

User Manual

Revision 1.005
English

PROFIBUS Slave / Modbus Slave - Converter

(Order Code: HD67562)

for Website information:

www.adfweb.com?Product=HD67562

for Price information:

www.adfweb.com?Price=HD67562

Benefits and Main Features:

- ▶ Very easy to configure
- ▶ Low cost
- ▶ Rail din mountable
- ▶ Galvanic isolation
- ▶ Industrial temperature range:
-40°C / 85°C (-40°F / 185°F)



HD67562

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
1.001	18/09/2008	FI	All	New software version
1.002	13/11/2008	FI	All	Change figure 1
1.003	15/04/2010	MI/Dp	All	Revision
1.004	23/06/2010	FT	All	Revision
1.005	11/01/2013	Nt	All	Added new chapters

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 are required for each individual application, legal and safety regulation. 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 instrument can represent a potential hazard if they are inappropriately installed and operated by personnel untrained. These instructions refer to residual risks with the following symbol:

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

CE CONFORMITY

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

CONNECTION SCHEME:

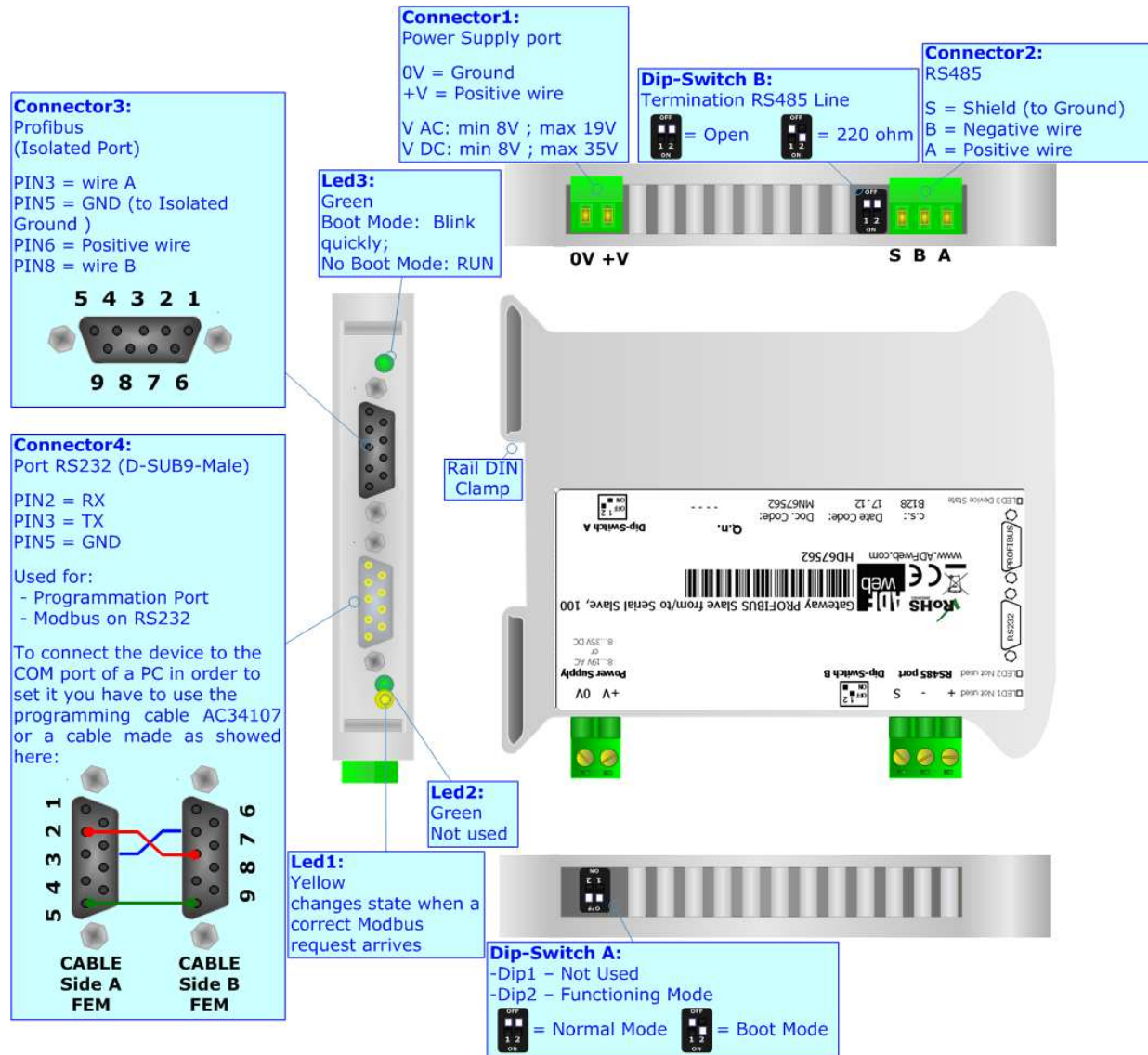


Figure 1: Connection scheme for HD67562

CHARACTERISTICS:

The Configurable PROFIBUS Slave / Modbus Slave – Converter allows the following characteristics:

- Two-directional information between Modbus network and PROFIBUS;
- Electrical isolation between two buses;
- Up to 244 bytes in reading and 244 bytes in writing;
- Power Supply 8...19V AC or 12...35V DC;
- Mountable on 35mm Rail DIN;
- Temperature range -40°C to 85°C.



CONFIGURATION:

You need Compositor SW67562 software on your PC in order to perform the following:

- Define the parameter of the PROFIBUS;
- Define the parameter of Modbus;
- Define which Modbus registers save in the PROFIBUS arrays;
- Create a GSD file;
- Update the device.

POWER SUPPLY:

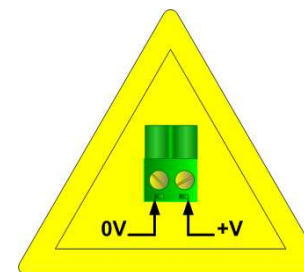
The devices can be powered at 8...24V AC and 12...35V DC. For more details see the two tables below.

VAC 		VDC 	
Vmin	Vmax	Vmin	Vmax
8V	19	8V	35V

Consumption at 24V DC:

Device	Consumption [W/VA]
HD67562-A1	3.5

Caution: Not reverse the polarity power



HD67562

USE OF COMPOSITOR SW67562:

To configure the Converter, use the available software that runs with Windows, called SW67562. It is downloadable on the site www.adfweb.com and its operation is described in this document. (This manual is referenced to the last version of the software present on our web site). The software works with MSWindows (MS 2000, XP, Vista, Seven, 8; 32/64bit).

When launching the SW67562 the right window appears (Fig. 2).



Figure 2: Main window for SW67562

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 "PROFIBUS Slave / Modbus Slave - 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 Project"**.

SET COMMUNICATION:

This section defines the fundamental communication parameter of two Buses, Serial and ProfiBus.

By pressing the "Set Communication" button from the main window for SW67562 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The Window is divided in two sections, one for the Serial and the other for the ProfiBus.

The means of the fields for "Serial" are:

- If the field "RS232" is checked, the serial line in use is the RS232, otherwise if the field "RS485" is checked, the serial line in use is the RS485;
- In the field "Baudrate" the baudrate for the serial line is defined;
- In the field "Parity" the parity of the serial line is defined;
- In the field "ID Dev." the address of the serial side is defined;
- In the subsection "Protocol" it is possible to select the protocol that you wish to use between the following:
 - "Modbus RTU";
 - "Modbus ASCII";
 - "JBUS";
 - Simple "Binary" Protocol;
 - Simple "ASCII" Protocol.

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 baudrate for the ProfiBus is defined;
- In the field "N Byte IN" the number of byte from the slave ProfiBus to the gateway is defined;
- In the field "N Byte OUT" the number of byte from the gateway to the slave ProfiBus is defined.

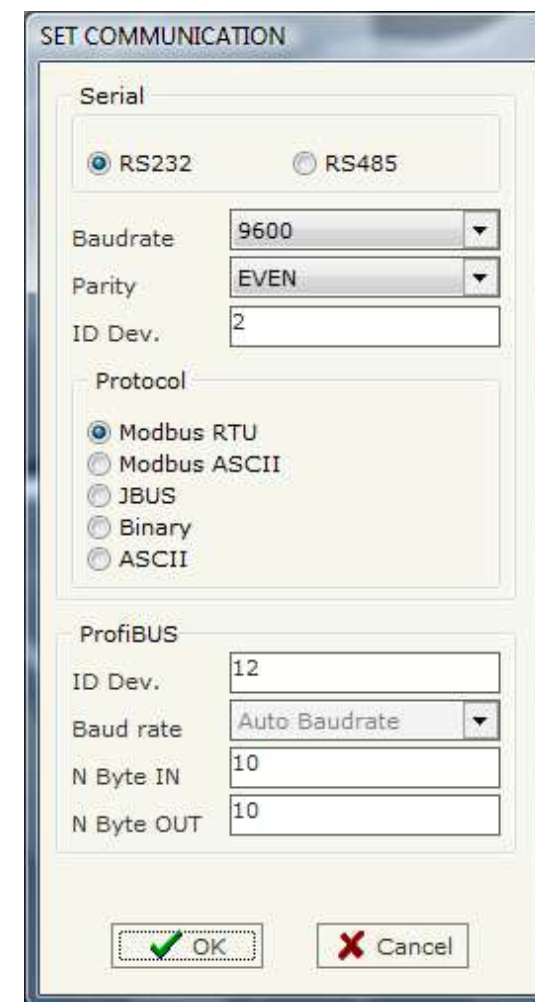


Figure 3: "Set Communication" window

SET ACCESS:

By pressing the "Set Access" button from the main window for SW67562 (Fig. 2) the window "Set SDO Access" appears (Fig. 4).

This window is divided in two parts, the "ProfiBus IN --> Serial Read" and the "Serial Write --> ProfiBus OUT".

The first part ("ProfiBus IN --> Serial Read") is used to read the data that arrived from the Slave ProfiBus by using the Serial Line.

The second part ("Serial Write --> ProfiBus OUT") is used to write the data that will be sent to the Slave ProfiBus by using the Serial Line.

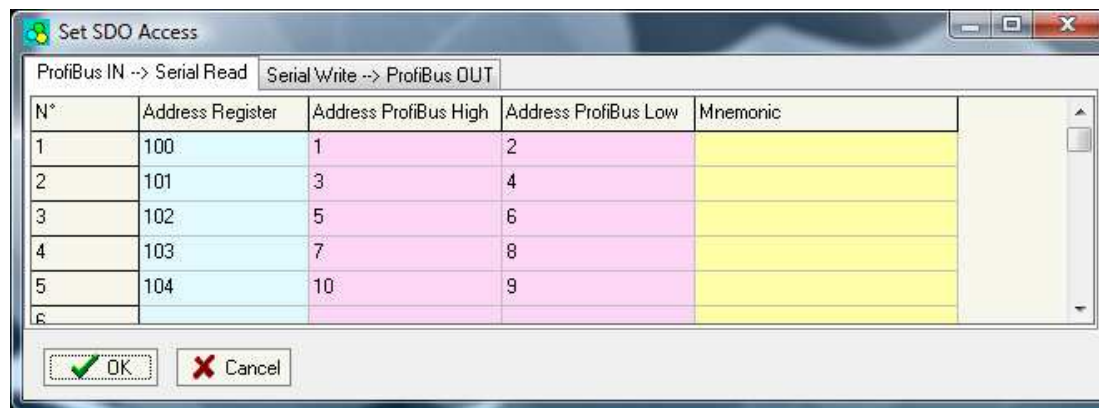


Figure 4: "Set SDO Access" window

The fields of the tables in the two parts are the same:

- In the field "Address Register" the address of the Serial Line is defined;
- In the field "Address ProfiBus High" the first byte where the data will be saved/loaded in the ProfiBus arrays is defined;
- In the field "Address ProfiBus Low" the second byte where the data will be saved/loaded in the ProfiBus arrays is defined;
- In the field "Mnemonic" the description for the register is defined.

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. 5):

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.

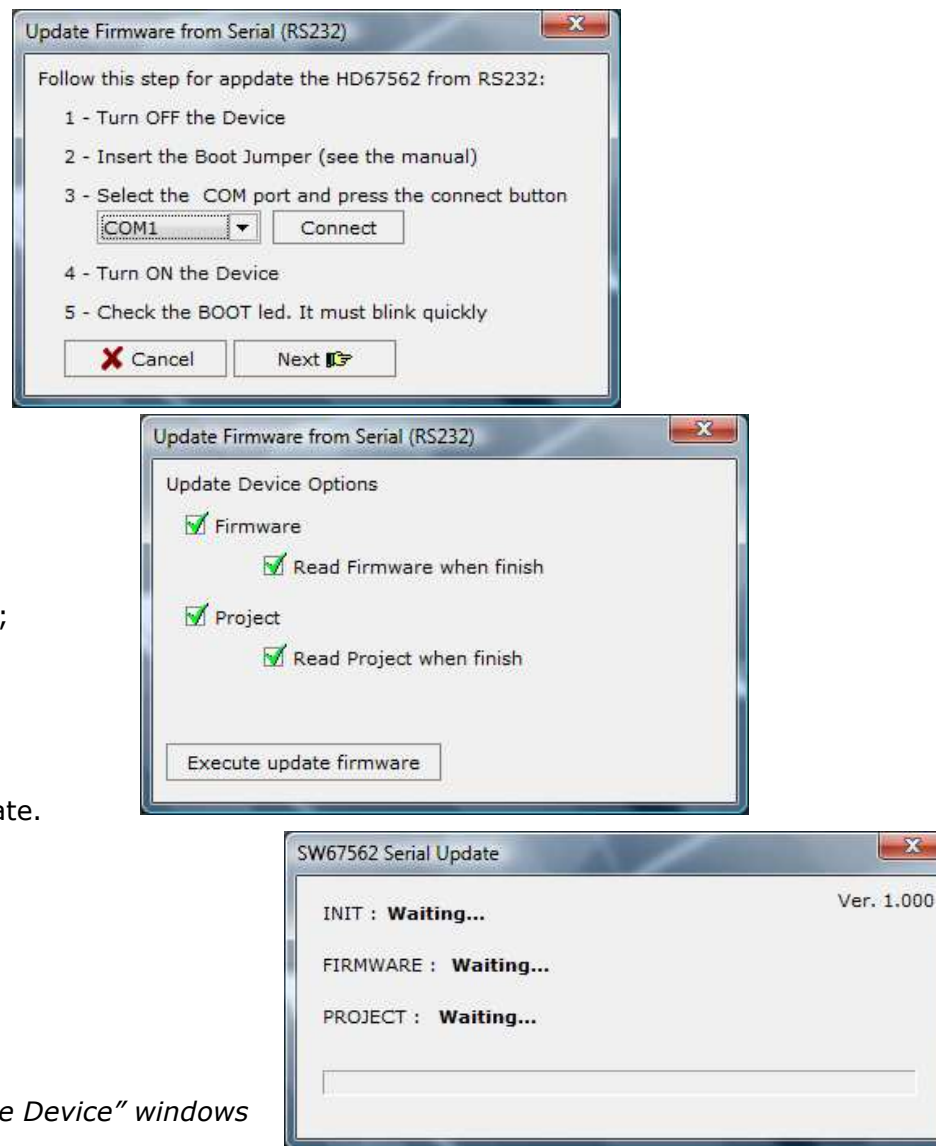


Figure 5: "Update Device" windows

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.

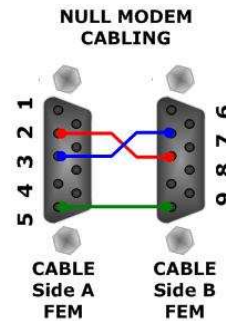
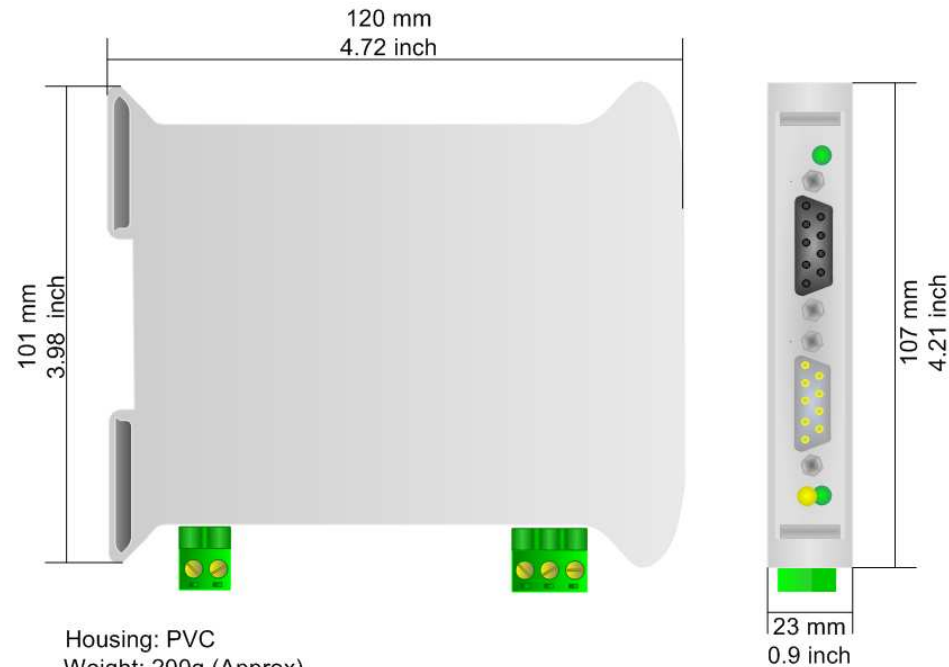


Figure 6: Null modem cabling

MECHANICAL DIMENSIONS:



Housing: PVC
Weight: 200g (Approx)

Figure 7: Mechanical dimensions scheme

ORDER CODE:

Order Code: **HD67562** - PROFIBUS Slave / Modbus Slave - Converter

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

DISCLAIMER

All technical content within this document can be modified without notice. The content of the document content is a recurring audit. 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 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:

- 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