

User Manual

Revision 1.000
 English

Ethernet TCP/IP or UDP from/to PROFIBUS Master

(Order Code: HD67568)

for Website information:

<http://www.adfweb.com/?Product=HD67568>

for Price information:

<http://www.adfweb.com/?Price=HD67568>

Benefits and Main Features:

- ▶ Very easy to configure
- ▶ Low cost
- ▶ Industrial temperature range:
 -30°C / 70°C (-22°F / 158°F)

For others Gateways / Bridges:

CANopen to Modbus
 See also the following links:
www.adfweb.com?Product=HD67001 (Modbus RTU Master)
www.adfweb.com?Product=HD67502 (Modbus RTU Slave)
www.adfweb.com?Product=HD67004 (Modbus TCP Master)
www.adfweb.com?Product=HD67505 (Modbus TCP Slave)

For others Gateways / Bridges:
 For **CAN bus 2.0A** and/or **CAN bus 2.0B to Modbus**
 See also the following links:
www.adfweb.com?Product=HD67011 (Modbus RTU Slave)
www.adfweb.com?Product=HD67012 (Modbus RTU Master)
www.adfweb.com?Product=HD67014 (Modbus TCP Slave)
www.adfweb.com?Product=HD67515 (Modbus TCP Master)

Do you have an your customer protocol?
 See the following links:
www.adfweb.com?Product=HD67003

Do you need to choose a device? do you want help?
 Ask it to the following link:
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.

To obtain the updated documentation for the product that you own, note the "Document Code" (Abbreviated written "Doc. Code" on the label on the product) and download the updated from our web site www.adfweb.com/download/

REVISION LIST:

Revision	Date	Author	Chapter	Description
1.000	16/12/2009	FI	All	First release version

WARNING:

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ADFweb.com is not responsible for any error this manual may contain.

TRADEMARKS:

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CONNECTION SCHEME:

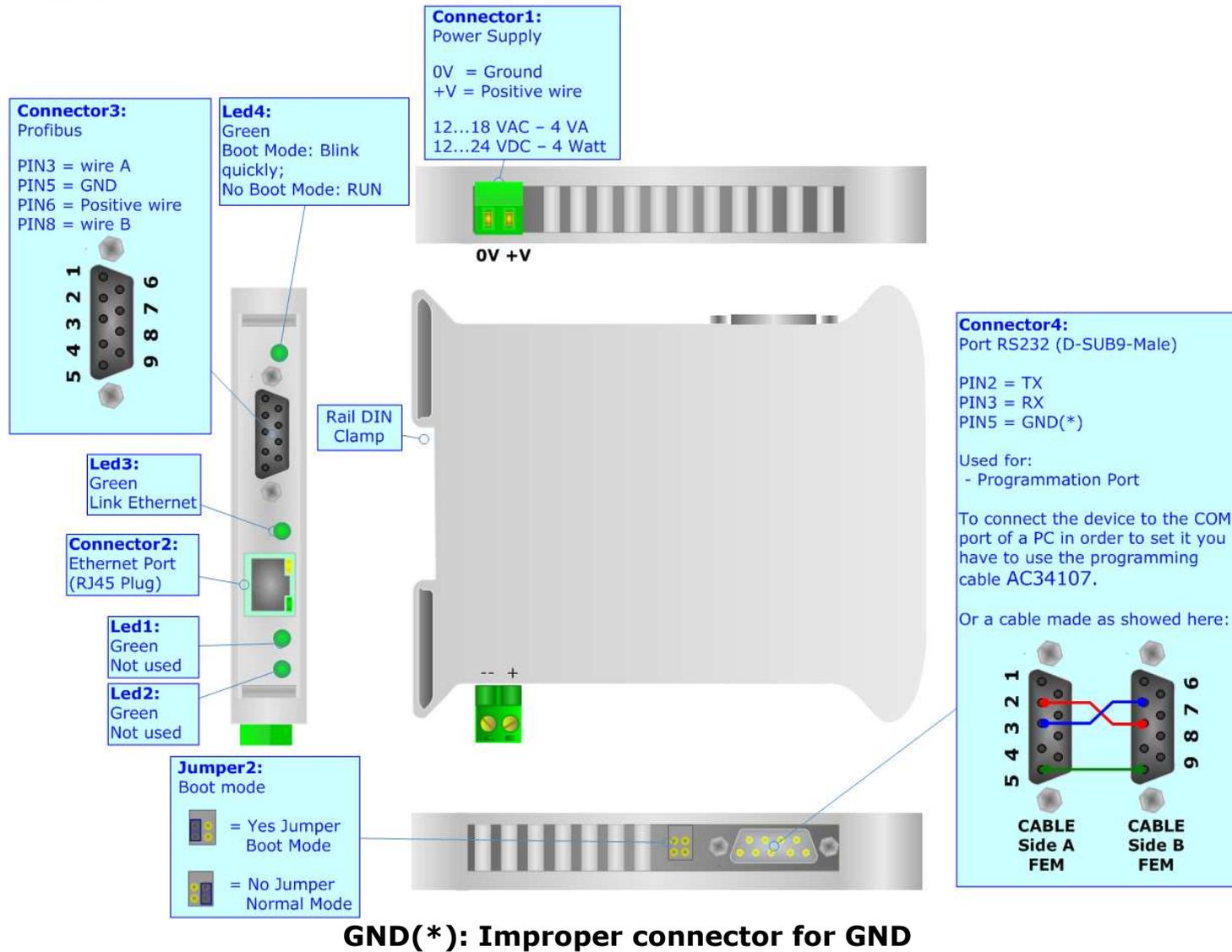


Figure 1: Connection scheme for HD67568

CHARACTERISTICS:

The Configurable Ethernet TCP/IP or UDP from/to PROFIBUS Master allows the following characteristics:

- Baud Rate and Parity changeable with software;
- Mountable on Rail DIN;
- Power Supply 12...18 VAC 4VA or 12...24 VDC 4Watt;
- Temperature range -30°C to 70°C;
- Serials Protocols supported:
 - Simple ASCII Protocol;
 - Simple Binary Protocol;
 - Modbus;
 - JBUS.

CONFIGURATION:

You need Compositor SW67568 software on your PC in order to perform the following:

- Define the parameter of the PROFIBUS;
- Define the parameter of the Ethernet line;
- Define the frames to read or write.

USE OF COMPOSITOR SW67568:

To configure the Gateway, use the available software that runs with Windows, called SW67568. It is downloadable on the site www.adfweb.com and its operation is described in this document.

When launching the SW67568 the right window appears (Fig. 2).

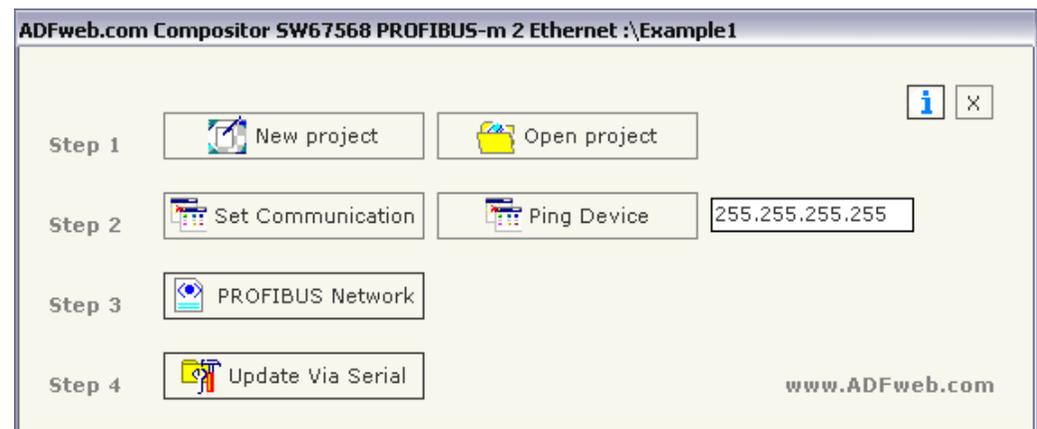


Figure 2: Main window for SW67568

NEW PROJECT / OPEN PROJECT:

The "New Project" button creates the folder which contains the entire device configuration. A device configuration can also be imported or exported:

- To clone the configurations of a Programmable Ethernet TCP/IP or UDP from/to PROFIBUS Master 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 Project".

SET COMMUNICATION:

This section defines the fundamental communication parameter of two buses, PROFIBUS and Ethernet.

By pressing the "Set Communication" button from the main window for SW67568 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The window is divided in two sections, one for the PROFIBUS and the other for the Ethernet.

The means of the fields for "PROFIBUS" are:

- In the field "ID Dev." the address of the PROFIBUS side is defined;
- In the field "Baud rate" the baud rate for the PROFIBUS side is defined;

The means of the fields for "Ethernet" are:

- In the field "IP ADDRESS" insert the IP address;
- In the field "SUBNET Mask" insert the SubNet Mask;
- If the "GATEWAY" field is checked it is possible to insert, in the field under, the IP Address for going out to the net;
- In the field "Port" insert the number of the port;
- If the field "TCP" is checked, the Ethernet protocol used is the TCP/IP, otherwise if the field "UDP" is checked the Ethernet protocol used is the UDP.

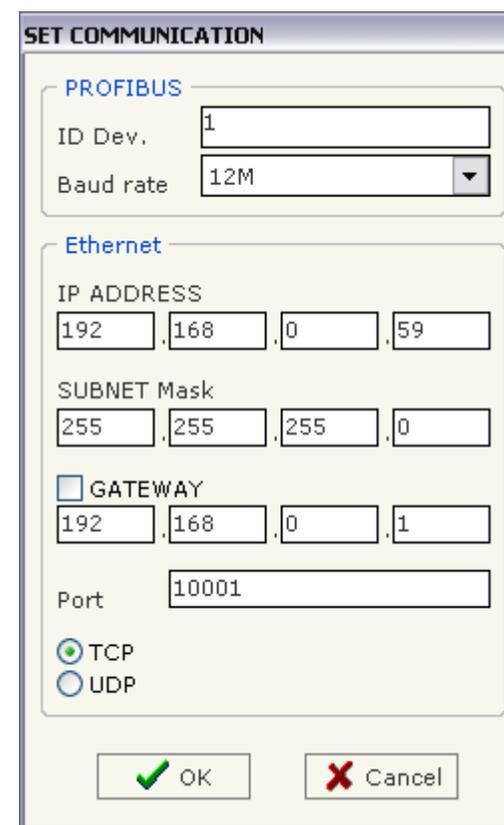


Figure 3: "Set Communication" window

PROFIBUS NETWORK:

By pressing the "PROFIBUS network" button from the main window for SW67568 (Fig. 2) the window "PROFIBUS Network" (Fig. 4) appears. In this section you can add/modify/remove the GSD file of the PROFIBUS slave.

When you select the slave, the window "PROFIBUS Device" (Fig. 5):

- In the section "ID Slave PROFIBUS" you must write the PROFIBUS address of your slave.
- In the section "Available modules" there are all the modules you can select for this slave, to add a modules you can select it and click on the "hands" or with a double click on the module.

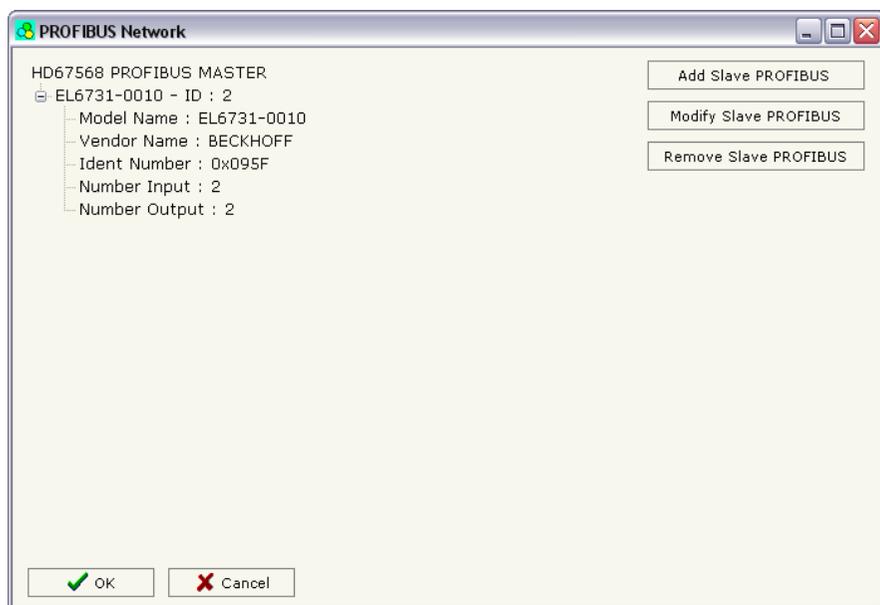


Figure 4: "PROFIBUS Network" window

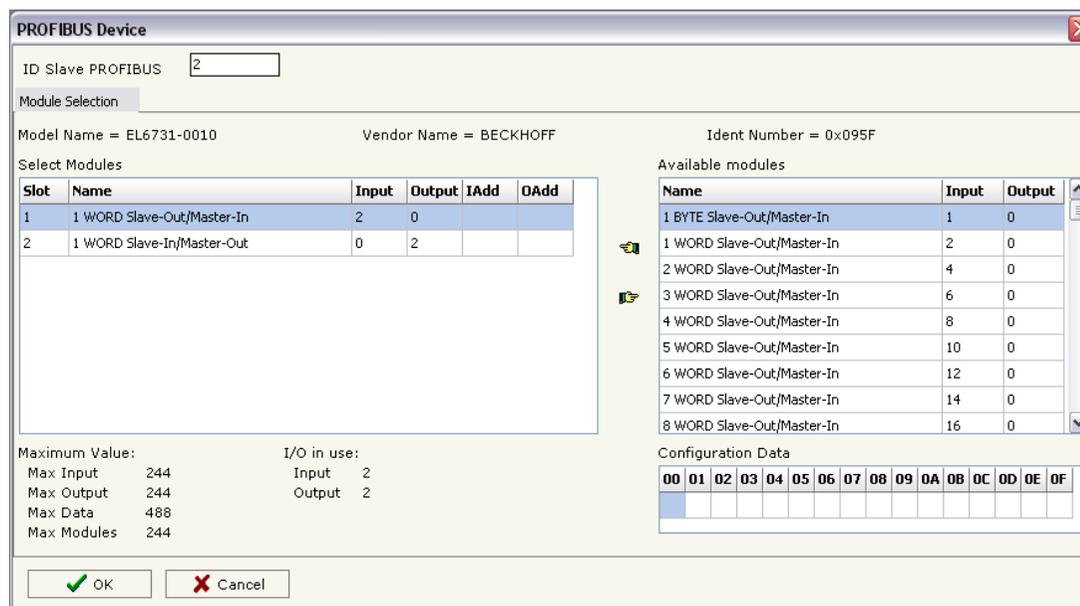


Figure 5: "PROFIBUS Device" window

UPDATE DEVICE:

Section "Update Device" (Fig. 6):

In order to load the parameters or update the firmware in the gateway, follow these instructions:

- Turn OFF the device;
- Connect the Null Modem cable from your PC to the Gateway;
- Insert the Boot Jumper (For more info see the "Connection scheme");
- Turn ON the device;
- Check the "BOOT Led". It must blink quickly (For more info see the "Connection scheme");
- Select the COM port and press the "Connect" button;
- Press the "Next" button;
- Select the operations you want to do. You can select only "Firmware", only "Project" or both of them;
- Press the "Execute update firmware" button to start the upload;
- When all the operations are "OK" turn OFF the device;
- Disconnect the Boot Jumper;
- Disconnect the RS232 Cable;
- Turn ON the device.

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

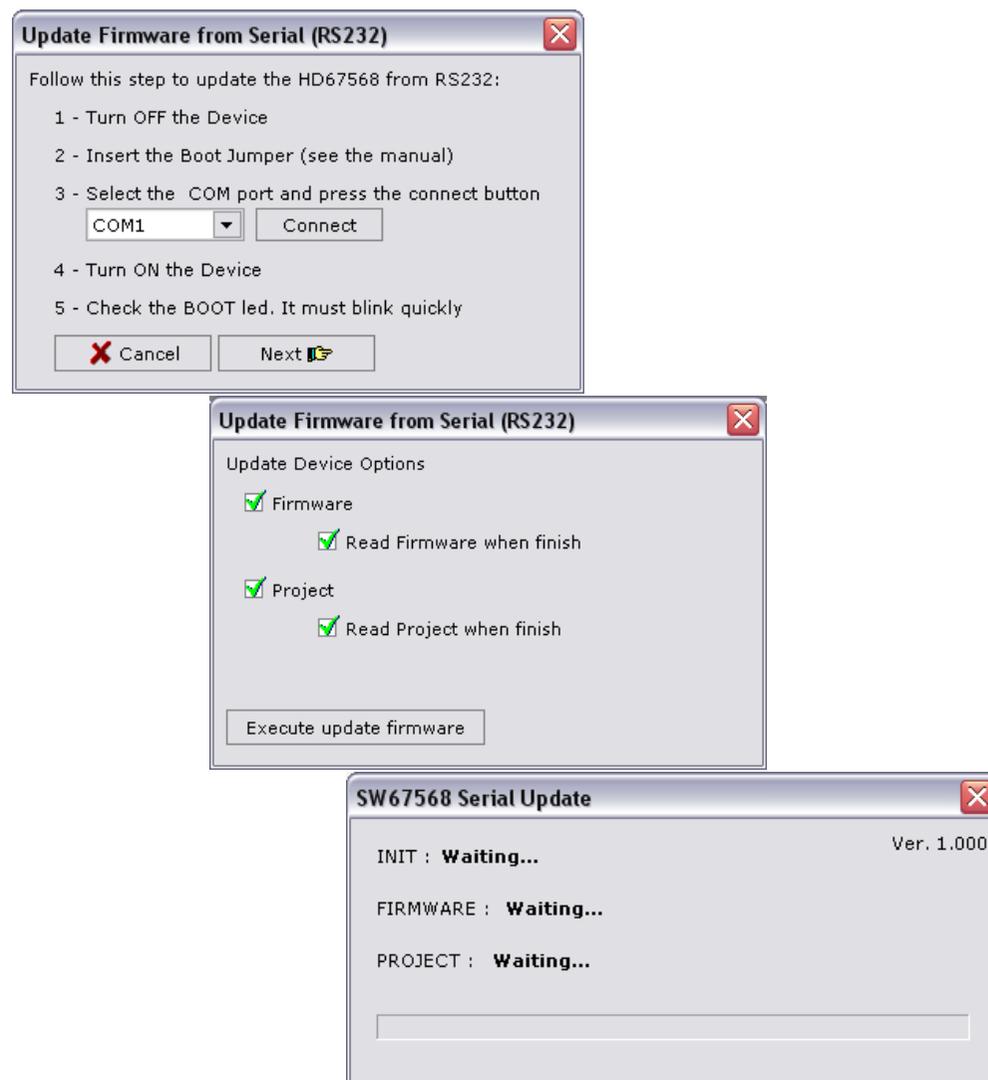


Figure 6: "Update Device" windows

CHARACTERISTICS OF THE CABLES:

The connection from RS232 socket to a serial port (example one from a personal computer) must be made with a Null Modem cable (a serial cable where the pins 2 and 3 are crossed).
 It is recommended that the RS232C Cable not exceed 15 meters.

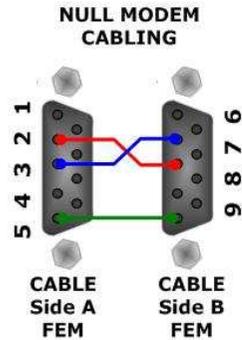


Figure 7: Null modem cabling

ETHERNET PROTOCOL:

This protocol has got a single function for write and/or read frames. This routine can use both the UDP protocol and the TCP by setting the parameter wanted with the SW67568 Compositor.

The request include the following byte:

Byte Number	Description
1	Address PROFIBUS slave
2	Starting Address Write
3	Number of Byte to Write (n)
4 ÷ (4+n-1)	Data Write

n=Number of Byte to Write

If the "Number of Byte to Write (n)" has got the value 0x00 there are no data to write.

The response includes the following byte:

Byte Number	Description
1	Slave state
2	Write state
3 ÷ (B length-1)	Data Read

n=Number of Byte to Read

The Slave state (Byte 1) can have these values:

- 0x00: slave not defined;
- 0x01: No error;
- 0x02: Slave not found;
- 0x03: The master is not able to read the diagnostic;
- 0x04: The master is not able to write the parametrization;
- 0x05: The master is not able to configure the modules;
- 0x06: The master is not able to read the diagnostic (second time);
- 0x07: error in read/write data
- FF: No slave connected.

The request state can have these values:

- 0x00: Not defined
- 0x01: No error
- 0x02: The slave not exist
- 0x03: Scripture cannot be made because the start byte is too far
- 0x04: Scripture cannot be made because the lenght is too much.
- 0x05: The data sent is not sufficient for writing

MECHANICAL DIMENSIONS:

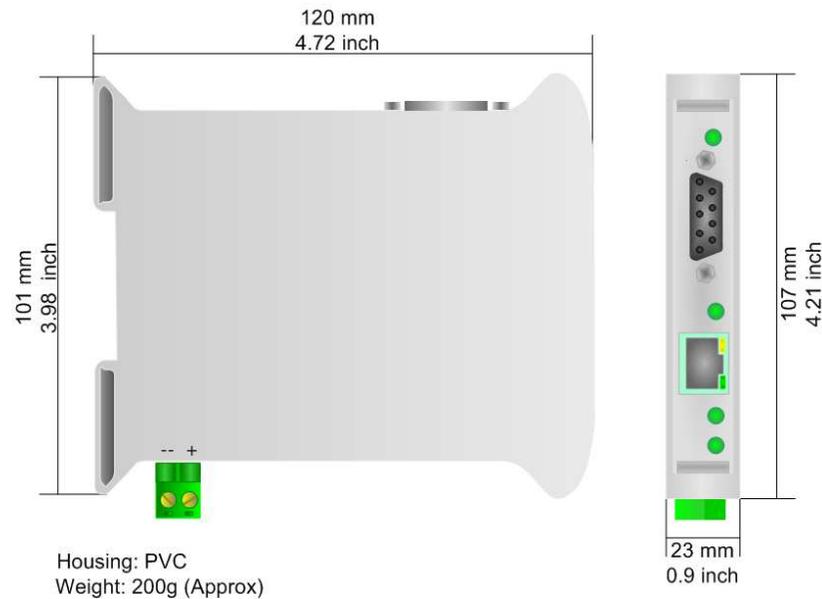


Figure 8: Mechanical dimensions scheme

ORDER CODE:

Order Code: **HD67568** - Gateway – Ethernet TCP/IP or UDP from/to PROFIBUS Master

ACCESSORIES:

Order Code: **AC34107** - Null Modem Cable Fem/Fem DSub 9 Pin 1,5 m

Order Code: **AC34114** - Null Modem Cable Fem/Fem DSub 9 Pin 5 m

Order Code: **AC34001** - Rail DIN - Power Supply 220/240V AC 50/60Hz – 12 V AC

Order Code: **AC34002** - Rail DIN - Power Supply 110V AC 50/60Hz – 12 V AC

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:

- 1) 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.
- 2) 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.

PRODUCTS AND RELATED DOCUMENTS:

Part	Description	URL
HD67121	Gateway CANopen / Canopen	www.adfweb.com?product=HD67121
HD67502	Gateway CANopen / Modbus - RTU	www.adfweb.com?product=HD67502
HD67505	Gateway CANopen / Modbus - Ethernet TCP	www.adfweb.com?product=HD67505
HD67134	Gateway CANopen / DeviceNet	www.adfweb.com?product=HD67134
HD67117	CAN bus Repeater	www.adfweb.com?product=HD67117
HD67216	CAN bus Analyzer	www.adfweb.com?product=HD67216