

User Manual

Revision 1.002
English

RS232 / RS485 / Optic Fiber - Repeater – Extender bus line

(Order Code: HD67238F)

for Website information:

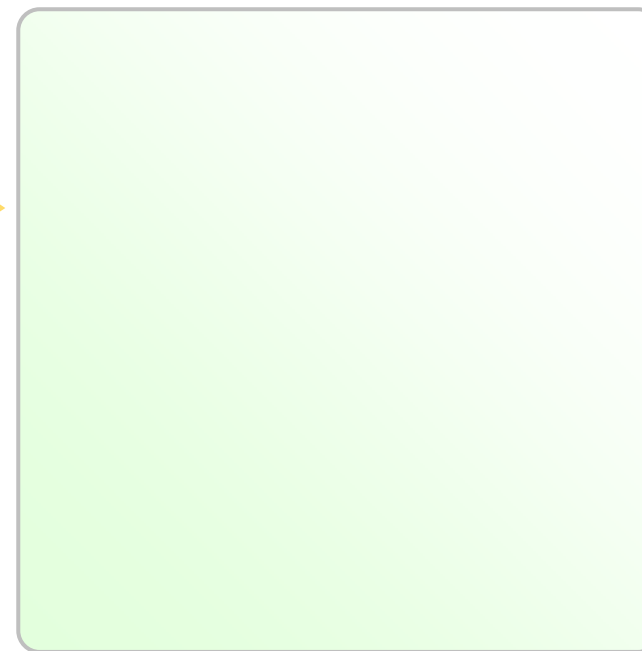
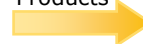
Benefits and Main Features:

- ▶ Naturally Resistant to Surges, Spikes and Electrical Noise.
- ▶ Multi Modal Optic fibre up to 2000 meters.
- ▶ Allows extension of a line segment.
- ▶ MAX baud rate 115200 Bps.
- ▶ Temperature range -40°C to 85°C.



HD67238F

Similar
Products



INDEX:

	Page
INDEX	2
UPDATED DOCUMENTATION	2
REVISION LIST	2
WARNING	2
TRADEMARKS	2
SECURITY ALERT	3
CHARACTERISTICS	4
POWER SUPPLY	4
SET COMMUNICATION PARAMETERS	5
SET SWITCHES BAUD RATE	5
SET SWITCHES PARITY	5
SET SWITCH ENABLE RS232/RS485	5
SET SWITCH ENABLE SERIAL OUTPUT	7
SOME EXAMPLES	8
CONNECTION SCHEME	9
FUNCTION MODES	10
CHARACTERISTICS OF THE CABLES	10
MECHANICAL DIMENSIONS	11
ORDER CODE	12
ACCESSORIES	12
DISCLAIMER	13
OTHER REGULATIONS AND STANDARDS	13
WARRANTIES AND TECHNICAL SUPPORT	14
RETURN POLICY	14
PRODUCTS AND RELATED DOCUMENTS	14

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	10/09/2007	Av	All	First release version
1.001	02/07/2008	AV	All	Change figure
1.002	11/02/2013	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 or give us a call if you need it.

CHARACTERISTICS:

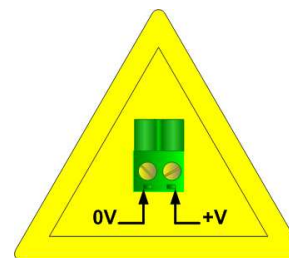
The Repeater optic fibre to RS232 to RS485 is a speedy repeater to the serial line RS232 or RS485 to optic fibre.
 The control by microprocessor with 16 bits makes it particularly suitable for supervisor software and the connection to a Personal Computer:

- Baud Rate and Parity changeable switches accessible externally
- Mountable on Rail DIN
- MAX Baud Rate 115.200 bps
- Power Supply 12/18V AC, 3 VA o 15/30V DC
- Temperature range -40°C to 85°C
- EMS EN 61000-6-2

POWER SUPPLY:

Recommended Power Supply	
VDC	VAC
24v	12v

Caution: Not reverse the polarity power .



HD67238F

VDC		VAC	
Vmin	Vmax	Vmin	Vmax
10v	35v	10v	19v

SET COMMUNICATION PARAMETERS:

Configurable Parameters :

- Baud Rate
- Parity

Fixed Parameters:

- 1 Bit Start
- 8 Bit Data

The switches are on the frontal panel of the device, their function are:

- Switches numbers 1,2,3 are for set the baud rate
- Switches numbers 4,5 are for set the parity
- Switch number 6 is not influential
- Switch number 7 is for enable RS232 or RS485
- Switch number 8 is for enable the output signal of RS232 (RTS and DTR).

SET SWITCHES BAUD RATE:

Switches n° 1, 2, 3

BAUD RATE (bps)	Dip 1	Dip 2	Dip 3
1200	OFF	OFF	OFF
2400	ON	OFF	OFF
4800	OFF	ON	OFF
9600	ON	ON	OFF
19200	OFF	OFF	ON
38400	ON	OFF	ON
57600	OFF	ON	ON
115200	ON	ON	ON

SET SWITCHES PARITY:

Switches n° 4, 5

PARITY	Dip 4	Dip 5
NO PARITY	OFF	OFF
EVEN PARITY	ON	OFF
ODD PARITY	OFF	ON

SET SWITCH ENABLE RS232/RS485:

Switch n° 7

ENABLE	Dip 7
RS232	OFF
RS485	ON

SET SWITCH ENABLE SERIAL OUTPUT:

Switch n° 8

ENABLE OUTPUT	Dip 8
NOT ENABLE	OFF
ENABLE	ON

For example:

You have this connection:

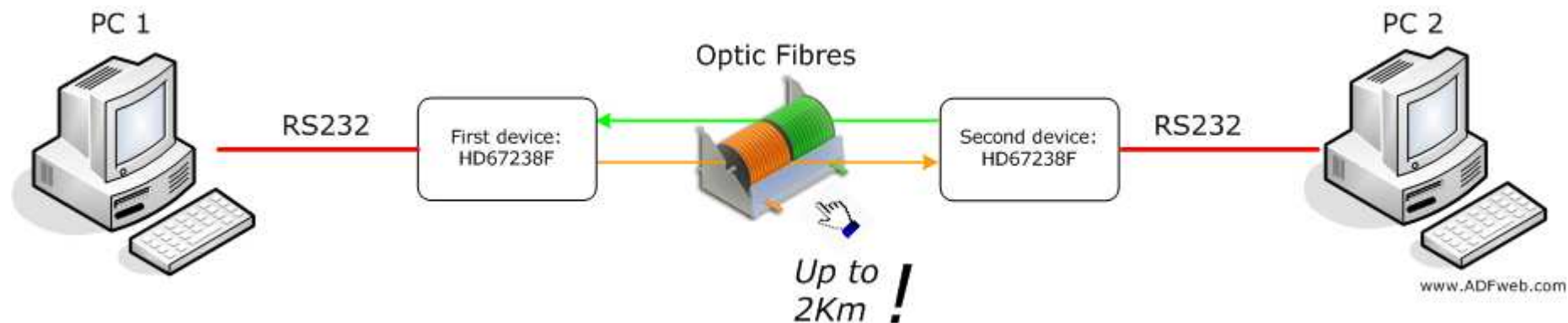


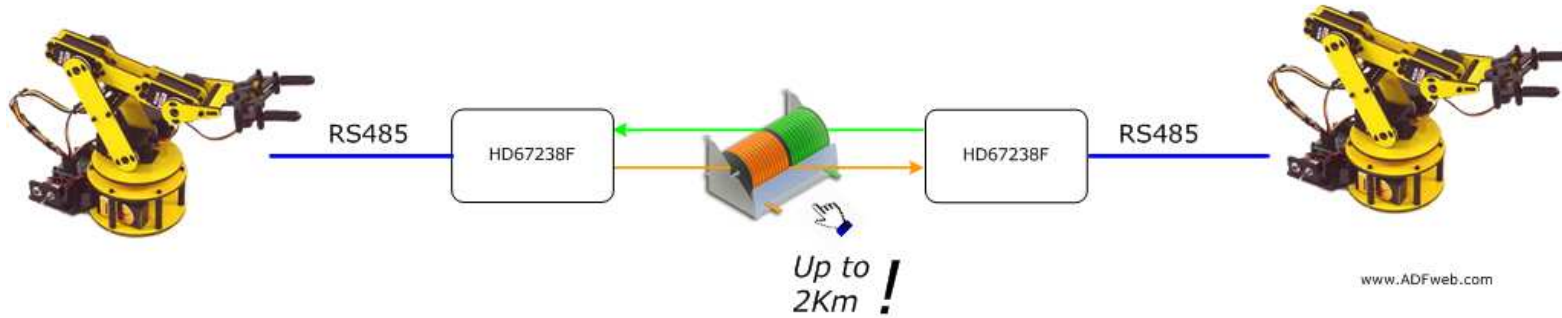
Figure 1: Example of connection

If the serial output is enable:

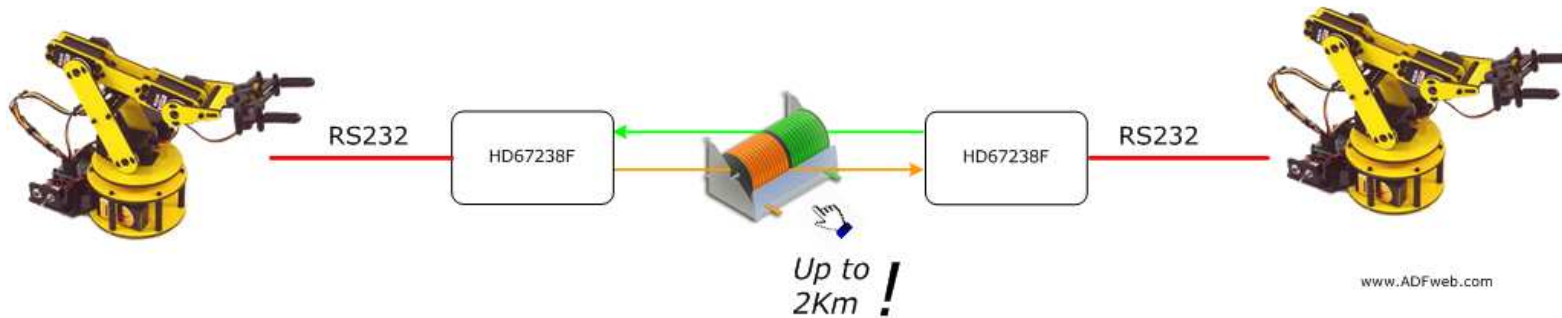
If the RTS of PC 1 is high then the CTS of first device goes high, on the second device the RTS goes high, in this way I have the high CTS on the PC 2.

SOME EXAMPLES:

RS485 Repeater:



RS232 Repeater:



RS232/RS485 Repeater:

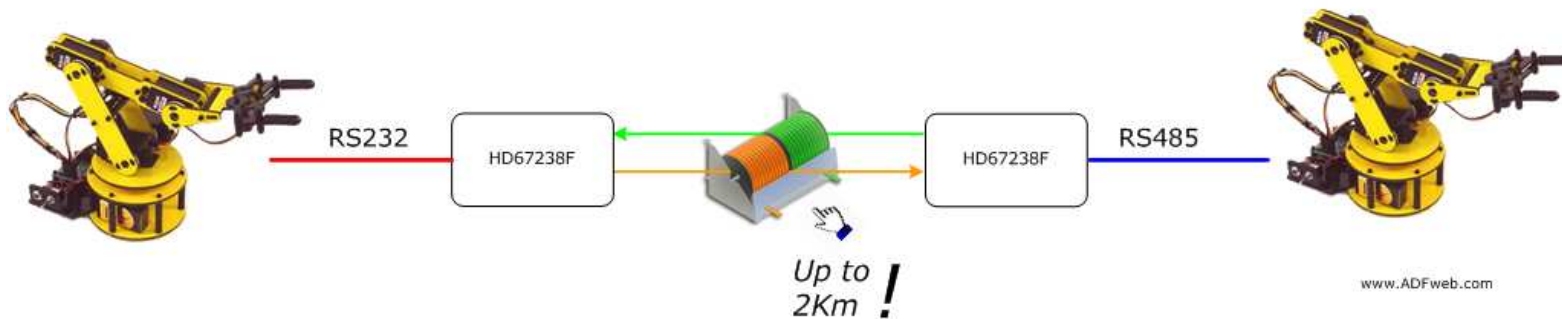


Figure 2: Some examples

CONNECTION SCHEME:

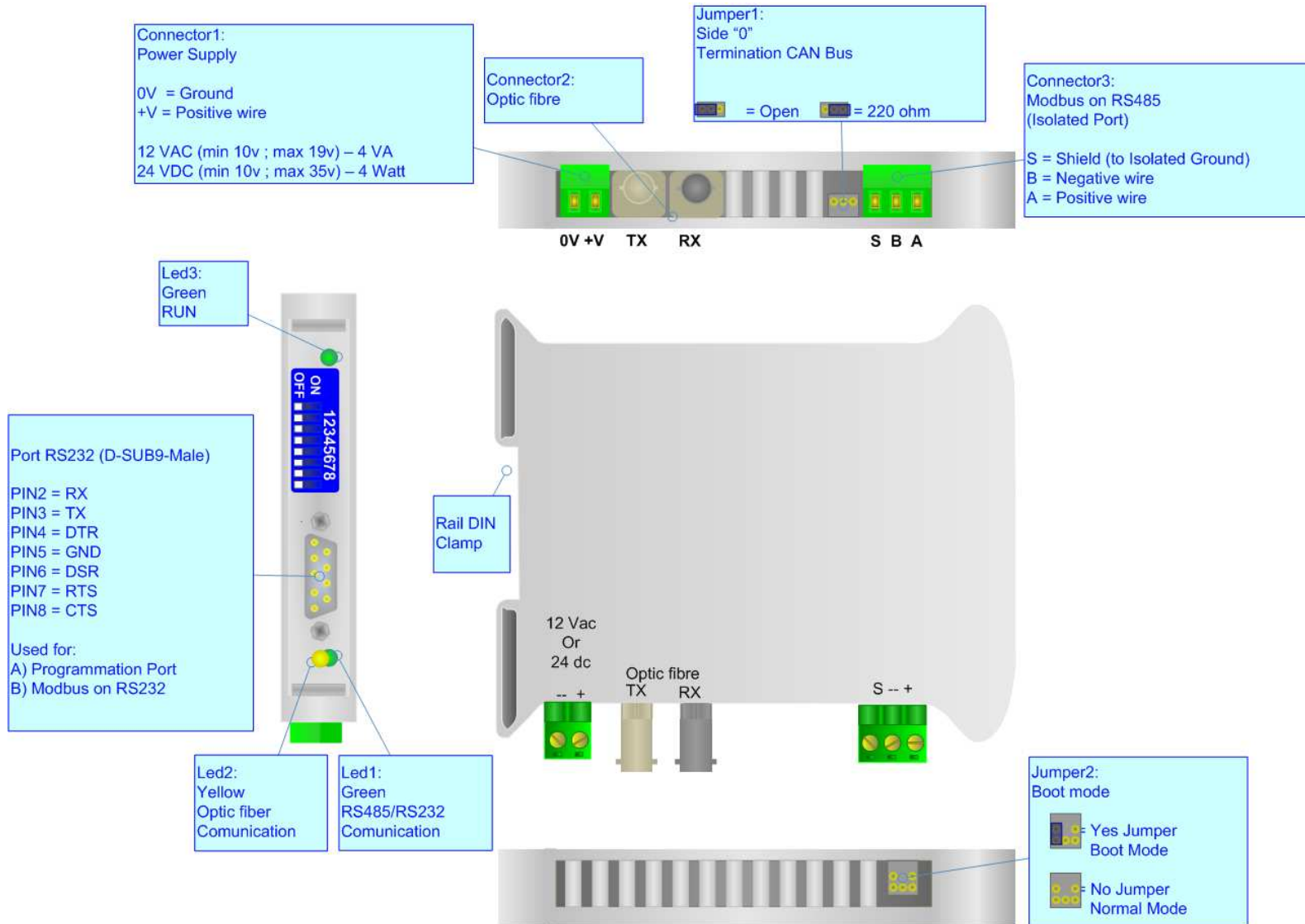


Figure 3: Connection scheme for HD67238F

FUNCTION MODES:

For the device HD67238F, it is possible to update the microprocessor program. Therefore there are two functions to select from the boot jumper:

- NORMAL MODE (factory setting, without BOOT jumper), with this setting the HD67118 is able to function as a converter 232/485
- BOOT MODE (with BOOT jumper), the boot mode is activated when the HD67118 is turned on. Eventual program updates are available on the site www.adfweb.com.

When the run LED blinks at frequency of about 1 a second, the device functions well.

The RX232 and RX485 LEDs monitor the activity on the line (reception of 1 byte) .

Note: if the RX232 and RX485 LEDs stay on permanently, it means that there is a problem in the transmission of the data.

CHARACTERISTICS OF THE CABLES:

The connection from RS232 socket to a serial port (example one from a personal computer), must be made with a Cross cable. The configuration of the cross cable is the following:

Pin 2 (RX)	To	Pin 3 (TX)
Pin 3 (TX)	To	Pin 2 (RX)
Pin 4 (DTR)	To	Pin 6 (DSR)
Pin 5 (GND)	To	Pin 5 (GND)
Pin 6 (DSR)	To	Pin 4 (DTR)
Pin 7 (RTS)	To	Pin 8 (CTS)
Pin 8 (CTS)	To	Pin 7 (RTS)

It is recommended that the RS232 Cable not exceed 15 meters.

The connection at RS485 socket must be done with twisted and shielded cable.

The terminal resistor must be inserted when the HD67238F is at the end of the line, using the Terminator jumper.

MECHANICAL DIMENSIONS:

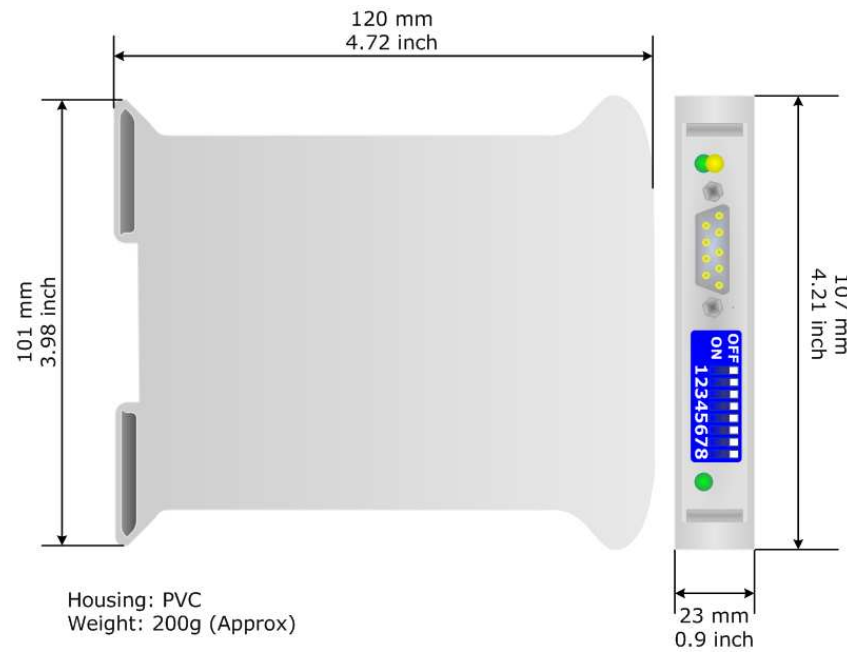


Figure 4: Mechanical dimensions scheme

ORDER CODE:

Order Code: **HD67238F** - RS232 / RS485 / Optic Fiber – Repeater – Extender bus line

ACCESSORIES:

Order Code: **AC34121** - Patch Cable Optic Fibres ST/ST 2Mts

Order Code: **AC34122** - Patch Cable Optic Fibres ST/ST 10Mts

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
HD67120	Converter Ethernet to RS232/RS485	www.adfweb.com?product=HD67120
HD67119	Converter USB 2.0 to RS485 Isolated	www.adfweb.com?product=HD67119
HD67007	Gateway Modbus TCP Server to RTU Master	www.adfweb.com?product=HD67007
HD67010	GatewayModbus TCP Client to RTU Slave	www.adfweb.com?product=HD67010