User Manual

Revision 1.002
English

Gateway / Bridge
CAN from/to PROFIBUS Slave

(Order Code: HD67552)

for Website information:
www.adfweb.com?Product=HD67552

for Price information:
www.adfweb.com?Price=HD67552

Benefits and Main Features:

▶ Very easy to configure

▶ Low cost

▶ Auto PROFIBUS Baudrate

▶ Wide supply input range

▶ Galvanic isolation

▶ 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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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

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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	25/08/2008	FI	All	First release version
1.001	27/02/2009	FI	All	Added new features
1.002	08/07/2009	MI	All	Revision

WARNING:

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CONNECTION SCHEME:

Connector3:
Profibus

PIN3 = wire A
PIN5 = GND
PIN6 = Positive wire
PIN8 = wire B

Led3:
Green
No Boot Mode:
Profibus
communication
Boot Mode: Blink
quickly

Connector1:
Power Supply

V- = Ground
V+ = Positive wire

12...18 VAC – 4 VA
12...24 VDC – 4 Watt

Jumper1:
Termination CAN bus Line

= Open   = 120 ohm

Connector2:
CAN bus

H = High wire
S = Shield
L = Low wire

V– V+   H S L

Connctor4:
Port RS232 (D-SUB9-Male)

PIN2 = TX
PIN3 = RX
PIN5 = GND

Used for:
A) Programmation Port

To connect the device to the
COM port of a PC in order to
set it you have to use the
programming cable AC34107.

Or a cable made as showed
here:

CABLE   CABLE
Side A   Side B
FEM   FEM

Rail
DIN
Clamp

-- +   Hi Grd Lo

Led1:
Yellow
CAN bus
communication

Led2:
Green
RUN

Jumper2:
Boot mode

= Yes Jumper
Boot Mode
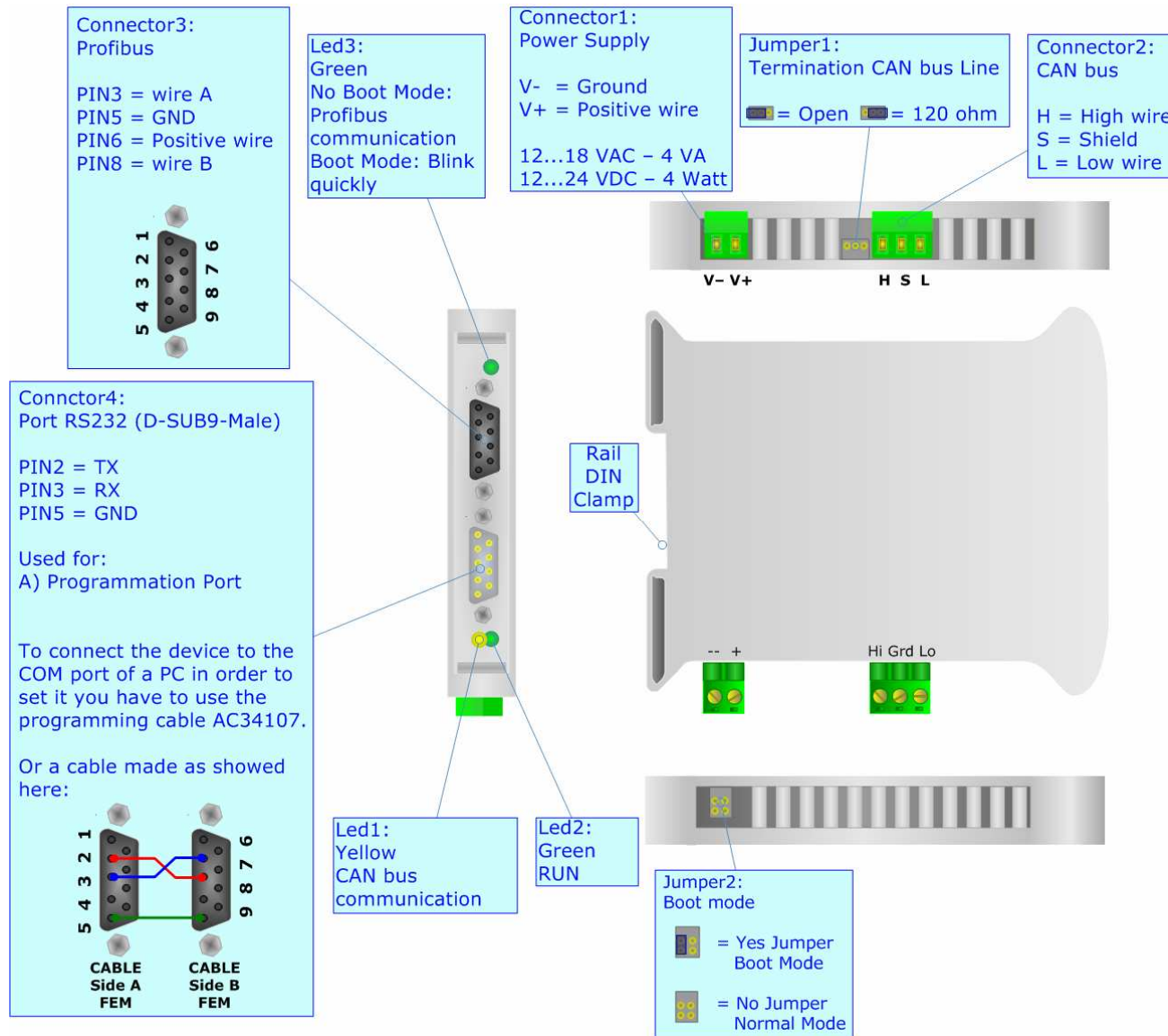
= No Jumper
Normal Mode

Figure 1: Connection scheme for HD67552

CHARACTERISTICS:

The Configurable CAN from/to PROFIBUS Slave Gateway allows the following characteristics:

➢ Two-directional information between network CAN and PROFIBUS;
➢ Eletrical isolation between two buses;
➢ Temperature range -30°C to 70°C.

CONFIGURATION:

You need Compositor SW67552 software on your PC in order to perform the following:

➢ Define the parameter of the CAN;
➢ Define the parameter of the PROFIBUS;
➢ Receive CAN frames;
➢ Transmit CAN frames.

USE OF COMPOSITOR SW67552:

To configure the Gateway, use the available software that runs with Windows, called SW67552. It is downloadable on the site www.adfweb.com and its operation is described in this document.

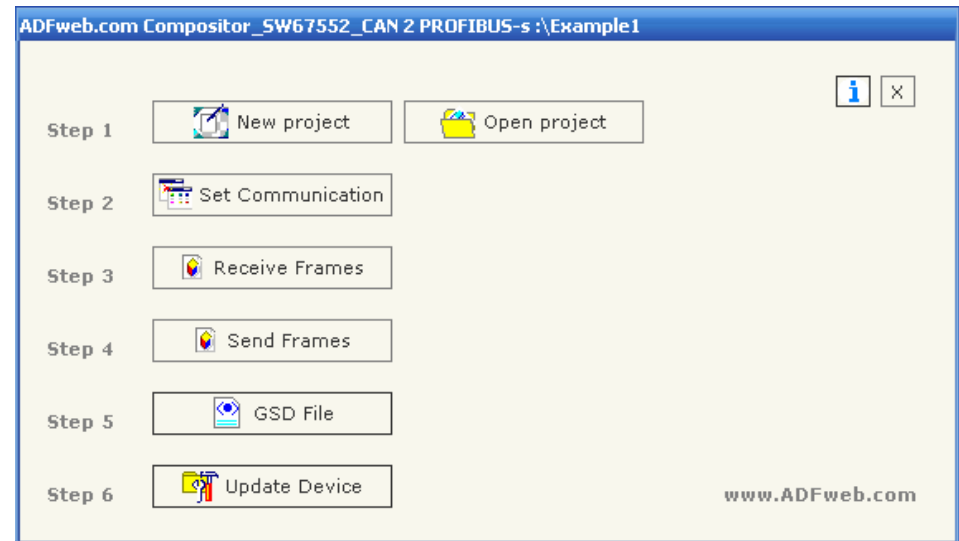When launching the SW67552 the right window appears (Fig. 2).

Figure 2: Main window for SW67552

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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 CAN from/to PROFIBUS Gateway 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".

When a new project is created or an existent project is open, it will be possible to access the various configuration sections of the software:

- **"Set Communication";**
- **"Receive CAN";**
- **"Transmit CAN".**

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SET COMMUNICATION:

This section defines the fundamental communication parameter of two Buses, CAN bus and PROFIBUS.

By Pressing the "Set Communication" button from the main window for SW67552 (Fig. 2) the window "Set Communication" appears (Fig. 3).

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

The means of the fields for "CAN" are:

> ➢ In the field "Baud Rate" the velocity of the CAN bus is defined;
> ➢ If the field "CAN Bus 2.0A" is checked, the CAN with a CobID of 11Bit is used; otherwise if the field "CAN Bus 2.0B" is checked the CAN with a CobID of 11Bit is used;
> ➢ If the field "Send Frame on Data Change" is checked, the frame is sent when the data are changed; otherwise if the field "Send Frame Every xx ms" is checked you have to insert a value in the field and then the frames defined in the "Send Frames" table are sent every xx ms;
> ➢ In the field "Time out Data" insert a time; when this time is elapsed and the data are not reliable, in the register you can read "FFFF".

The means of the fields for "PROFIBUS" are:

> ➢ In the field "ID Dev." the address for the PROFIBUS side is defined;
> ➢ In the field "Baud Rate" the baudrate for the PROFIBUS is defined;
> ➢ If the field "Create GSD file from CAN Mapping" is checked, when you create the "GSD File" every CAN Frame is insert in a Module, otherwise if this field isn't checked a Module contains up to 64 byte.

Figure 3: "Set Communication" window

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RECEIVE FRAMES:

By pressing the "Receive Frames" button from the main window for SW67552 (Fig. 2) the window "Receive Frames" appears (Fig. 4).

The data of the columns have the following meanings:

> ➢ In the field "Cob-ID" the COB_ID of the CAN bus is defined;
> ➢ In the field "Dimension" the number of byte of CAN frame is defined;
> ➢ In the field "Swap" if it is necessary it is possible to create a swap of data bytes;
> ➢ If the field "Delete" is checked the data in the frame will be erased after the "TimeOut Data" is expired;
> ➢ In the field "Mnemonic" the description for the frame is defined.
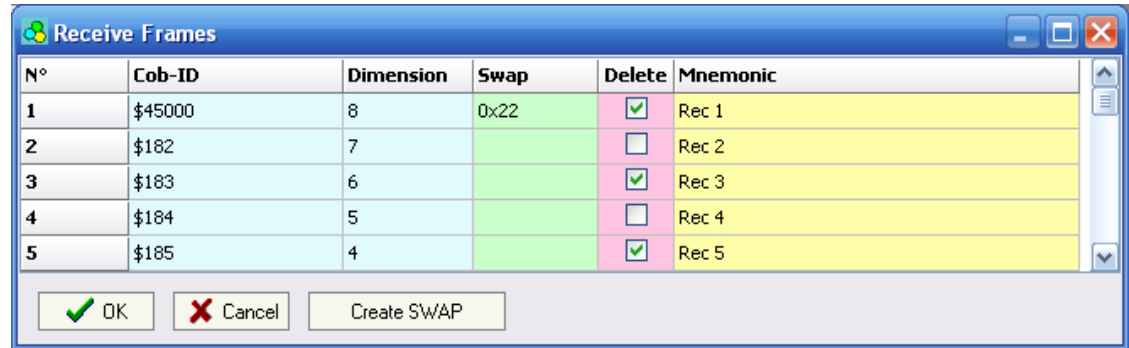

Figure 4: "Receive Frames" window

By pressing the "Create Swap" button from the "Receive Frames" window, the window "Byte Swap" appears (Fig. 5).
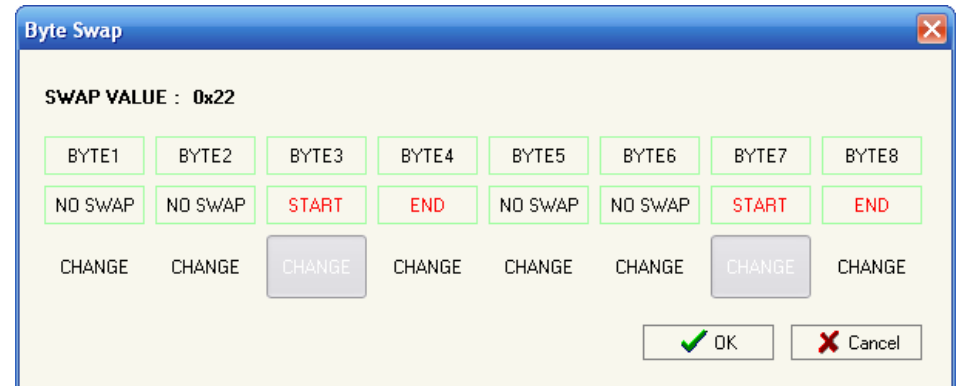This window help you to modify the "Swap" field.

Figure 5: "Byte Swap" window

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SEND FRAMES:

By pressing the "Send Frames" button from the main window for SW67552 (Fig. 2) the window "Send Frames" appears (Fig. 6).

The data of the column have the following meanings:

  ➢ In the field "COB ID" the COB_ID of the CAN bus is defined;
  ➢ In the field "Dimension" the number of byte of CAN frame is defined;
  ➢ In the field "Swap" if it is necessary it is possible to create a swap of data bytes;
  ➢ In the field "Mnemonic" the description for the frame is defined.
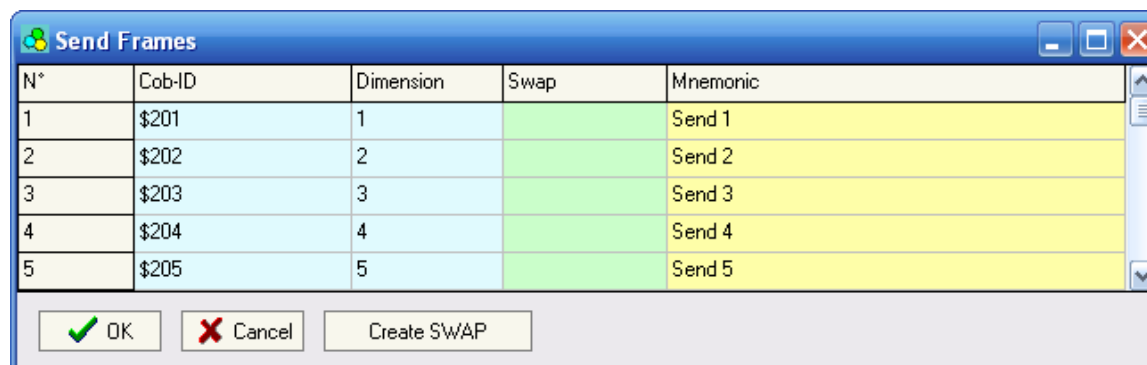

Figure 6: "Send Frames" window

By pressing the "Create Swap" button from the "Receive Frames" window, the window "Byte Swap" appears (Fig. 7).
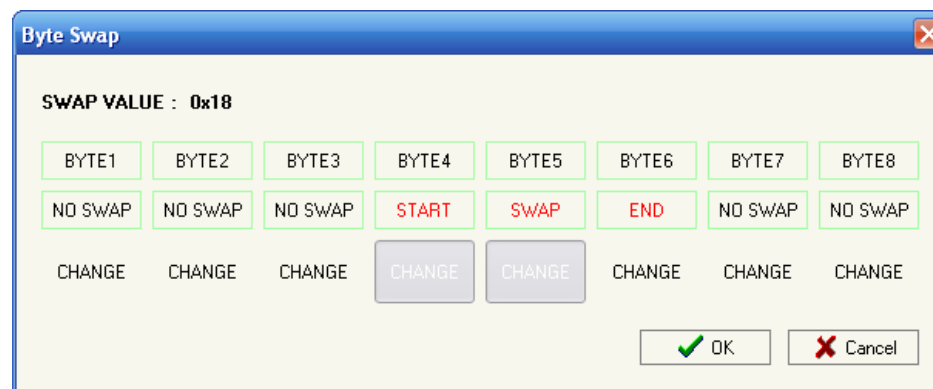This window help you to modify the "Swap" field.

Figure 7: "Byte Swap" window

GSD FILE:

By pressing the "GSD File" button it is possible to save the GSD file for the PROFIBUS side.
With this feature you can save the configuration of the gateway of the PROFIBUS side.

UPDATE DEVICE:

Section "Update device" (Fig. 8).

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.

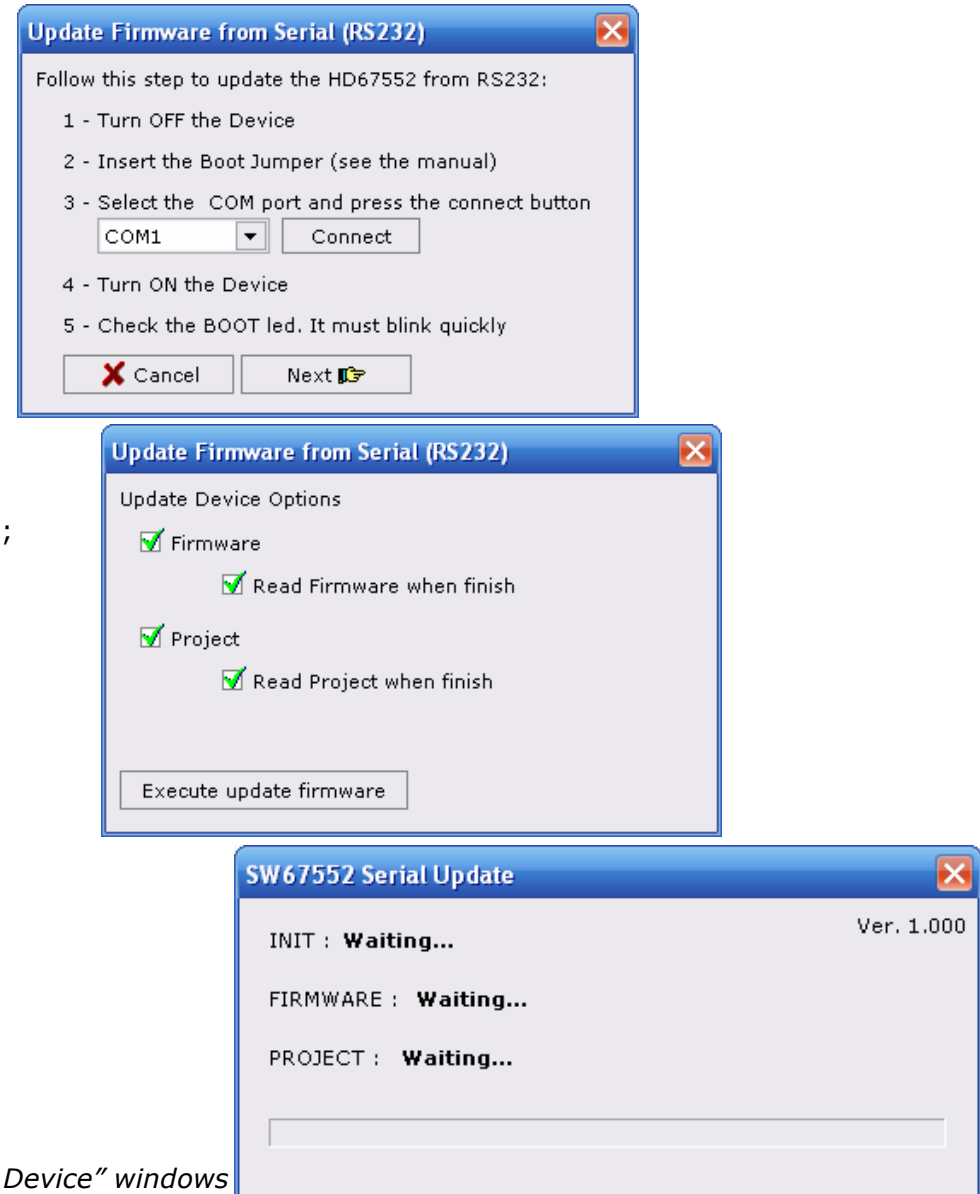At this point the configuration/firmware on the device is correctly updated.

Figure 8: "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.
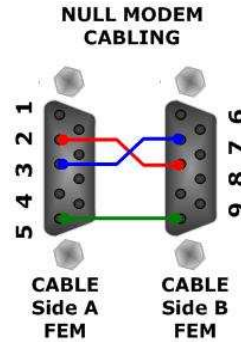
Figure 9: Null modem cabling

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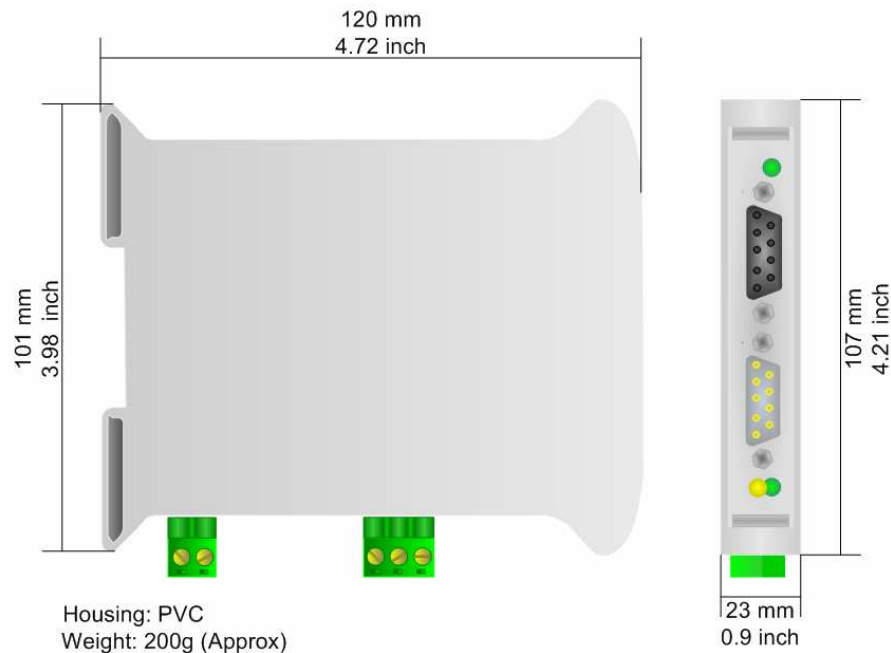
MECHANICAL DIMENSIONS:

Figure 10: Mechanical dimensions scheme

ORDER CODE:

Order Code: **HD67552** **-** Gateway – CAN from/to PROFIBUS Slave

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

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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