User Manual

Revision 0.000
English

MQTT / HTTP/REST Server - Converter

(Order Code: HD67G67-B2, HD67G67-G43-B2, HD67G67-G43-E-B2, HD67G67-G43-VPN-B2, HD67G67-G43-E-VPN-B2)

For Website information:
www.adfweb.com?Product=HD67G67-B2
www.adfweb.com?Product=HD67G67-G43-B2
www.adfweb.com?Product=HD67G67-G43-E-B2
www.adfweb.com?Product=HD67G67-G43-VPN-B2
www.adfweb.com?Product=HD67G67-G43-E-VPN-B2

For Price information:
www.adfweb.com?Price=HD67G67-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 Server to

www.adfweb.com?Product=HD67G04	**(Serial)**
www.adfweb.com?Product=HD67G06	**(Modbus Master)**
www.adfweb.com?Product=HD67G08	**(Modbus Slave)**
www.adfweb.com?Product=HD67G10	**(Modbus TCP Master)**
www.adfweb.com?Product=HD67G12	**(Modbus TCP Slave)**
www.adfweb.com?Product=HD67G14	**(BACnet Master)**
www.adfweb.com?Product=HD67G16	**(BACnet Slave)**
www.adfweb.com?Product=HD67G21	**(CAN)**
www.adfweb.com?Product=HD67G23	**(CANopen)**
www.adfweb.com?Product=HD67G25	**(DALI)**
www.adfweb.com?Product=HD67G27	**(DeviceNet Master)**
www.adfweb.com?Product=HD67G29	**(DeviceNet Slave)**
www.adfweb.com?Product=HD67G31	**(DMX)**
www.adfweb.com?Product=HD67G33	**(EtherNet/IP Master)**
www.adfweb.com?Product=HD67G53	**(EtherNet/IP Slave)**
www.adfweb.com?Product=HD67G37	**(J1939)**
www.adfweb.com?Product=HD67G39	**(KNX)**
www.adfweb.com?Product=HD67G41	**(NMEA0183)**
www.adfweb.com?Product=HD67G43	**(NMEA2000)**
www.adfweb.com?Product=HD67G45	**(PROFIBUS Master)**
www.adfweb.com?Product=HD67G47	**(PROFIBUS Slave)**
www.adfweb.com?Product=HD67G49	**(PROFINET Master)**
www.adfweb.com?Product=HD67G51	**(PROFINET Slave)**
www.adfweb.com?Product=HD67G53	**(SNMP Manager)**
www.adfweb.com?Product=HD67G55	**(SNMP Agent)**
www.adfweb.com?Product=HD67G57	**(OPC UA Client)**
www.adfweb.com?Product=HD67G59	**(OPC UA Server)**
www.adfweb.com?Product=HD67G61	**(Ethernet)**
www.adfweb.com?Product=HD67G63	**(IEC 61850 Client)**
www.adfweb.com?Product=HD67G65	**(IEC 61850 Server)**
www.adfweb.com?Product=HD67G69	**(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

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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
0.000	27/05/2025	Mdb	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

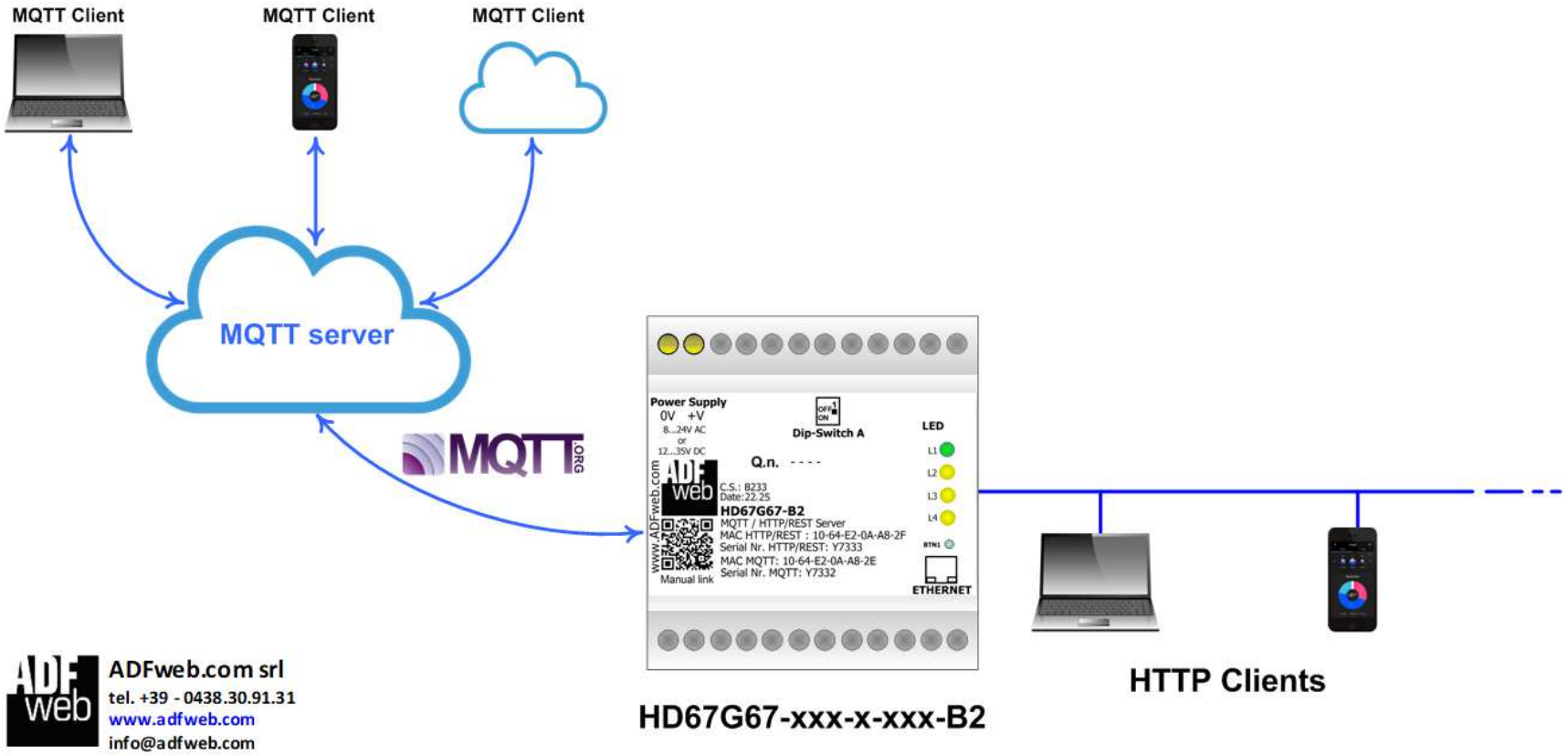
The device is state-of-the-art and is safe. The instruments can represent a potential hazard if they are inappropriately installed and operated by untrained personnel. These instructions refer to residual risks with the following symbol:

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:

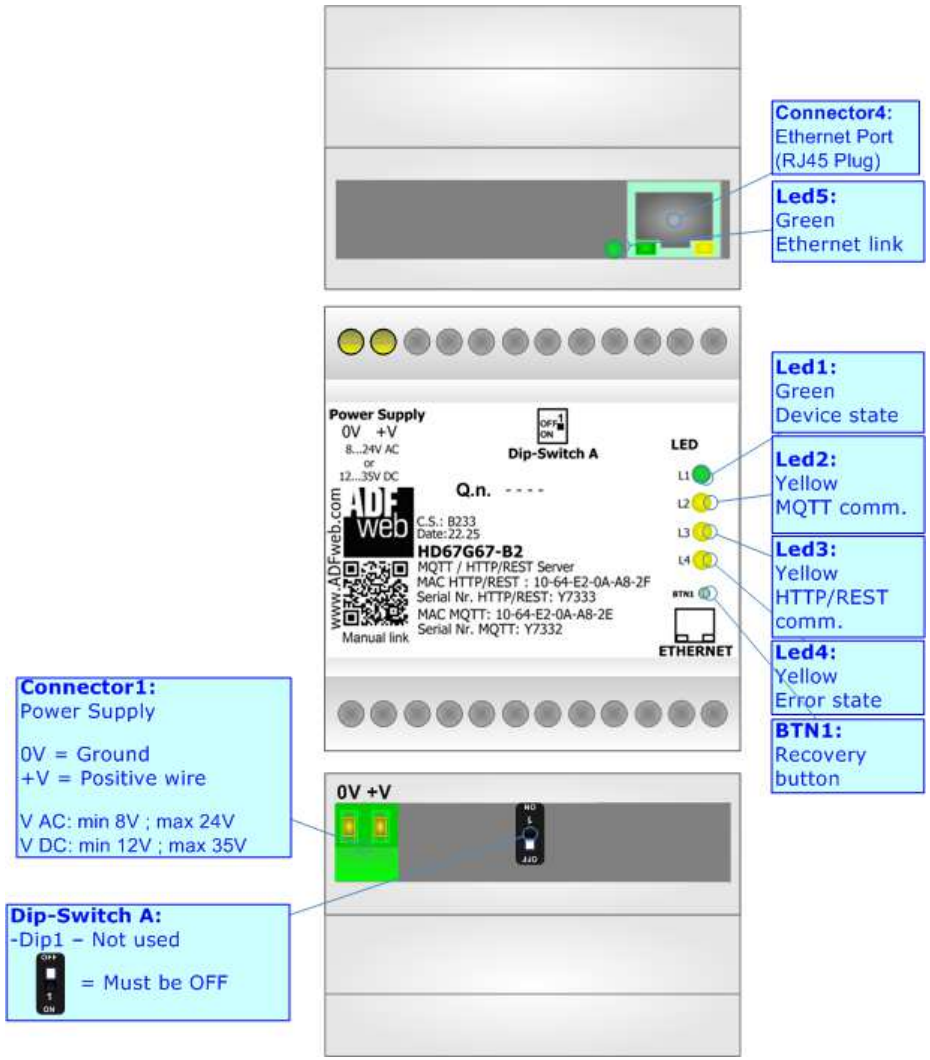


Figure 1a: Connection scheme for HD67G67-B2

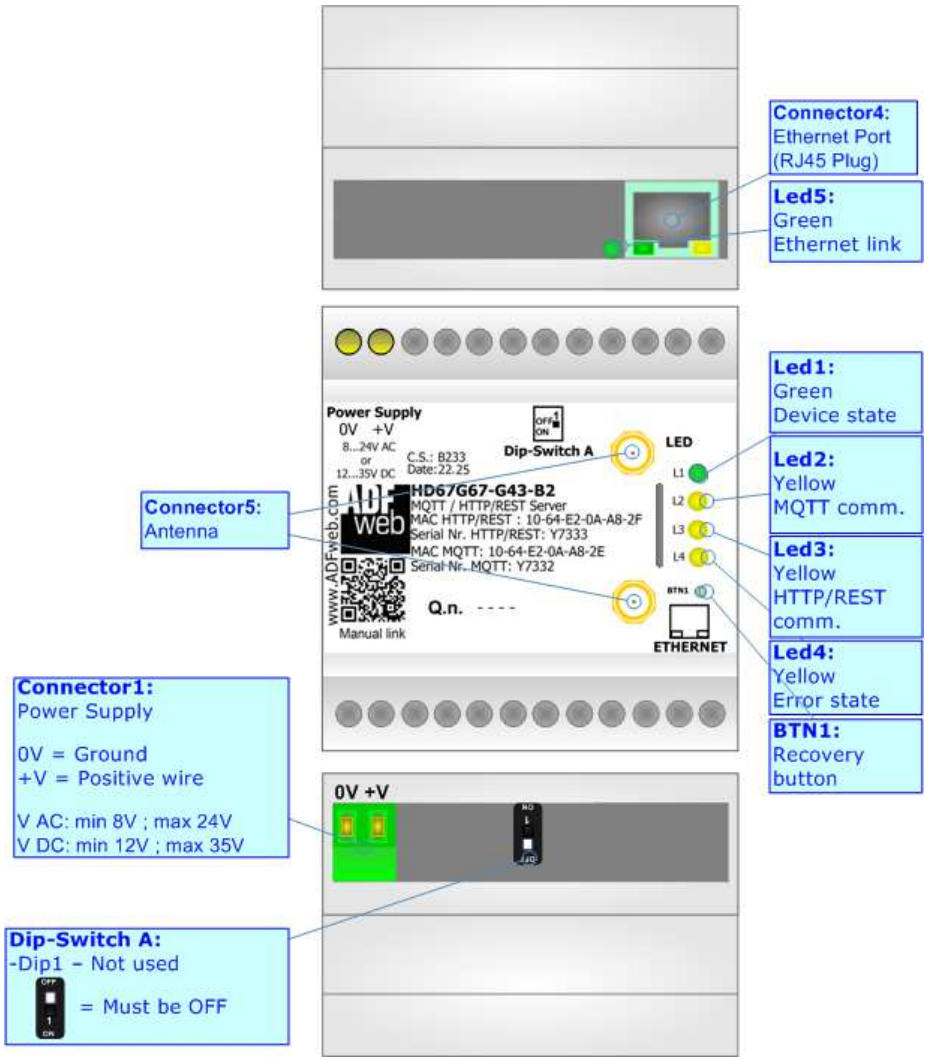


Figure 1b: Connection scheme for HD67G67-G43-x-xxx-B2

CHARACTERISTICS:

The HD67G67-xxx-x-xxx-B2 is a MQTT / HTTP/REST Server Converter.

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 SW67G67 software on your PC in order to perform the following:

- Define the parameter of HTTP/REST;
- Define the parameter of MQTT line;
- Define the list of HTTP/REST clients to communicate with MQTT;
- Define the endpoints of the HTTP/REST clients;
- Update the device.

POWER SUPPLY:

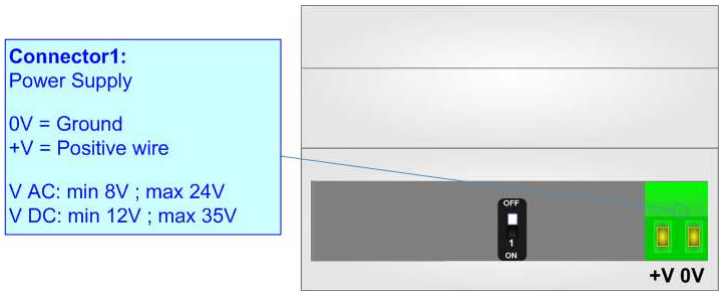
The devices can be powered at 8…24V AC and 12…35V DC. For more details see the two tables below.

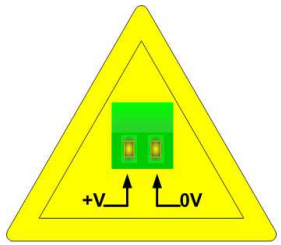
VAC ~		VDC ⎓	
Vmin	**Vmax**	**Vmin**	**Vmax**
8V	**24V**	**12V**	**35V**

Consumption at 24V DC:

Device	Consumption [W/VA]
HD67G67-xxx-x-xxx-B2	5

Caution: Not reverse the polarity power



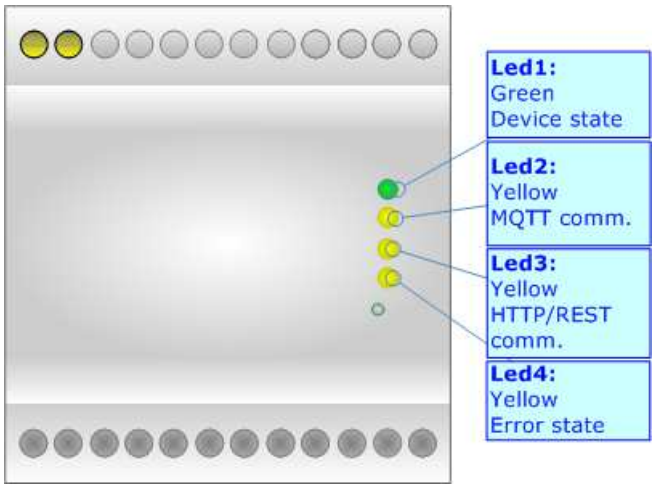


HD67G67-xxx-x-xxx-B2

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.

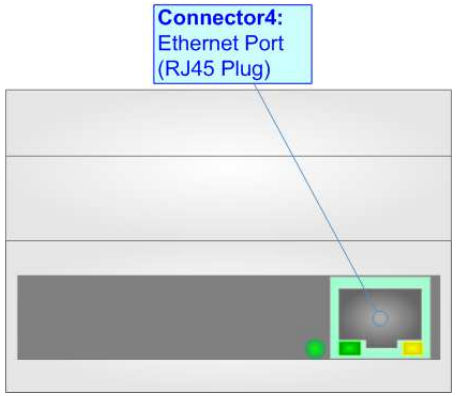
LED	Normal Mode	Recovery Mode
1: Device State (green)	Blinks slowly (~1Hz)	Blinks quickly
2: MQTT comm. (yellow)	Blinks when MQTT communication is running	Blinks quickly
3: HTTP/REST comm. (yellow)	Blinks when a HTTP/REST request is received	Blinks quickly
4: Error State (yellow)	**ON:** an error occurs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



ETHERNET:

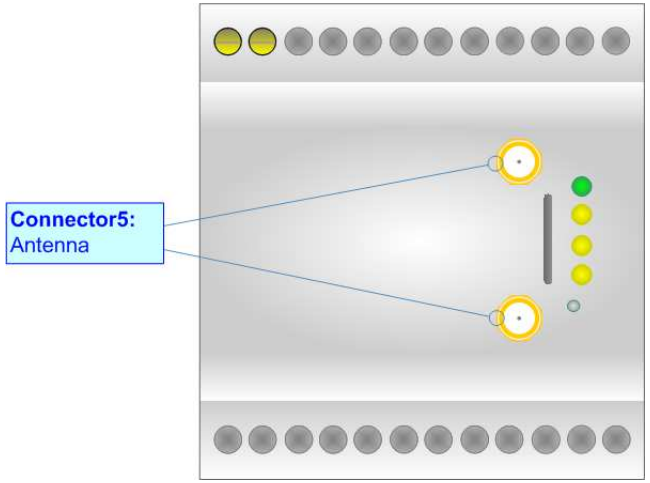
The Ethernet port is used for programming the device, for HTTP/REST communication and for MQTT communication.
The Ethernet connection must be made using Connector4 of HD67G67-xxx-x-xxx-B2 with at least a Category 5E cable. The maximum length of the cable should not exceed 100m. The cable has to conform 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 MQTT side.



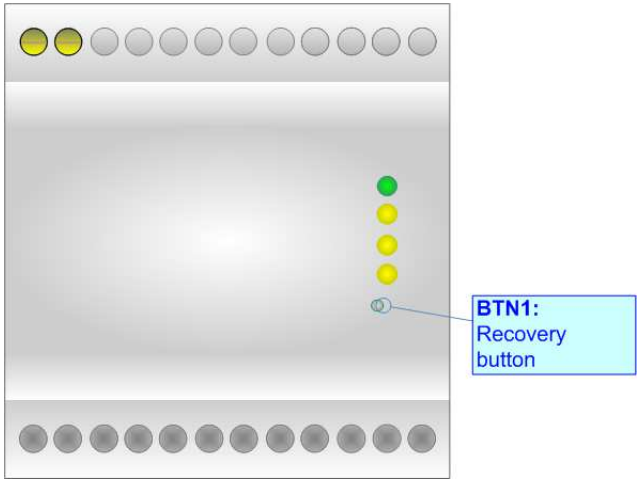
MOBILE:

The HD67G67-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).

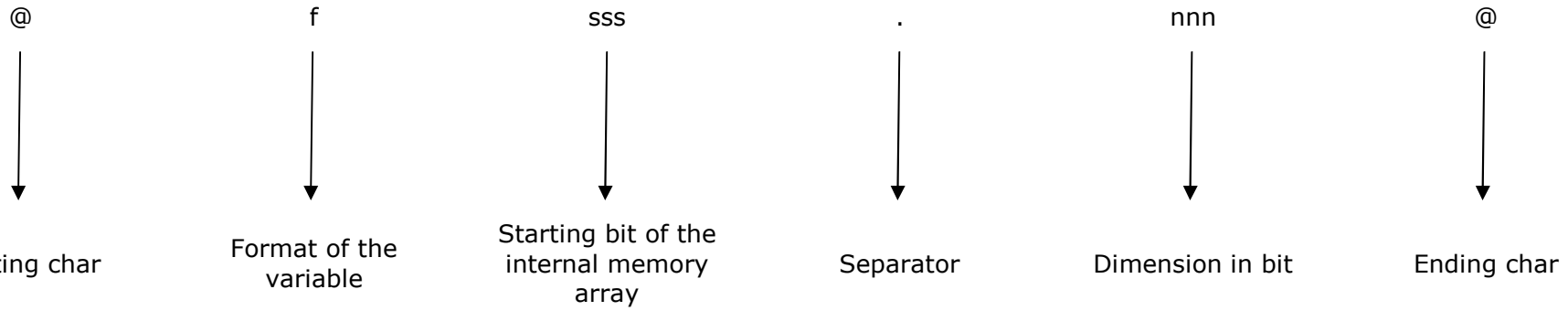
USE OF COMPOSITOR SW67G67:

To configure the Converter, use the available software that runs with Windows called SW67G67. 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).

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

TEMPLATE STRING: DEFINITION OF HTTP/REST PAYLOAD

It is possible to define which is the MQTT data to map inside the HTTP/REST endpoints using specific keywords.
In order to link the data into the HTTP/REST endpoint, you can use these keywords:



Below the type of format allowed:

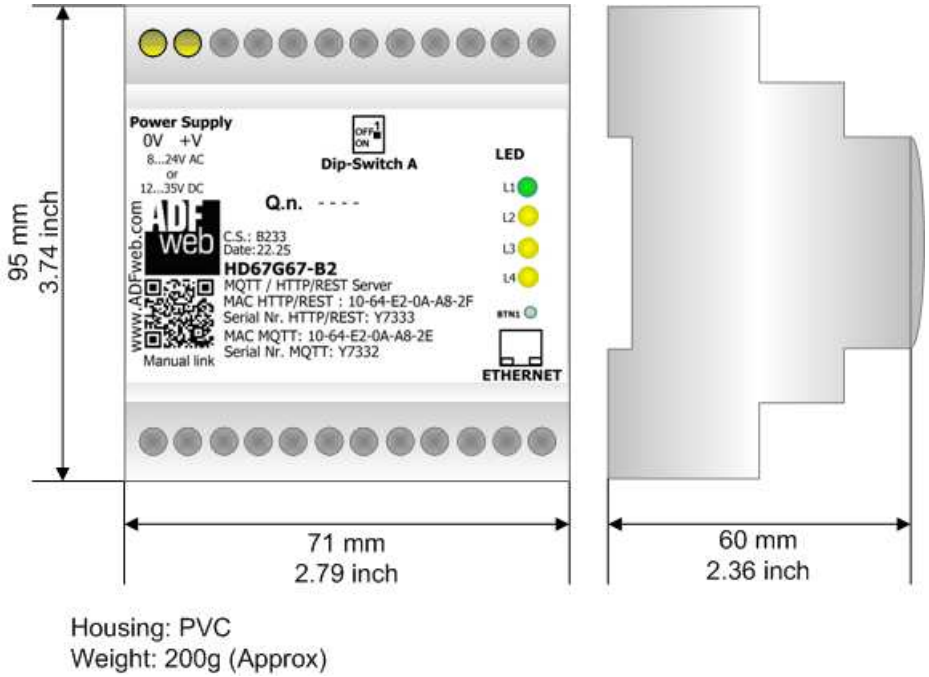
FORMAT	IDENTIFIER
Unsigned Integer	u
Signed Integer	i
Float	f
Binary	b
String	s
Hexadecimal	x
Base64	l

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 2a: Mechanical dimensions scheme for HD67G67-B2

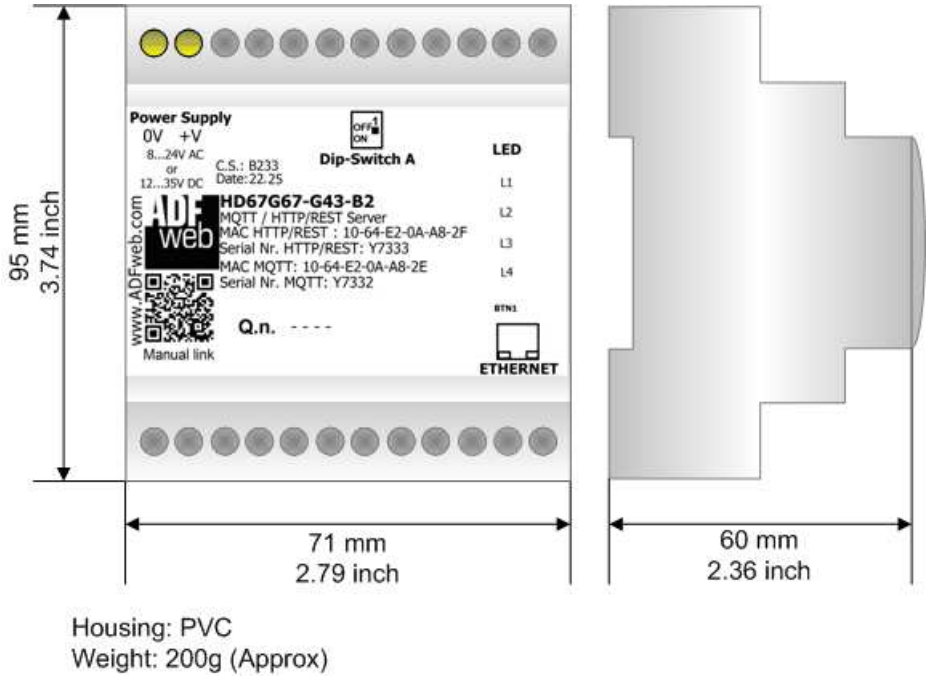


Figure 2b: Mechanical dimensions scheme for HD67G67-G43-x-xxx-B2

ORDERING INFORMATIONS:

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

HD67G67 – 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

Device Family
HD67G67: MQTT / HTTP/REST Server - Converter

Order Code:	**HD67G67-B2**	**-**	MQTT / HTTP/REST Server – Converter
Order Code:	**HD67G67-G43-B2**	**-**	MQTT / HTTP/REST Server – Converter (LAN + SIM LTE)
Order Code:	**HD67G67-G43-E-B2**	**-**	MQTT / HTTP/REST Server – Converter (LAN + SIM LTE+E-SIM)
Order Code:	**HD67G67-G43-VPN-B2**	**-**	MQTT / HTTP/REST Server – Converter (LAN + SIM LTE, VPN)
Order Code:	**HD67G67-G43-E-VPN-B2**	**-**	MQTT / HTTP/REST Server – 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

DISCLAIMER:

All technical content within this document can be modified without notice. The content of the document is a under continual renewal.
For losses due to fire, earthquake, third party access or other accidents, or intentional or accidental abuse, misuse, or use under abnormal conditions repairs are charged to the user. ADFweb.com S.r.l. will not be liable for accidental loss of use or inability to use this product, such as loss of business income. ADFweb.com S.r.l. shall not be liable for consequences of improper use.

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 2002/95/EC 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.

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