

# User Manual

Revision 1.002  
English

## Repeater Optic fibre to RS232 to RS485

(Order Code: HD67238F)

for Website information:

[www.adfweb.com?Product=HD67238F](http://www.adfweb.com?Product=HD67238F)

for Price information:

[www.adfweb.com?Price=HD67238F](http://www.adfweb.com?Price=HD67238F)

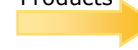
### Benefits and Main Features:

- ▶ 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 -30°C to 70°C.



HD67238F

Similar  
Products



For others Converter / Adapter:

**RS232 / RS485**

See also the following link:

[www.adfweb.com?Product=HD67118](http://www.adfweb.com?Product=HD67118)

**Ethernet / RS232 / RS485**

See also the following link:

[www.adfweb.com?Product=HD67120](http://www.adfweb.com?Product=HD67120)

**USB / RS485**

See also the following link:

[www.adfweb.com?Product=HD67119](http://www.adfweb.com?Product=HD67119)

Do you have an your customer protocol?

See the following link:

[www.adfweb.com?Product=HD67003](http://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](http://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/](http://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/](http://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

**WARNING:**

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**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:

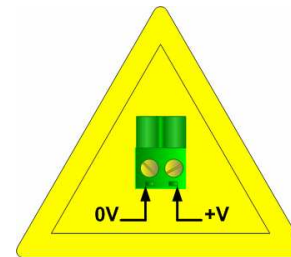
- Baud Rate and Parity changeable switches accessible externally
- Mountable on Rail DIN
- MAX Baud Rate 115.200 bps
- Power Supply 12/18V AC, 3 VA o 15/30V DC
- Temperature range -30°C to 70°C
- EMS EN 61000-6-2

**POWER SUPPLY:**

Recommended Power Supply	
VDC	VAC
24v	12v

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

**Caution: Not reverse the polarity power .**



HD67238F

**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

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

**SET SWITCHES PARITY:**

Switches n° 4, 5

<b>PARITY</b>	<b>Dip 4</b>	<b>Dip 5</b>
<b>NO PARITY</b>	<b>OFF</b>	<b>OFF</b>
<b>EVEN PARITY</b>	<b>ON</b>	<b>OFF</b>
<b>ODD PARITY</b>	<b>OFF</b>	<b>ON</b>

**SET SWITCH ENABLE RS232/RS485:**

Switch n° 7

<b>ENABLE</b>	<b>Dip 7</b>
<b>RS232</b>	<b>OFF</b>
<b>RS485</b>	<b>ON</b>

**SET SWITCH ENABLE SERIAL OUTPUT:**

Switch n° 8

<b>ENABLE OUTPUT</b>	<b>Dip 8</b>
<b>NOT ENABLE</b>	<b>OFF</b>
<b>ENABLE</b>	<b>ON</b>

For example:

You have this connection:

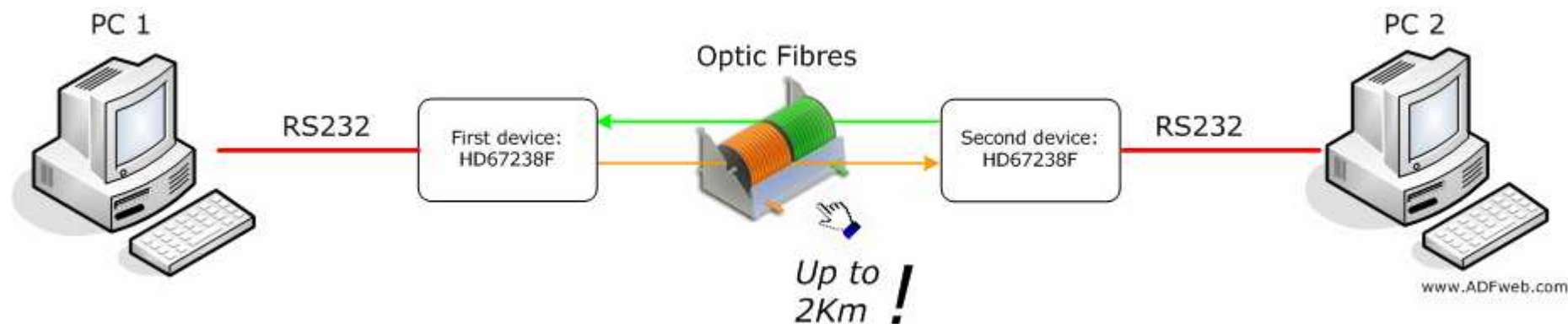


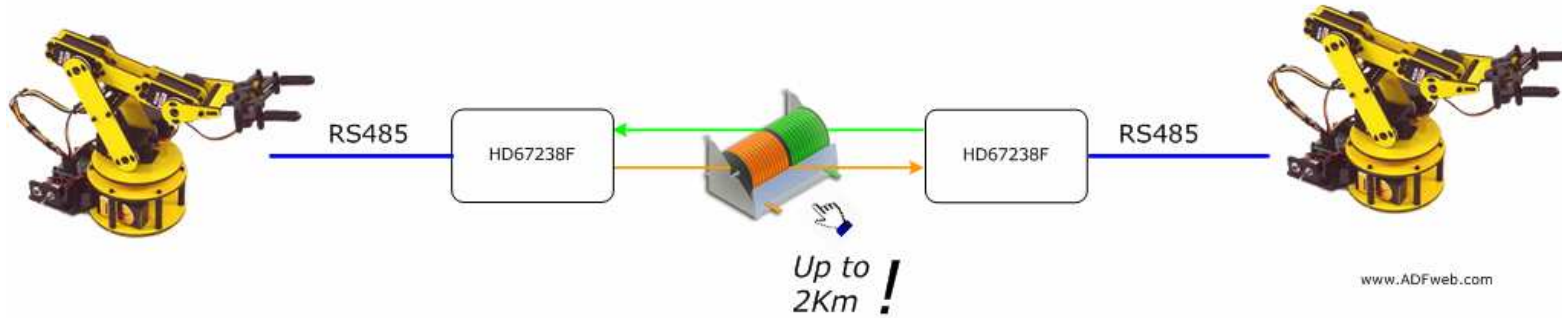
Figure 1: Example of connection

If the serial output is enable:

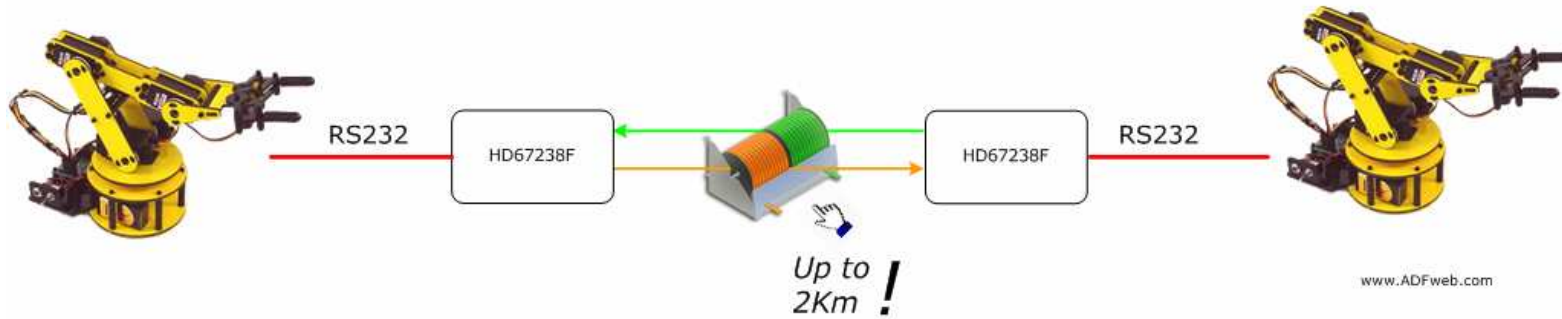
If the RTS of PC 1 is high then the CTS of first device goes high, on the second device the RTS goes high, in this way I have the high CTS on the PC 2.

**SOME EXAMPLES:**

**RS485 Repeater:**



**RS232 Repeater:**



**RS232/RS485 Repeater:**

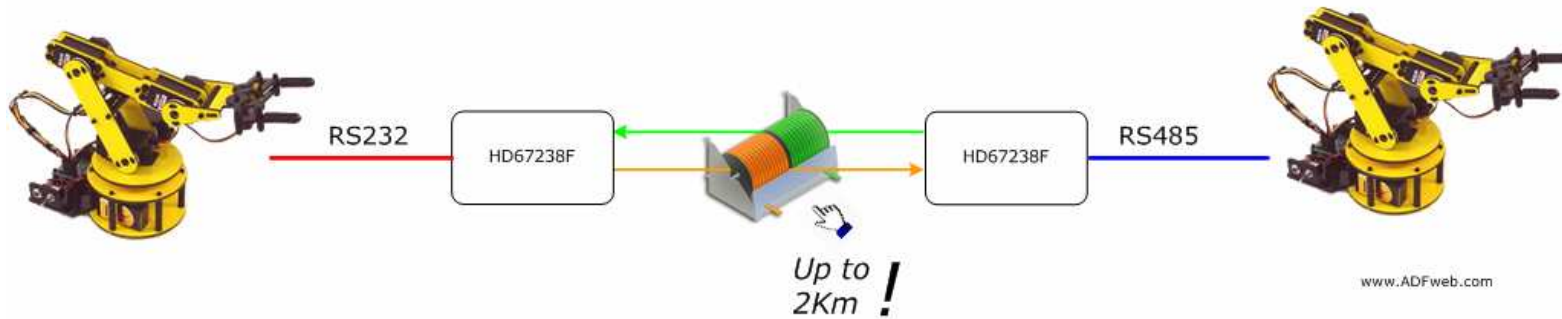


Figure 2: Some examples

**CONNECTION SCHEME:**

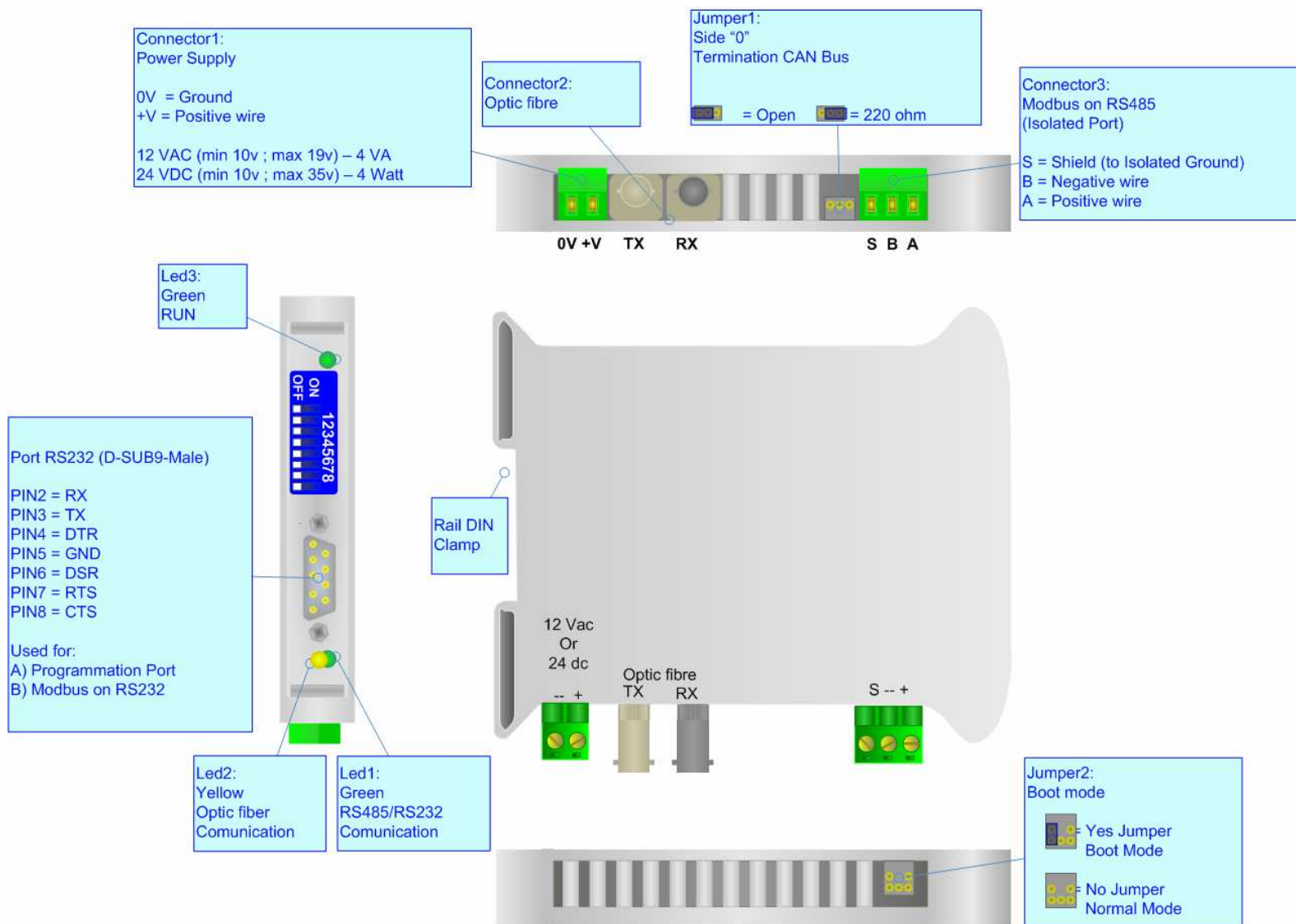


Figure 3: Connection scheme for HD67238F

**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](http://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:**

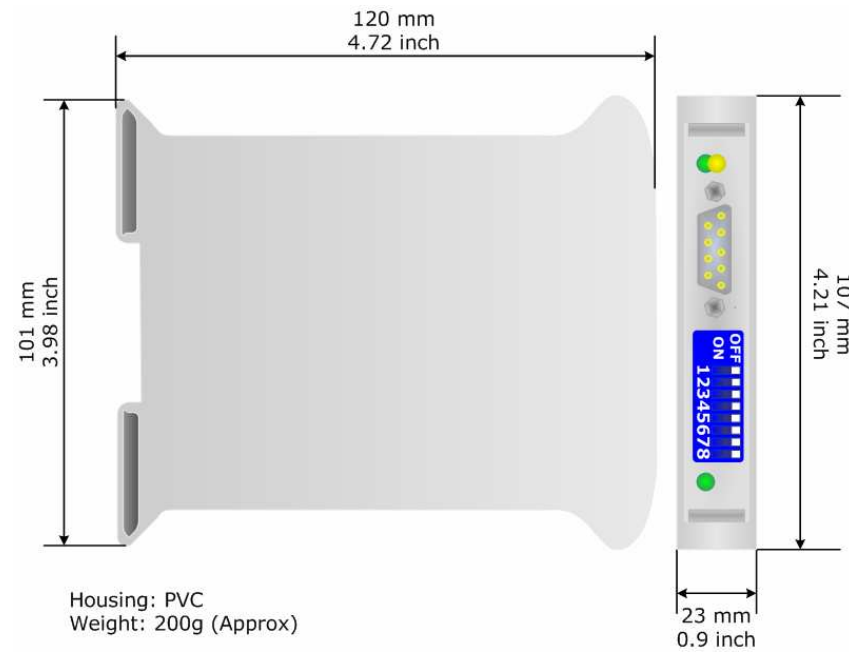


Figure 4: Mechanical dimensions scheme

**ORDER CODE:**

Order Code: **HD67238F** - Repeater optic fibre to RS232 to RS485

**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

**WARRANTIES AND TECHNICAL SUPPORT:**

For fast and easy technical support for your ADFweb.com SRL products, consult our internet support at [www.adfweb.com](http://www.adfweb.com).

Otherwise contact us at the address [support@adfweb.com](mailto: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](http://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	<a href="http://www.adfweb.com?product=HD67120">www.adfweb.com?product=HD67120</a>
HD67119	Converter USB 2.0 to RS485 Isolated	<a href="http://www.adfweb.com?product=HD67119">www.adfweb.com?product=HD67119</a>
HD67007	Gateway Modbus TCP Server to RTU Master	<a href="http://www.adfweb.com?product=HD67007">www.adfweb.com?product=HD67007</a>
HD67010	GatewayModbus TCP Client to RTU Slave	<a href="http://www.adfweb.com?product=HD67010">www.adfweb.com?product=HD67010</a>