateway of the network is defined. This feature can be enabled or disabled pressing the Check Box field;
- In the field "**DNS**" the IP Address of the DNS server is defined. This feature can be enabled or disabled pressing the Check Box field.

HTTP/REST Client → HTTP/REST Client:

This section is used to define the general parameters of the HTTP/REST. The means of the fields are:

- If the field "**Diagnostic**" is checked, the status of the HTTP/REST queries is mapped to BACnet side starting from the offset defined. Each bit will represent the status of a HTTP/REST request:
  - If for a request the converter receives a correct response, the status bit is put to '0';
  - If for a request the converter receives a wrong response or it doesn't receive any response, the status bit is put to '1'.

HTTP/REST Client → NTP (Network Time Protocol):

This section is used to define the parameters of NTP protocol. The means of the field is:

- In the field "**Server URL**" the URL or the IP Address of the NTP Server is defined.

HTTP/REST CLIENT → MOBILE INTERNET:

This section is used to define the main parameters of LTE connectivity. The means of the fields are:

- If the field "Enable Physical SIM" is checked, the SIM slot is enabled;
- In the field "**PIN**" the PIN code of the SIM card is defined;
- In the field "**APN**" the APN for mobile connection is defined;
- In the field "**Username**" the user for mobile connection is defined;
- In the field "**Password**" the password for mobile connection is defined;
- If the field "**Enable eSIM**" is checked, the eSIM is enabled (available only for version with integrated eSIM with connectivity enabled);
- In the field "**Network Mobile**" it is possible to defined the type of mobile connectivity:
  - All: mobile connection will be automatically managed by the module, selecting the best available network (3G or 4G);
  - 4G Only: mobile connection will be done only using LTE;

BACNET MASTER section (For BACnet IP devices)

BACNET → ETHERNET CONNECTION:

This section is used to define the general parameters of Ethernet. The means of the fields are:

- In the field "**Device Name (Hostname)**" the Hostname to assign to the converter is defined;
- If the field "**Obtain an IP Address Automatically (DHCP for Cable Connection)**" is checked, DHCP for LAN connection is enabled;
- If the field "**Obtain an IP Address Automatically (DHCP for Wi-Fi Connection)**" is checked, DHCP for Wi-Fi connection is enabled;
- If the field "**Enable DNS**" is checked, DNS protocol is enabled;
- In the field "**Primary DNS**" the IP Address of the primary DNS server is defined;
- In the field "**Secondary DNS**" the IP Address of the secondary DNS server is defined.

BACNET → BACNET MASTER:

This section is used to define the general parameters of BACnet/IP side. The means of the fields are:

- In the field "**IP Address**" the IP address of BACnet side of the converter is defined;
- In the field "**SubNet Mask**" the Subnet Mask of BACnet side of the converter is defined;
- In the field "**Gateway**" the default gateway of the network is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
- In the field "**Port**" the port used for BACnet communication is defined. The default port used for BACnet communication is 47808, but is possible to insert any value (except 10000 and 10001);
- In the field "**BACnet Device Name**" the name of BACnet/IP side of the converter is defined;
- In the field "**Device Identifier**" the ID of BACnet/IP side of the converter is defined;
- In the field "**TimeOut Polling (ms)**" the timeout for the BACnet requests is defined;
- In the field "**Send IAm message evert (s)**" the message I-am is sent by device every time indicated on the field. The minimum time is 60s.

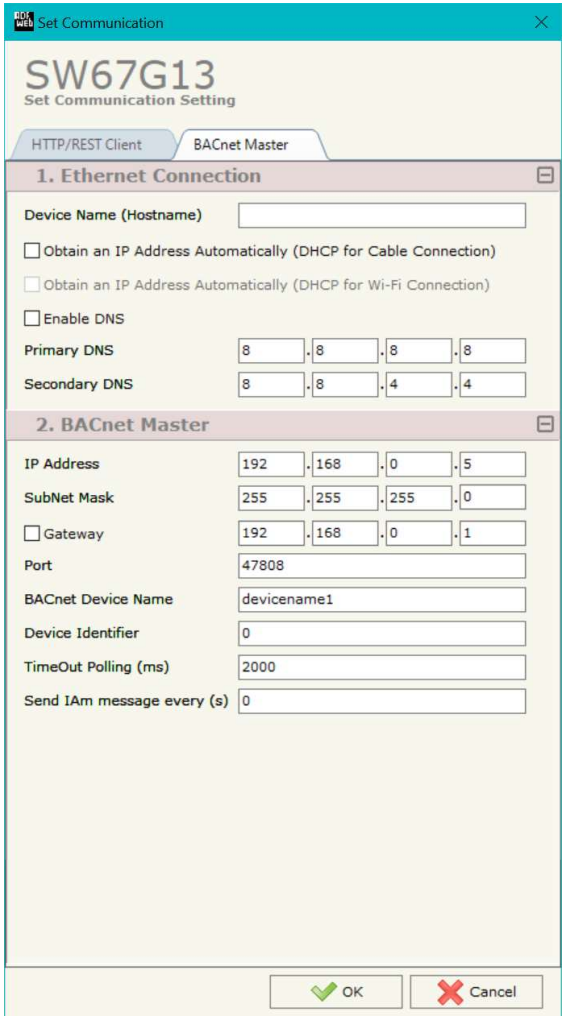


Figure 3b: "Set Communication → BACnet/IP" window

BACNET → BACNET/MSTP:

This section is used to define the general parameters of BACnet/MSTP side. The means of the fields are:

- In the field "**Baudrate**" the data rate of the BACnet line is defined;
- In the field "**Parity**" the parity of the line is defined;
- In the field "**BACnet Device Name**" the name to give to the BACnet node is defined;
- In the field "**MAC Address**" the MAC of BACnet node (from 0 to 254) is defined;
- The field "**Max Master**" specifies the highest allowable address for master nodes. The value shall be less than or equal to 127;
- The field "**Max Info Frames**" specifies the maximum number of information frames the node may send before it must pass the token;
- In the field "**Device Instance**" the of the BACnet MS/TP side of the converter is defined.

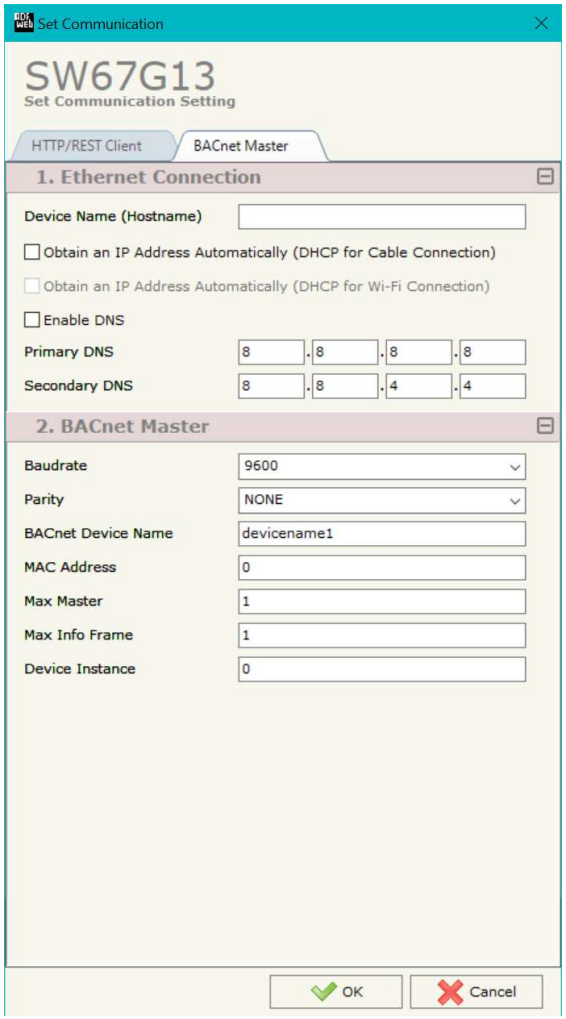


Figure 3c: "Set Communication → BACnet/MSTP" window

SET HTTP/REST:

By Pressing the "**Set HTTP/REST**" button from the main window for SW67G13 (Fig. 2) the window "Set HTTP/REST Access" appears (Fig. 4). This section is used to define the list of the HTTP servers accessible by the converter using GET and POST requests.

By clicking on "**Add**", "**Modify**" or "**Delete**" buttons, it is possible to add, edit or delete a HTTP/REST server.

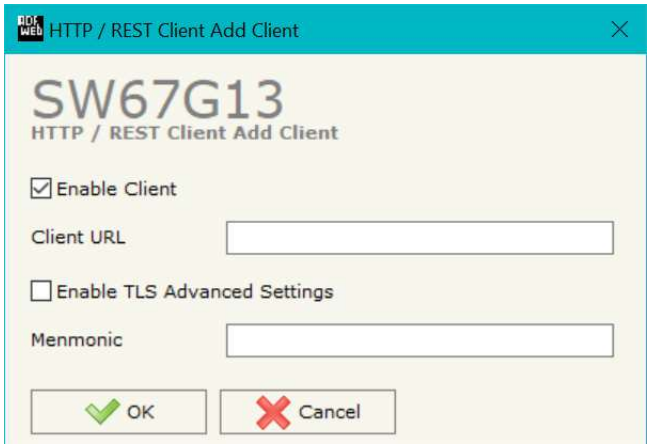


Figure 4a: "Set HTTP/REST Client → Add new Client" window

The means of the fields are:

- If the field "**Enable Client**" is checked, the HTTP/REST client is enabled;
- In the field "**Client URL**" the URL of the client to communicate with is defined;
- If the field "**Enable TLS Advanced Settings**" is checked, it is possible to define custom TLS settings for HTTPS communication;
- In the field "**Server Certificate**" the .pem CA Certificate of the remote broker/server used to open a secure connection is defined;
- In the field "**Client Certificate**" the .pem Client's Certificate is defined;
- In the field "**Client Key**" the corresponding .pem Client's Certificate key is defined;
- In the field "**Client Key Password**" the key password is defined;
- In the field "**Mnemonic**" a description is defined;

By selecting the required HTTP/REST server, it is possible to configure the list of the endpoints to GET and POST and the templates to get and set the data to connect to BACnet side.

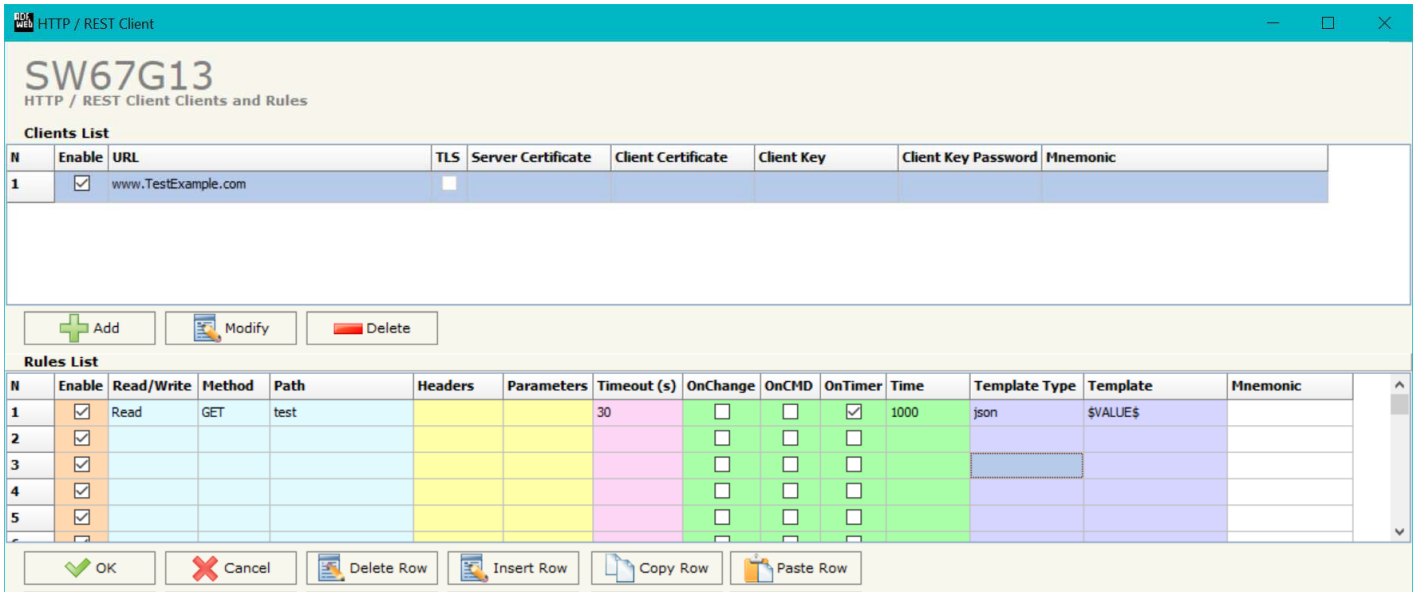


Figure 4b: "Set HTTP/REST Access" window

The means of the fields are:

- If the field "**Enable**" is checked, the endpoint is enabled;
- In the field "**Read/Write**" it is possible to define if the request is used for reading or writing the data. In case of "Read" the data will be transferred from HTTP/REST to PROFINET, in case of "Write" from PROFINET to HTTP/REST;
- In the field "**Method**" the type of HTTP/REST request to use is defined;
- In the field "**Path**" the name of the endpoint is defined;
- In the field "**Headers**" it is possible to add some key-value to be used as header by making a double click on the cell;
- In the field "**Parameters**" it is possible to add some key-value to be used as parameters by making a double click on the cell;
- In the field "**Timeout (s)**" the timeout used to wait the response from the HTTP/REST server is defined;
- If the field "**On Change**" is checked, the HTTP/REST query is sent when the data on BACnet side changes the value (only for writing requests);
- If the field "**OnCMD**" is checked, the HTTP/REST query is sent at the reception of a BACnet side request;

- If the field "**On Timer**" is checked, the HTTP/REST query is sent cyclically;
- In the field "**Time (ms)**" the delay in ms between two queries is defined (if "On Timer" is checked);
- In the field "**Template Type**" the template format is defined. If the option "RAW" is selected it is managed as plaintext; otherwise if it is selected "JSON" option it is managed as a Json format;
- In the field "**Template**" the structure of the payload and the variables to be linked is defined. See page 34 for more info;
- In the field "**Mnemonic**" the description for the endpoint is defined.

SET BACNET ACCESS:

By Pressing the "**Set BACnet Access** " button from the main window of SW67G13 (Fig. 2), the window "Set BACnet Access" appears (Fig. 5).

The window is divided in two parts, the "**BACnet in Read**" that contains the BACnet objects that the Converter goes to read from the slaves; and "**BACnet in Write**" that contains the BACnet objects that the Converter goes to write into the slaves.

The means of the fields in the window (Read) are the follows:

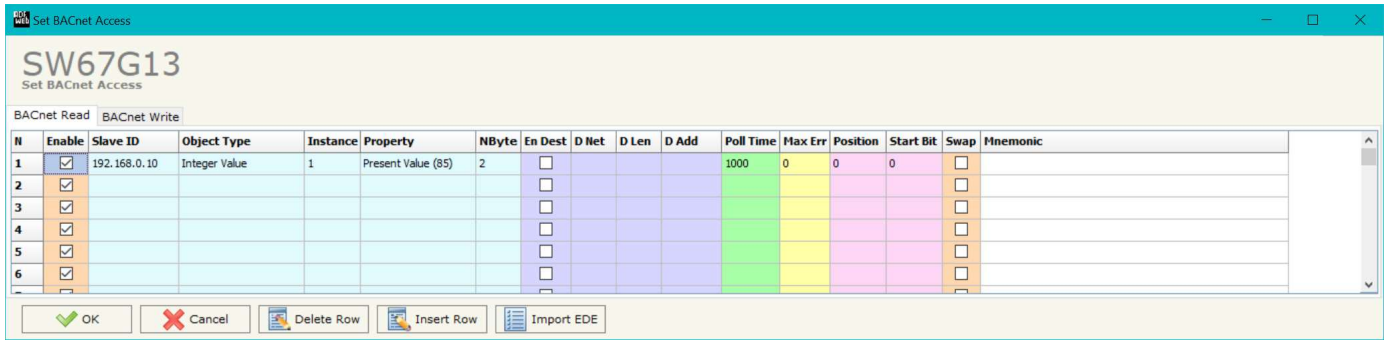


Figure 5a: "BACnet Set Access → BACnet Read" window

- If the field "**Enable**" is checked, the BACnet variable is enabled;
- In the field "**Slave ID**" insert the IP address of the slave that contains the data to be read;
- In the field "**Object Type**" select the object to be read;
- In the field "**Instance**", define the instance number of the object;
- In the field "**Property**" select the property to be read;
- In the field "**NByte**", define the number of bytes reserved for saving the information on HTTP;
- By checking the field "**En Dest**" is possible to enable the Destination Network (D Net), Destination Length (D Len) and Destination Address (D Adr). These informations are used for make a request to other segments of network;
- In the field "**D Net**" define the destination network (from 1 to 65535);
- In the field "**D Len**" define the length of "D Add" field (1 or 2 or 6);
- In the field "**D Add**" define the address of the endpoint. If "D Len" is one is possible to insert a number from 1 to 255; if "D Len" is two is possible to insert a number from 1 to 65535; if "D Len" is 6 is possible to insert an IP and port in this format "192.168.2.188:47808";
- In the field "**Poll Time**" define the frequency of the request;
- In the field "**Max Error**" insert the number of consecutive errors that the Master waits before discard the row from the cycle of requests;
- In the field "**Position**" it is possible to select the position where save the data into the 1439 bytes array;

- The field "**Start Bit**" is used for the "Binary Input" and "Binary Output" BACnet objects. Is possible to select the position in the byte where save the data;
- By checking the field "**Swap**" it is possible to swap the order of data readed from BACnet slave;
- In the field "**Mnemonic**" is possible to insert a description of the data inserted in the row.

The means of the fields in the window (Write) are the following:

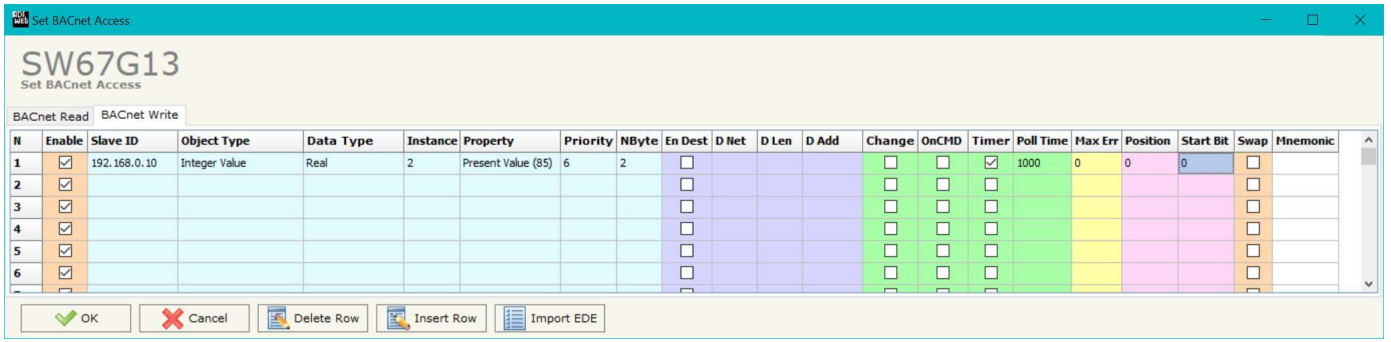


Figure 5b: "BACnet Set Access → BACnet Write" window

- If the field "**Enable**" is checked, the BACnet variable is enabled;
- In the field "**Slave ID**" insert the IP address of the slave where the data are written;
- In the field "**Object Type**" select the object to be written;
- In the field "**Data Type**" select the type of data to write;
- In the field "**Instance**", define the instance number of the object;
- In the field "**Property**" select the property to be written;
- In the field "**Priority**" define the priority of the frame (from 0 to 16). If is 0, means the frame doesn't contain the Priority tag.
- In the field "**NByte**", define the number of bytes sent in the request;
- By checking the field "**En Dest**" is possible to enable the Destination Network (D Net), Destination Length (D Len) and Destination Address (D Adr). These informations are used for make a request to other segments of network;
- In the field "**D Net**" define the destination network (from 1 to 65535);
- In the field "**D Len**" define the length of "D Add" field (1 or 2 or 6);
- In the field "**D Add**" define the address of the endpoint. If "D Len" is one is possible to insert a number from 1 to 255; if "D Len" is two is possible to insert a number from 1 to 65535; if "D Len" is 6 is possible to insert an IP and port in this format "192.168.2.188:47808";
- By checking the field "**Change**" the BACnet write request is made only if HTTP data are changed; otherwise (if is selected the field "**Timer**") is sent cyclically, using the "Poll Time";
- By checking the field "**OnCMD**" the BACnet write request is sent at the reception of a HTTP query;
- In the field "**Poll Time**" define the frequency of the request;

- In the field "**Max Error**" insert the number of consecutive errors that the Master waits before discard the row from the cycle of requests;
- In the field "**Position**" is possible to select the position where take the data to write in the request from a 1439 bytes array;
- The field "**Start Bit**" is used for the "Binary Output" BACnet objects. Is possible to select the position in the byte where save the data;
- In the field "**Swap**"
- In the field "**Mnemonic**" is possible to insert a description of the data inserted in the row.

UPDATE DEVICE:

By pressing the "**Update Device**" button, it is possible to load the created Configuration into the device; and also the Firmware, if necessary. This by using the Ethernet port.

If you don't know the actual IP address of the device you have to use this procedure:

- Turn ON the device
- Connect the Ethernet cable;
- Insert the IP Address of the converter (if not known, it is possible to use "ADFweb Discovery Tool" to find it);
- Press the "**Execute update firmware**" button to start the upload;
- When all the operations are "OK" turn OFF the Device;
- Close the updating windows and wait for restarting.

At this point the configuration/firmware on the device is correctly updated.

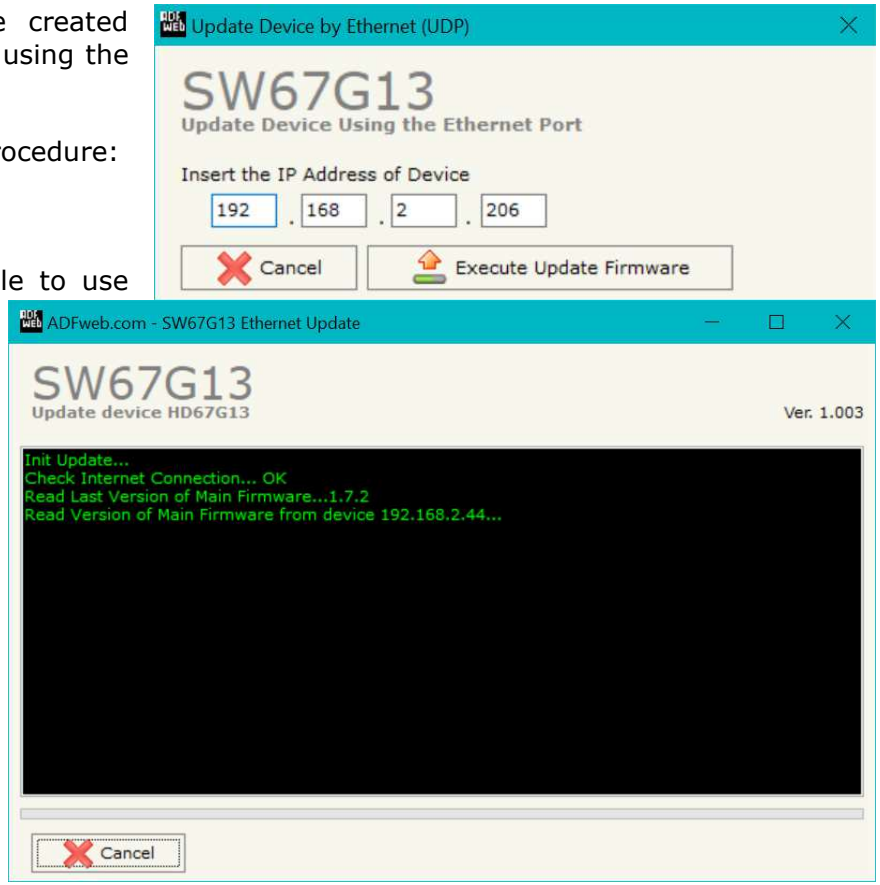


Figure 6: "Update device" windows

Warning:
If the update fails, try these points before seeking assistance:

- Try to repeat the operations for the updating;
- Try with another PC;
- Try to restart the PC;
- Check the LAN settings;
- If you are using the program inside a Virtual Machine, try to use in the main Operating System;
- If you are using Windows Seven, Vista, 8, 10 or 11 make sure that you have the administrator privileges;
- In case you have to program more than one device, using the "UDP Update", you have to cancel the ARP table every time you connect a new device on Ethernet. For do this you have to launch the "Command Prompt" and write the command "arp -d". Pay attention that with Windows Vista, Seven, 8, 10, 11 you have to launch the "Command Prompt" with Administrator Rights;
- Pay attention at Firewall lock.

Warning:
In the case of HD67G13 you have to use the software "SW67G13": www.adfweb.com\download\filefold\SW67G13.zip.

USER/PASSWORD:

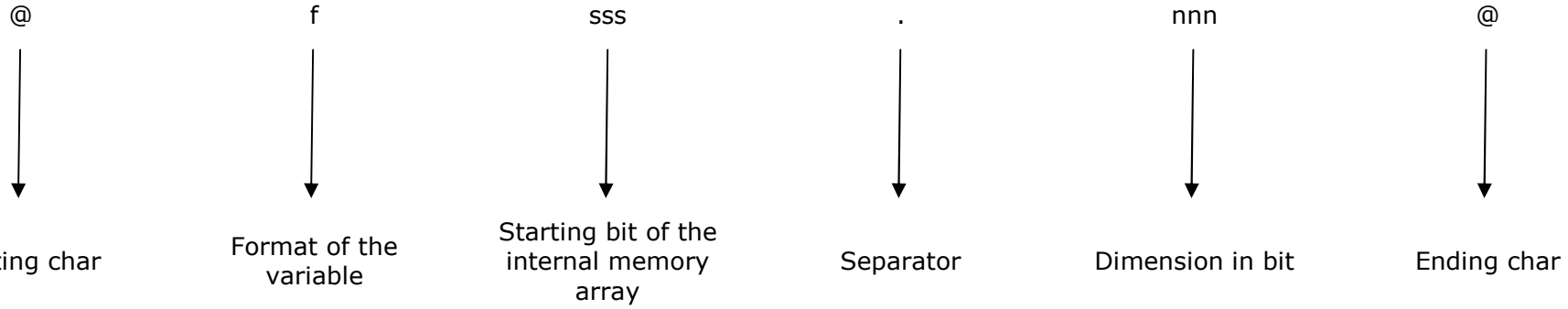
Figure 7: "Change User Password"

By pressing the "**USER/PASSWORD**" button, it is possible to change the User and Password credentials for the update of the device.
The default credentials are "admin" for User and Password.

Warning:
If you don't remember the User and Password that you have set, it is necessary to reset the device on factory settings using the recovery button. The configuration inside the converter will be lost.

TEMPLATE STRING: DEFINITION OF HTTP/REST PAYLOAD

It is possible to define which is the data to link to the BACnet side using specific keywords.



Below the type of format allowed:

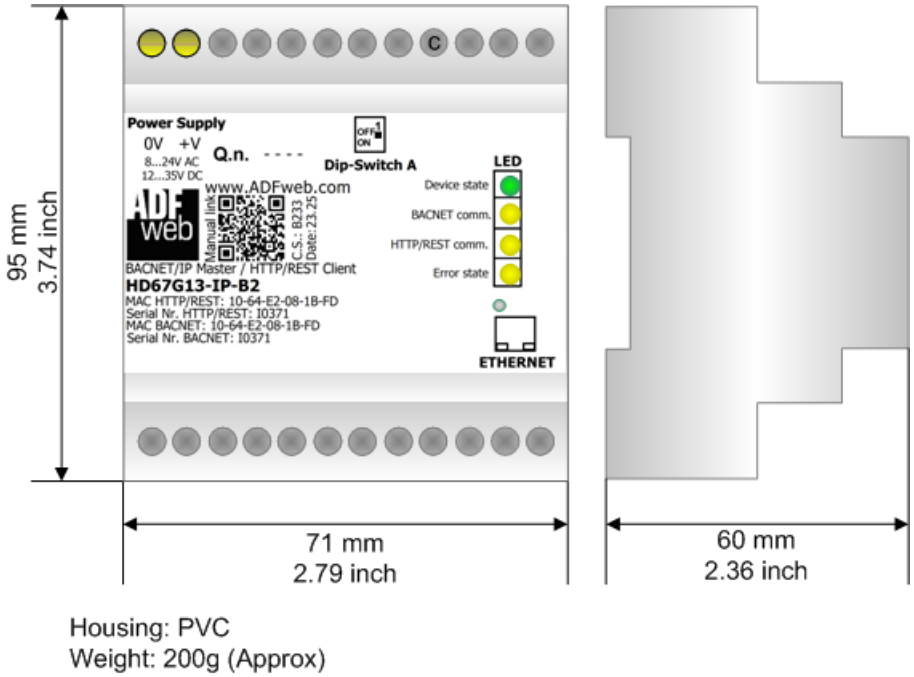
FORMAT	IDENTIFIER
Unsigned Integer	u
Signed Integer	i
Float	f
Binary	b
String	s
Hexadecimal	x
Base64	l

Example:

We have two variables mapped respectively into Position 0 and 4. The first one is an signed integer value of 16 bit, the second one is a floating point. In order to compose a JSON, the template can be filled in this way:

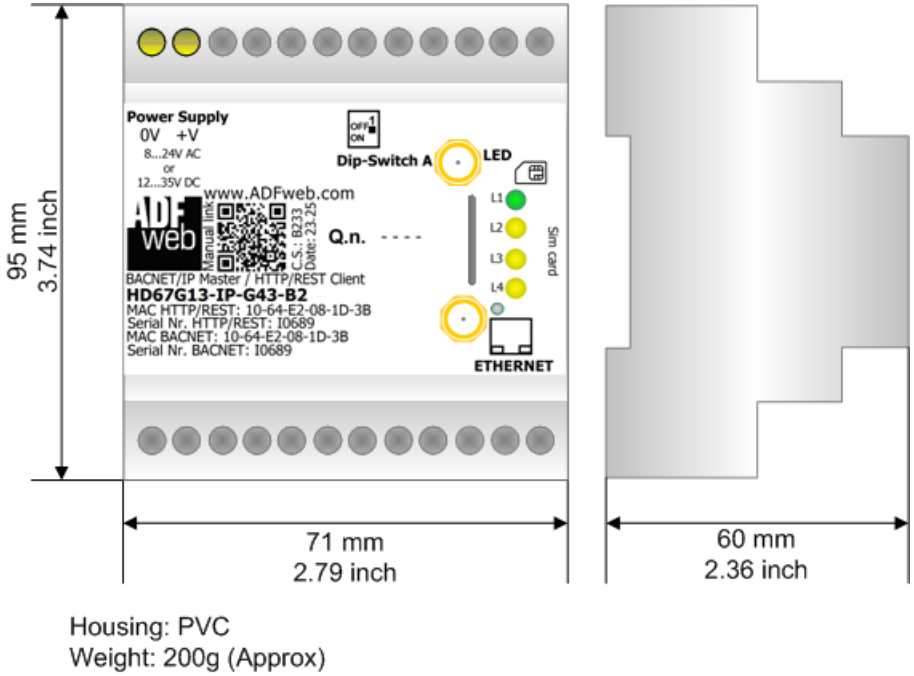
```
{
	"var1": @i0.16@,
	"var2": @f32.32@
}
```

MECHANICAL DIMENSIONS:



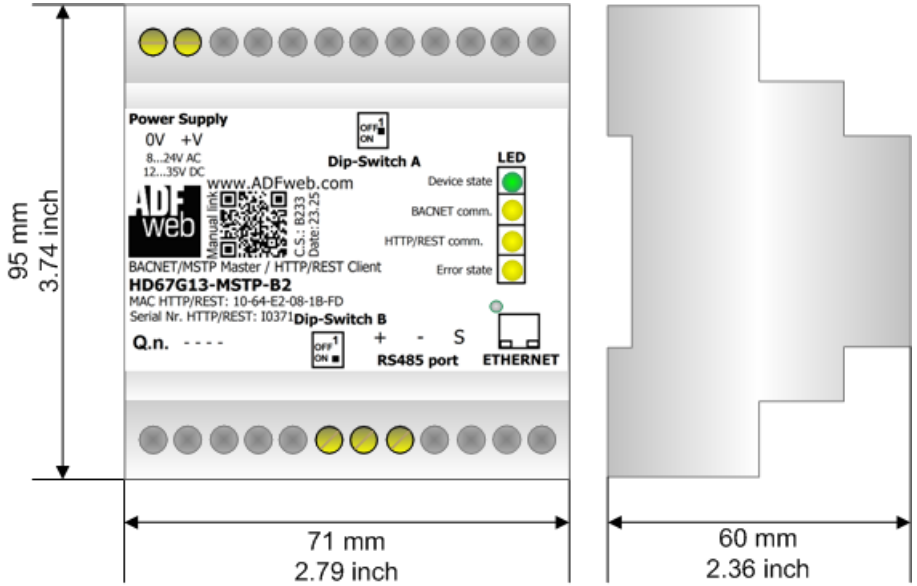
Housing: PVC
Weight: 200g (Approx)

Figure 8a: Mechanical dimensions scheme for HD67G13-IP-B2



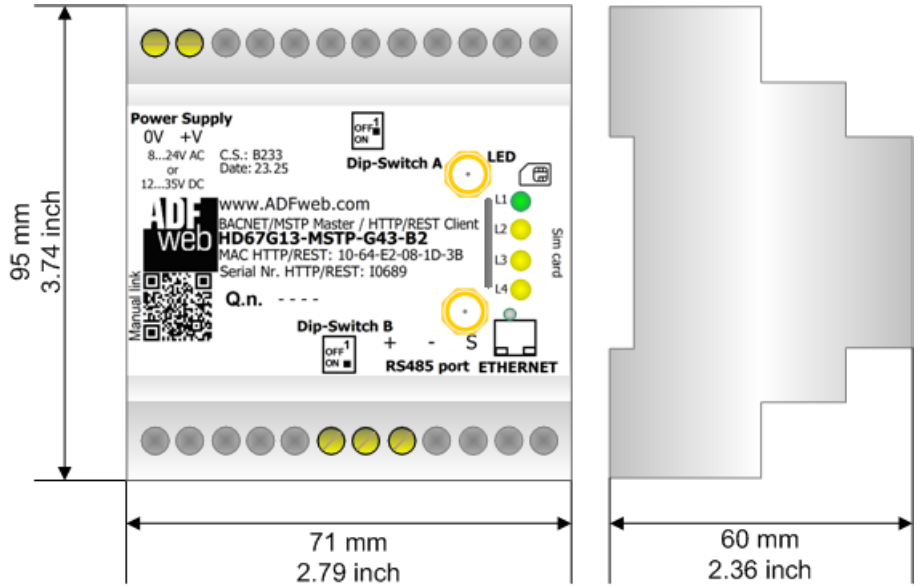
Housing: PVC
Weight: 200g (Approx)

Figure 8b: Mechanical dimensions scheme for HD67G13-IP-G43-x-xxx-B2



Housing: PVC
Weight: 200g (Approx)

Figure 8c: Mechanical dimensions scheme for HD67G13-MSTP-B2



Housing: PVC
Weight: 200g (Approx)

Figure 8d: Mechanical dimensions scheme for HD67G13-MSTP-G43-x-xxx-B2

ORDERING INFORMATIONS:
The ordering part number is formed by a valid combination of the following:

HD67G13 – xxxx – xxx – x - xxx – B 2

Connectors Type
2: Fixed Screw Terminal

Enclosure Type
B: Modulbox 4M, 35mm DIN Rail mounting

Services
None: No available services
VPN: VPN service available

E-SIM
None: No available services
E: E-SIM available inside for LTE connectivity from ADFweb.com's platform

LTE module
None: No available LTE module
G43: LTE module present with SIM card slot

Port
IP: BACnet/IP
MSTP: BACnet/MSTP

Device Family
HD67G13: BACnet Master / HTTP/REST Client – Converter

Order Code:	**HD67G13-IP-B2**	**-**	BACnet IP Master / HTTP/REST Client – Converter
Order Code:	**HD67G13-IP-G43-B2**	**-**	BACnet IP Master / HTTP/REST Client – Converter (LAN + SIM LTE)
Order Code:	**HD67G13-IP-G43-E-B2**	**-**	BACnet IP Master / HTTP/REST Client – Converter (LAN + SIM LTE+E-SIM)
Order Code:	**HD67G13-IP-G43-VPN-B2**	**-**	BACnet IP Master / HTTP/REST Client – Converter (LAN + SIM LTE, VPN)
Order Code:	**HD67G13-IP-G43-E-VPN-B2**	**-**	BACnet IP Master / HTTP/REST Client – Converter (LAN + SIM LTE+E-SIM, VPN)

Order Code: **HD67G13-MSTP-B2** - BACnet MSTP Master / HTTP/REST Client – Converter

Order Code: **HD67G13-MSTP-G43-B2** - BACnet MSTP Master / HTTP/REST Client – Converter (LAN + SIM LTE)

Order Code: **HD67G13-MSTP-G43-E-B2** - BACnet MSTP Master / HTTP/REST Client – Converter (LAN + SIM LTE+E-SIM)

Order Code: **HD67G13-MSTP-G43-VPN-B2** - BACnet MSTP Master / HTTP/REST Client – Converter (LAN + SIM LTE, VPN)

Order Code: **HD67G13-MSTP-G43-E-VPN-B2** - BACnet MSTP Master / HTTP/REST Client – Converter (LAN + SIM LTE+E-SIM, VPN)

ACCESSORIES:

Order Code: **AC34011** - 35mm Rail DIN - Power Supply 220/240V AC 50/60Hz – 12 V DC

Order Code: **AC34012** - 35mm Rail DIN - Power Supply 220/240V AC 50/60Hz – 24 V DC

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OTHER REGULATIONS AND STANDARDS:

WEEE INFORMATION

Disposal of old electrical and electronic equipment (as in the European Union and other European countries with separate collection systems).

This symbol on the product or on its packaging indicates that this product may not be treated as household rubbish. Instead, it should be taken to an applicable collection point for the recycling of electrical and electronic equipment. If the product is disposed correctly, you will help prevent potential negative environmental factors and impact of human health, which could otherwise be caused by inappropriate disposal. The recycling of materials will help to conserve natural resources. For more information about recycling this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

RESTRICTION OF HAZARDOUS SUBSTANCES DIRECTIVE

The device respects the 2011/65/EU + 2015/863 Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (commonly referred to as Restriction of Hazardous Substances Directive or RoHS).

CE MARKING

The product conforms with the essential requirements of the applicable EC directives.

WARRANTIES AND TECHNICAL SUPPORT:

For fast and easy technical support for your ADFweb.com SRL products, consult our internet support at www.adfweb.com.
Otherwise contact us at the address support@adfweb.com

RETURN POLICY:

If while using your product you have any problem and you wish to exchange or repair it, please do the following:

- Obtain a Product Return Number (PRN) from our internet support at www.adfweb.com. Together with the request, you need to provide detailed information about the problem.
- Send the product to the address provided with the PRN, having prepaid the shipping costs (shipment costs billed to us will not be accepted).

If the product is within the warranty of twelve months, it will be repaired or exchanged and returned within three weeks. If the product is no longer under warranty, you will receive a repair estimate.

ADFweb.com S.r.l.
Via Strada Nuova, 17
IT-31010 Mareno di Piave
TREVISO (Italy)
Phone +39.0438.30.91.31
Fax +39.0438.49.20.99
www.adfweb.com