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# **User Manual**

Revision 1.000 English

# Gateway CAN from/to Modbus Slave

(Order Code: HD67412-Exx-xxx)

for Website information: www.adfweb.com?Product=HD67412

for Price information:

www.adfweb.com?Price=HD67412-E4V www.adfweb.com?Price=HD67412-E7V www.adfweb.com?Price=HD67412-E4R www.adfweb.com?Price=HD67412-E7R

## **Benefits and Main Features:**

- Easy to configure
- Metal enclosure with fixing lugs
- Varnished / Resined (optionally)
- Wide supply input range
- Triple isolation
- Industrial temperature range: -40°C / 105°C (-22°F / 158°F)



Similiar Products For other Gateways / Bridges:

#### CAN from/to Modbus

See also the following links:

## **CANopen from/to Modbus**

See also the following links:

www.adfweb.com?product=HD67001 www.adfweb.com?product=HD67502 www.adfweb.com?product=HD67504 www.adfweb.com?product=HD67505 (Modbus RTU Master) (Modbus RTU Slave) (Modbus TCP Master) (Modbus TCP Slave)

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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## User Manual CAN from/to Modbus Slave

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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 <a href="www.adfweb.com/download/">www.adfweb.com/download/</a> 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 <a href="https://www.adfweb.com/download/">www.adfweb.com/download/</a>

#### **REVISION LIST:**

Revision	Date	Author	Chapter	Description
1.000	14/11/2011	Fl	All	First release version

#### **WARNING:**

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## **CONNECTION SCHEME:**

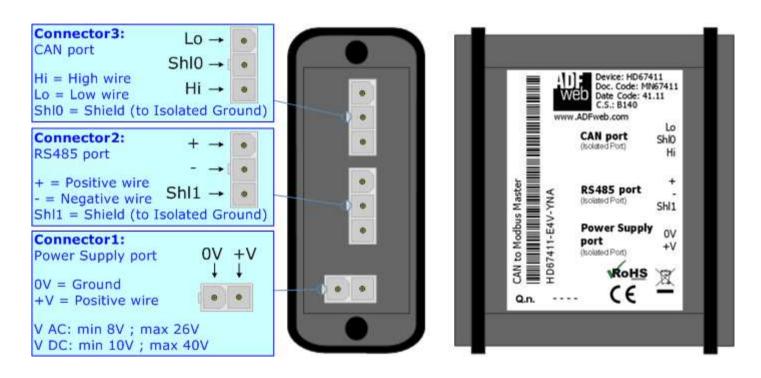


Figure 1-1: Connection scheme for HD67412-E4x-xxx

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Figure 1-2: Connection scheme for HD67412-E7x-xxx



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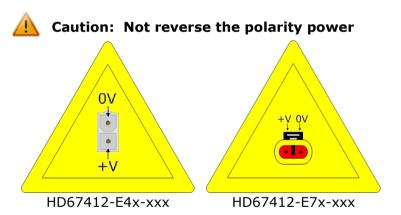
## **POWER SUPPLY:**

The devices can be powered between a wide range of tensions. For more details see the two tables below.

	VAC ~		VDC = = =	
	Vmin	Vmax	Vmin	Vmax
HD67412-Exx-xxx	8V	26V	10V	40V

## Consumption at 24V DC:

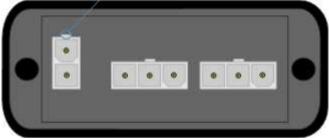
Device	W/VA
HD67412-Exx-xxx	4



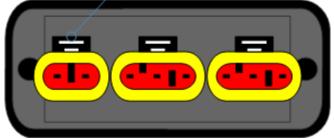


<u>Note:</u> It is possible to use also negative tensions. In this case the polarity must be inverted.









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#### RS485:

The connection of the RS485 in the HD670412-E4x-xxx device must be made with a 3way MiniFit Female connector. The pinout of Male MiniFit connector of the board is at right side of the page.

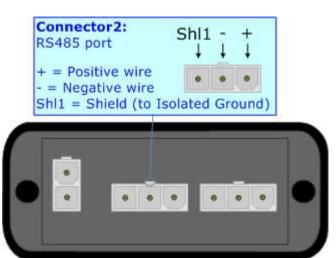
The connection of the RS485 in the HD670412-E7x-xxx device must be made with a AMP SuperSeal 1.5 Male connector. The pinout of Female connector of the board is at right side of the page.

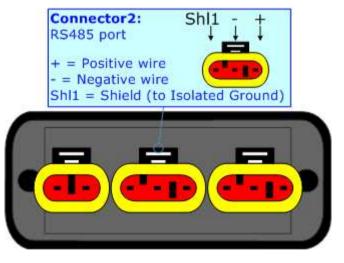
The termination of RS485 line, with a  $220\Omega$  resistor, in the HD67412-Exx-xxx is made internally of the device; when the order is performed. If the device have the RS485 terminated the code is the follow: HD67412-Exx-xYx; otherwise is this other: HD67412-Exx-xNx.

The maximum length of the cable should be 1200m (4000 feet).

Here some codes of cables:

- → Belden: p/n 8132 2x 28AWG stranded twisted pairs conductor + foil shield + braid shield;
- Belden p/n 82842 2x 24AWG stranded twisted pairs conductor + foil shield + braid shield;
- → Tasker: p/n C521 1x 24AWG twisted pair conductor + foil shield + braid shield;
- → Tasker: p/n C522 2x 24AWG twisted pairs conductor + foil shield + braid shield.





Link for Mini-Fit® connectors: <a href="http://www.molex.com/molex/products/group?key=minifit\_products&channel=products">http://www.molex.com/molex/products/group?key=minifit\_products&channel=products</a> Link for SuperSeal 1.5 connectors: <a href="http://www.te.com/catalog/cinf/en/c/10876/956">http://www.te.com/catalog/cinf/en/c/10876/956</a>



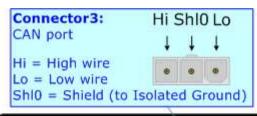
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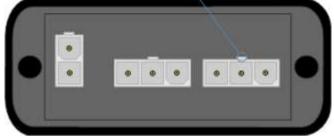
## CAN:

The connection of the CAN in the HD67412-E4x-xxx device must be made with a 3way MiniFit Female connector. The pinout of Male MiniFit connector of the board is at right side of the page.

The connection of the CAN in the HD67412-E7x-xxx device must be made with a AMP SuperSeal 1.5 Male connector. The pinout of Female connector of the board is at right side of the page.

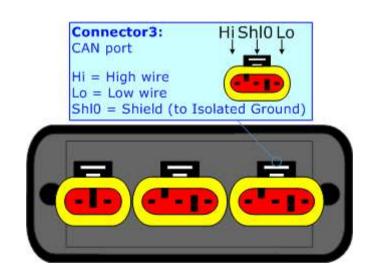
The termination of CAN line, with a  $120\Omega$  resistor, in the HD67412-Exx-xxx is made internally of the device; when the order is performed. If the device have the CAN terminated the code is the follow: HD67412-Exx-Yxx; otherwise is this other: HD67412-Exx-Nxx.





## Cable characteristics:

DC parameter:	Impedance	70 Ohm/m
AC parameters:	Impedance	120 Ohm/m
	Delay	5 ns/m
Length	Baud Rate [bps]	Length MAX [m]
	10 K	5000
	20 K	2500
	50 K	1000
	100 K	650
	125 K	500
	250 K	250
	500 K	100
	800 K	50
	1000 K	25



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## **CHARACTERISTICS:**

The "CAN from/to Modbus Slave" Gateway has the following characteristics:

- ➤ Two-directional information between networks CAN and Modbus;
- Metal Enclosure with four fixing lugs;
- ◆ Triple isolation between CAN Power supply and between CAN RS485 and between RS485 Power supply;
- Varnished and optionally resined;
- → Temperature range -40°C to 105°C.

The Gateway can be configured up to a maximum 500 CAN bus frame in reading and 500 CAN bus frame in writing.



#### Note:

The HD67412-E7x-xxx is furnished with 10 cm cable length.

## **CONFIGURATION:**

The "CAN from/to Modbus Slave" Gateway allows a CAN network to communicate with a Modbus network.

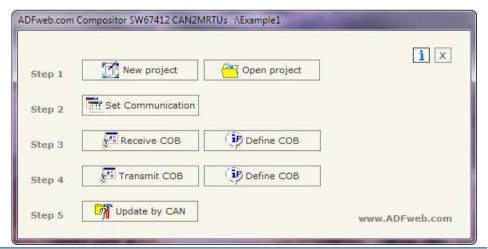
You need Compositor SW67412 software on your PC in order to perform the following:

- Define the parameters of two buses;
- Define which Modbus Registers are reading from CAN frame;
- → Define which Modbus Registers are writing from CAN frame;
- ♦ Update the device.

## **USE OF COMPOSITOR SW67412:**

To configure the "CAN from/to Modbus Master" Gateway, use the available software that runs with Windows, called SW67412. It is downloadable on the site <a href="www.adfweb.com">www.adfweb.com</a> 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). When launching the SW67412 the right window appears (Fig. 2).

Figure 2: Main window for SW67412



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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 and exported:

- → To clone the configurations of a Programmable "CAN from/to Modbus Slave" 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 COB";
- → "Transmit COB".

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#### **GENERAL PARAMETER:**

This section defines the fundamental communication parameters of two buses, CAN and Modbus.

By pressing the "**Set Communication**" button from the main window for SW67412 (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 Modbus line (Serial):

- → In the field "Baud rate" the velocity of the two buses is defined;
- → Select the type of CANbus ("CAN Bus 2.0A" or "CAN Bus 2.0B");
- "TimeOut Data" is the maximum time that the device attends for the CAN Frame;
- ▼ In the field "Modbus Register" insert the value of Modbus register which contains the number 1 if a CAN frame arrives or the number 0 if it does not arrives before the timeout;
- ★ If the field "RS232" is checked the serial line in use is the RS232, otherwise is the "RS485";
- In the field "Parity" the serial parity is defined;
- ★ If the field "Cancel data after read" is checked, the gateway cancel the data arrived from CAN bus after a modbus read function
- ▼ If the field "No Cancel if read Input Reg." Is checked, the gateway cancel the data arrived from CAN bus only if you use the Function 3 (Holding Register). If you use teh Function 4 (Input Register) data will not be cancel.

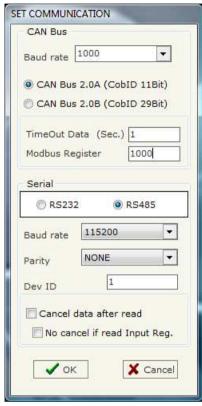


Figure 3: "Set Communication" window

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## **RECEIVE COB:**

By pressing the "Receive COB" button from the main window for SW67412 (Fig. 2) the window "Receive CAN Frame" appears (Fig. 4).

A user who has to read a CANbus frame from CANbus to Modbus needs to insert the coordinates of the CANbus frame in order to be transmitted in the field "Receive COB" of the window:

- → In the field "CobID" insert the Cob ID of the CANbus frame;
- → In the field "Dimension" insert the number of bytes of the CANbus frame (the maximum dimension is 8 Bytes);
- → In the field "Mnemonic" you can insert a brief description.

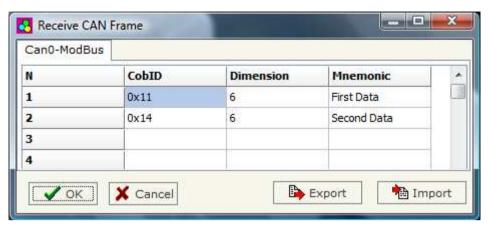


Figure 4: "Receive CAN Frame" window

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#### **DEFINE COB:**

By pressing the "**Define COB**" button from the main window for SW67412 (Fig. 2) the window "Receive CAN Frame Info" appears (Fig. 5):

- → In the field "COB-ID Frame" there are the COB-ID that you insert in the list Receive COB;
- → In the field "MODBUS" there are the modbus words defined for that COB-ID Frame;
- → In the field "Index MODBUS" there is the address that contain the Modbus word;
- → In the field "Selecet Frame Byte" you select the position of the byte;

## For example:

Click on the "COB-ID", insert the valid address in the field "Index MODBUS", select the byte position(B1 in "High MODBUS Byte" and B2 in "Low MODBUS Byte"), click the "New" button, then in the field "MODBUS" the names of modbus words appear (The first word is name IND MB 0, the second IND MB 1, the third Ind MB 2, the fourth Ind MB 3).

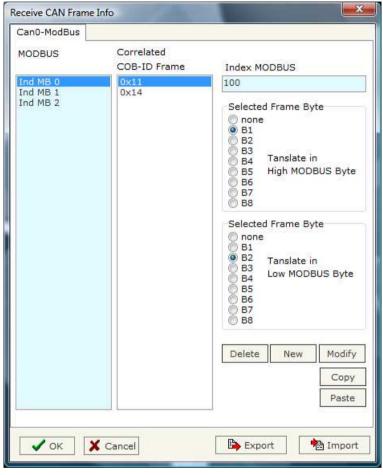


Figure 5: "Receive CAN Frame Info" window

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#### **TRANSMIT COB:**

By pressing the "Transmit COB" button from the main window for SW67412 (Fig. 2) the window "Transmit CAN Frame" appears (Fig. 6).

A user who has to write a CANbus frame from Modbus to CANbus needs to insert the coordinates of the CANbus frame in order to be transmitted in the field "Trasmit COB" of the window:

- In the field "CobID" insert the Cob\_ID of the CANbus frame;
- → In the field "Dimension" insert the number of bytes of the CANbus frame (the maximum dimension is 8 Bytes);
- ▶ In the field "Mnemonic" you can insert a brief description.

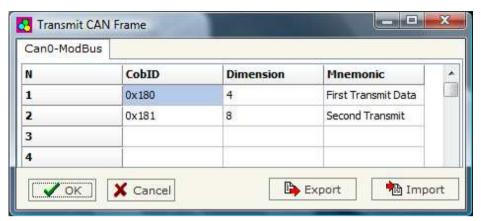


Figure 6: "Transmit CAN Frame" window

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#### **DEFINE COB:**

By pressing the "**Define COB**" button from the main window for SW67412 (Fig. 2) the window "Transmit CAN Frame Info" appears (Fig. 7).

- ▼ In the field "COB-ID Frame" there are the COB-ID that you insert in the list;
- In the field "MODBUS" there are the Modbus words defined for that COB-ID Frame;
- → In the field "Index MODBUS" there is the address that contain the Modbus word;
- ▶ In the field "Selected Frame Byte" you select the position of the byte.

## For example:

Click on the "COB-ID", insert the valid address in the field "Index MODBUS", select the byte position(B1 in "High MODBUS Byte" and B2 in "Low MODBUS Byte"), click the "New" button, then in the field "MODBUS" the names of modbus words appears (The first word is name IND MB 0, the second IND MB 1, the third Ind MB 2, the fourth Ind MB 3).

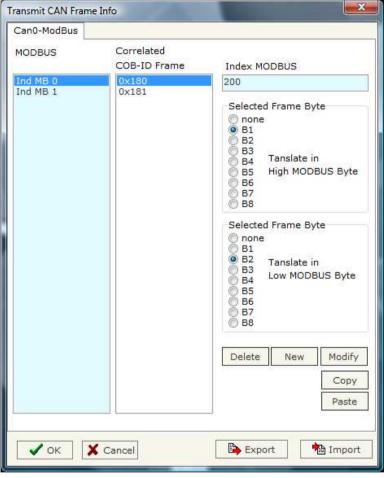


Figure 7: "Transmit CAN Frame Info" window

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Jodate Firmware from Serial (RS232)

#### **UPDATE DEVICE:**

By pressing the "**Update by CAN**" button from the main window for SW67412 (Fig. 2) the right window appears (Fig. 8).

## Note:

For updating the device you need the programmer "AC67400 - CAN Interface to configure devices".

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

- ◆ Connect the "AC67400" programmer to the PC through the USB port and connect the CAN port of the "AC67400" to the CAN port of HD67412-Exx-xxx;
- → Select the "COM port" where the "AC67400" is connected (the USB port of the device is see like a COM port);
- ▼ If the BaudRate of CAN is known select it in the field "Select the BaudRate of CAN" otherwise you have to select "Search Baudrate";
- Press the "Next" button;
- → Select which 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" the configuration/firmware on the device is correctly updated and it is possible to disconnect the "AC67400" programmer.

# Note:

When you install a new version of the software it is better if the first time you do the update of the Firmware in the HD67412-Exx-xxx device.

# Figure 8: "Update Device" windows

## Warning:

If the Fig. 9 appears when you try to do the Update before require assistance try these points:

- → Check if the serial COM port selected is the correct one;
- ◆ Check if the CAN cable is connected between the "AC67400" and the device;
- Try to repeat the operations for the updating;
- Try with another PC;
- → Try to restart the PC.

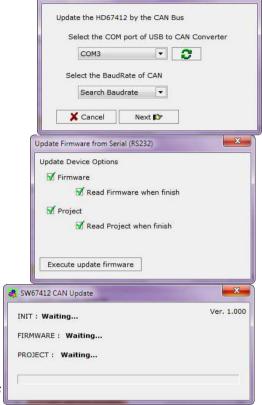
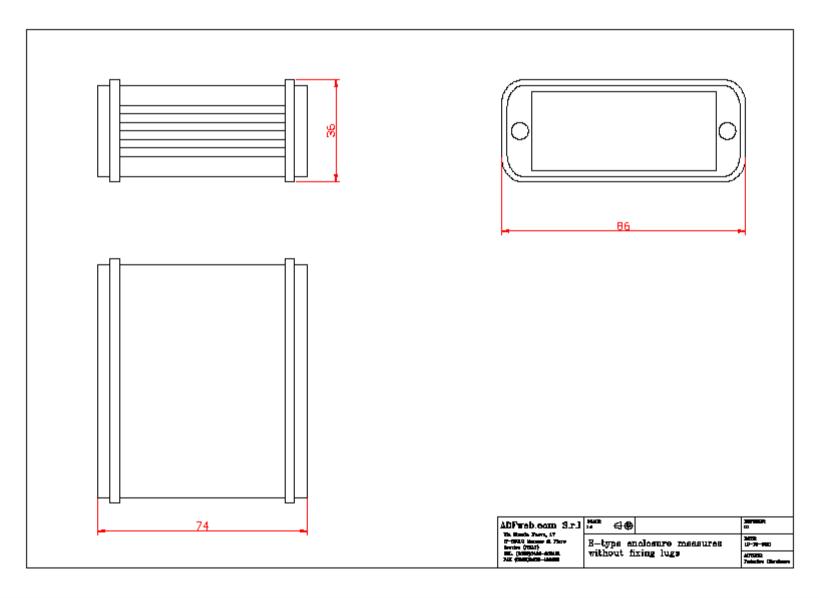


Figure 9: "Protection" window

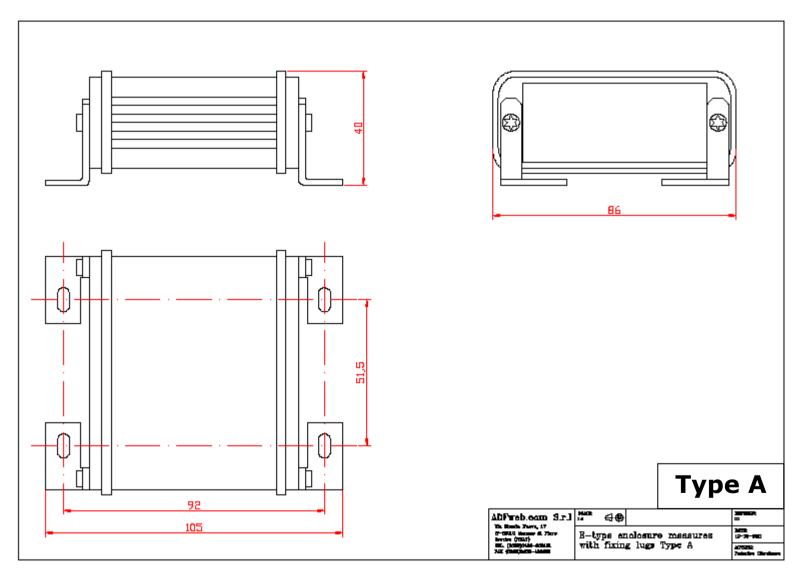


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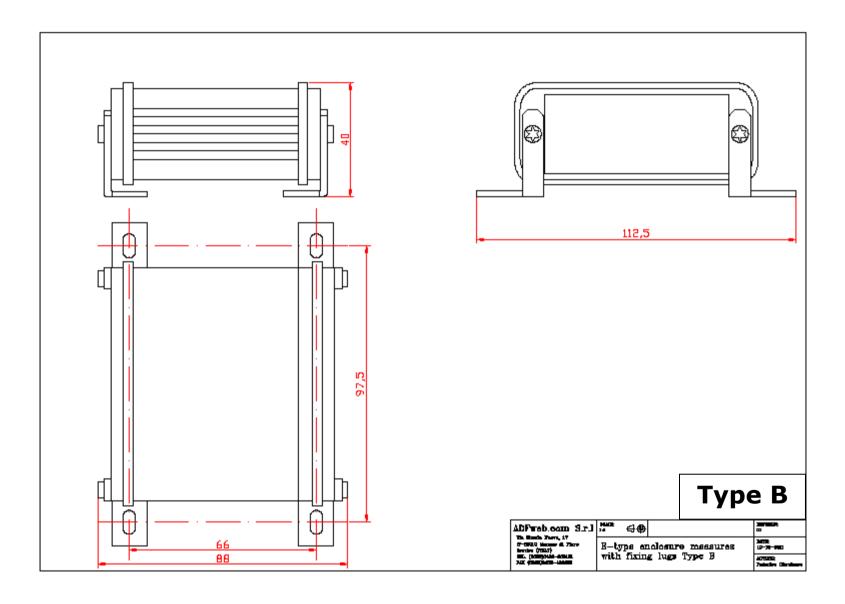
## **MECHANICAL DIMENSIONS:**



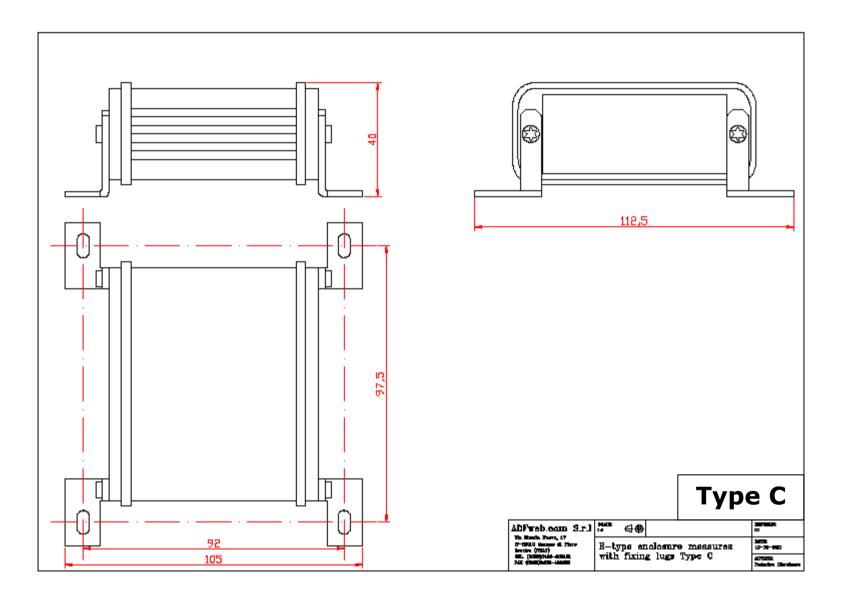
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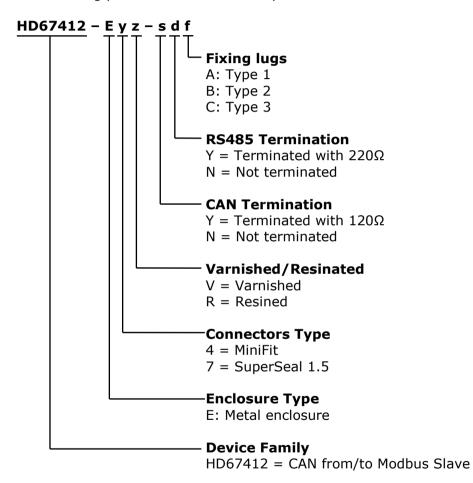
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## **ORDERING INFORMATIONS:**

The ordering part number is formed by a valid combination of the following:



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Order Code: HD67412-E4V-NNA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 not terminated, CAN not terminated and fixing lugs "Type A"
Order Code: HD67412-E4V-NNB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 not terminated, CAN not terminated and fixing lugs "Type B" $$
Order Code: HD67412-E4V-NNC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 not terminated, CAN not terminated and fixing lugs "Type $C^{\prime\prime}$ "
Order Code: HD67412-E4V-NYA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 terminated, CAN not terminated and fixing lugs "Type A"
Order Code: HD67412-E4V-NYB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 terminated, CAN not terminated and fixing lugs "Type B"
Order Code: HD67412-E4V-NYC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 terminated, CAN not terminated and fixing lugs "Type C"
Order Code: HD67412-E4V-YNA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 not terminated, CAN terminated and fixing lugs "Type A" $^{\prime\prime}$
Order Code: HD67412-E4V-YNB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 not terminated, CAN terminated and fixing lugs "Type B"
Order Code: HD67412-E4V-YNC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 not terminated, CAN terminated and fixing lugs "Type $C$ "
Order Code: HD67412-E4V-YYA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 terminated, CAN terminated and fixing lugs "Type A"
Order Code: HD67412-E4V-YYB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 terminated, CAN terminated and fixing lugs "Type B"
Order Code: HD67412-E4V-YYC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board varnished, RS485 terminated, CAN terminated and fixing lugs "Type C"
Order Code: HD67412-E4R-NNA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 not terminated, CAN not terminated and fixing lugs "Type A"
Order Code: HD67412-E4R-NNB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 not terminated, CAN not terminated and fixing lugs "Type B"

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Order Code: HD67412-E4R-NNC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 not terminated, CAN not terminated and fixing lugs "Type C"
Order Code: HD67412-E4R-NYA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 terminated, CAN not terminated and fixing lugs "Type A"
Order Code: HD67412-E4R-NYB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 terminated, CAN not terminated and fixing lugs "Type B"
Order Code: HD67412-E4R-NYC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 terminated, CAN not terminated and fixing lugs "Type C"
Order Code: HD67412-E4R-YNA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 not terminated, CAN terminated and fixing lugs "Type A" $^{\prime\prime}$
Order Code: HD67412-E4R-YNB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 not terminated, CAN terminated and fixing lugs "Type B" $$
Order Code: HD67412-E4R-YNC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 not terminated, CAN terminated and fixing lugs "Type C"
Order Code: HD67412-E4R-YYA	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 terminated, CAN terminated and fixing lugs "Type A"
Order Code: HD67412-E4R-YYB	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 terminated, CAN terminated and fixing lugs "Type B"
Order Code: HD67412-E4R-YYC	-	CAN from/to Modbus Slave with MiniFit connectors, electronic board resined, RS485 terminated, CAN terminated and fixing lugs "Type C"
Order Code: HD67412-E7V-NNA	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 not terminated, CAN not terminated and fixing lugs "Type A"
Order Code: HD67412-E7V-NNB	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 not terminated, CAN not terminated and fixing lugs "Type B"
Order Code: HD67412-E7V-NNC	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 not terminated, CAN not terminated and fixing lugs "Type C"
Order Code: HD67412-E7V-NYA	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 terminated, CAN not terminated and fixing lugs "Type A"



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Order Code: HD67412-E7V-NYB	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 terminated, CAN not terminated and fixing lugs "Type B"
Order Code: HD67412-E7V-NYC	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 terminated, CAN not terminated and fixing lugs "Type C" $^{\prime\prime}$
Order Code: HD67412-E7V-YNA	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 not terminated, CAN terminated and fixing lugs "Type A" $^{\prime\prime}$
Order Code: HD67412-E7V-YNB	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 not terminated, CAN terminated and fixing lugs "Type B"
Order Code: <b>HD67412-E7V-YNC</b>	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 not terminated, CAN terminated and fixing lugs "Type $C^{\prime\prime}$
Order Code: HD67412-E7V-YYA	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 terminated, CAN terminated and fixing lugs "Type A"
Order Code: HD67412-E7V-YYB	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 terminated, CAN terminated and fixing lugs "Type B" $^{\prime\prime}$
Order Code: HD67412-E7V-YYC	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board varnished, RS485 terminated, CAN terminated and fixing lugs "Type $C^{\prime\prime}$
Order Code: HD67412-E7R-NNA	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 not terminated, CAN not terminated and fixing lugs "Type A" $$
Order Code: HD67412-E7R-NNB	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 not terminated, CAN not terminated and fixing lugs "Type B" $^{\prime\prime}$
Order Code: HD67412-E7R-NNC	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 not terminated, CAN not terminated and fixing lugs "Type C"
Order Code: HD67412-E7R-NYA	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 terminated, CAN not terminated and fixing lugs "Type A"
Order Code: HD67412-E7R-NYB	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 terminated, CAN not terminated and fixing lugs "Type B"
Order Code: HD67412-E7R-NYC	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 terminated, CAN not terminated and fixing lugs "Type C"



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Order Code: HD67412-E7R-YNA	-	CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485
		not terminated, CAN terminated and fixing lugs "Type A"

Order Code: **HD67412-E7R-YNB** - CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 not terminated, CAN terminated and fixing lugs "Type B"

Order Code: **HD67412-E7R-YNC** - CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 not terminated, CAN terminated and fixing lugs "Type C"

Order Code: **HD67412-E7R-YYA** - CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 terminated, CAN terminated and fixing lugs "Type A"

Order Code: **HD67412-E7R-YYB** - CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 terminated, CAN terminated and fixing lugs "Type B"

Order Code: **HD67412-E7R-YYC** - CAN from/to Modbus Slave with SuperSeal 1.5 connectors, electronic board resined, RS485 terminated, CAN terminated and fixing lugs "Type C"

## **ACCESSORIES:**

Order Code: **AC67400** - CAN interface to configure devices

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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 <a href="www.adfweb.com">www.adfweb.com</a>. 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 <a href="https://www.adfweb.com">www.adfweb.com</a>. 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
HD67316	CAN, CANopen, J1939, DeviceNet, NMEA2000 Analyzer	www.adfweb.com?Product=HD67316
HD67401	CAN bus Repeater (standard and extended protocols)	www.adfweb.com?product=HD67401
HD67119	Converter USB 2.0 to RS485 Isolated	www.adfweb.com?product=HD67119
HD67302	GSM I/O and Alarms Modem	www.adfweb.com?Product=HD67302
HD67031	Analyzer / Scanner / Sniffer M-Bus	www.adfweb.com?product=HD67031

INFO: www.adfweb.com