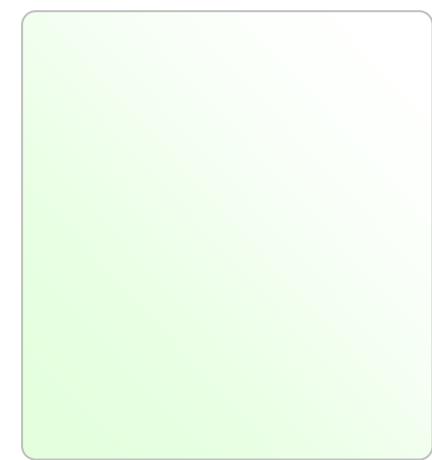


User Manual

Document code: MN67952\_ENG Revision 1.000 Page 1 of 33







⊕ ⊕ ⊕ ADF web

Industrial Electronic Devices

#### **INDEX:**

	Page
INDEX	2
UPDATED DOCUMENTATION	2
REVISION LIST	2
WARNING	2
TRADEMARKS	2 3
SECURITY ALERT	3
EXAMPLE OF CONNECTION	4
CONNECTION SCHEME	5
CHARACTERISTICS	6
CONFIGURATION	6
POWER SUPPLY	7
FUNCTION MODES	8
LEDS	9
ETHERNET	10
USE OF COMPOSITOR SW67952	11
NEW CONFIGURATION / OPEN CONFIGURATION	12
SOFTWARE OPTIONS	13
SET COMMUNICATION	15
MQTT SET TOPIC	21
PROFINET XML	23
UPDATE DEVICE	24
TEMPLATE STRING: DEFINITION OF MQTT	26
PAYLOAD	
PLC CONFIGURATION	27
MECHANICAL DIMENSIONS	30
ORDERING INFORMATIONS	31
ACCESSORIES	31
DISCLAIMER	32
OTHER REGULATIONS AND STANDARDS	32
WARRANTIES AND TECHNICAL SUPPORT	33
RETURN POLICY	33

User Manual	PROFINET	/ MQTT
-------------	----------	--------

Document code: MN67952\_ENG Revision 1.000 Page 2 of 33

#### **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 <u>www.adfweb.com/download/</u> and search for the corresponding code on the page. Click on the proper "Document Code" and download the updates.

## **REVISION LIST:**

Revision	Date	Author	Chapter	Description
1.000	05/12/2017	Ff	All	First release version

#### 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.



Document code: MN67952\_ENG Revision 1.000 Page 3 of 33

#### **SECURITY ALERT:**

#### **GENERAL INFORMATION**

To ensure safe operation, the device must be operated according to the instructions in the manual. When using the device, legal and safety regulation are required for each individual application. 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 instruments can represent a potential hazard if they are inappropriately installed and operated by untrained personnel. These instructions refer to residual risks with the following symbol:



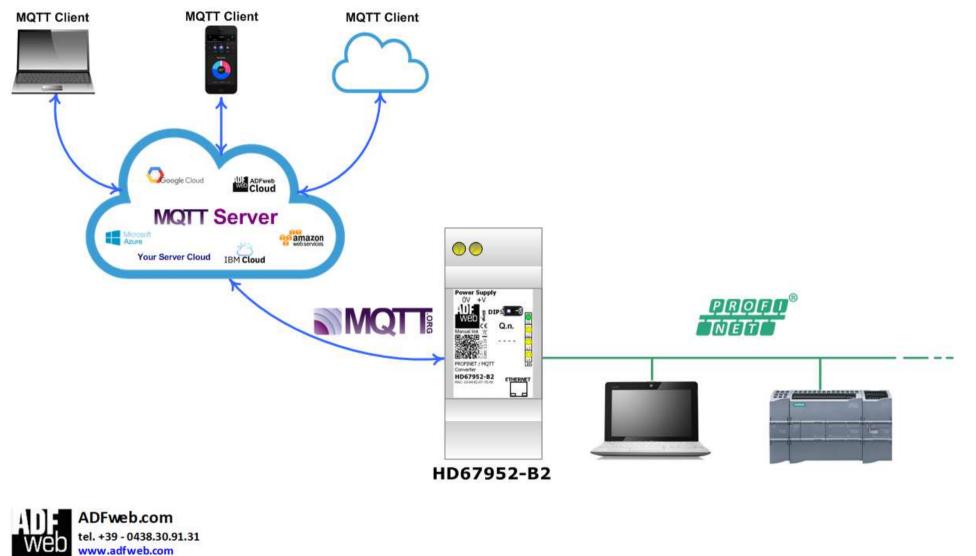
This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

#### **CE** CONFORMITY

The declaration is made by our company. You can send an email to or give us a call if you need it.

Document code: MN67952\_ENG Revision 1.000 Page 4 of 33

## **EXAMPLE OF CONNECTION:**

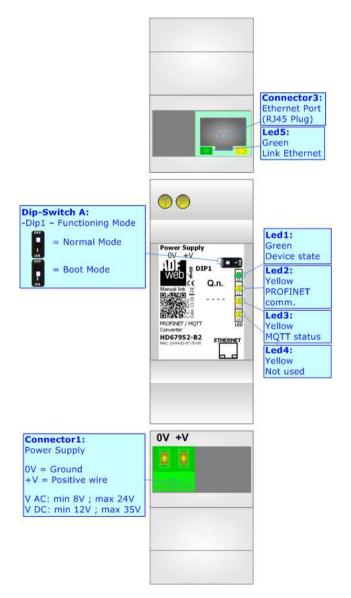


info@adfweb.com



Document code: MN67952\_ENG Revision 1.000 Page 5 of 33

## **CONNECTION SCHEME:**







Document code: MN67952\_ENG Revision 1.000 Page 6 of 33

## CHARACTERISTICS:

The HD67952-B2 is a PROFINET / MQTT Converter.

It allows the following characteristics:

- Mountable on 35mm Rail DIN;
- ✤ Wide power supply input range: 18...35V DC and 8...24V AC;
- ✤ Wide temperature range: -40°C / 85°C [-40°F / +185°F].

## **CONFIGURATION:**

You need Compositor SW67952 software on your PC in order to perform the following:

- Define the parameter of MQTT;
- Define the parameter of PROFINET line;
- Define the MQTT topics to be published/subscribed in the MQTT Server;
- Update the device.



Document code: MN67952\_ENG Revision 1.000 Page 7 of 33

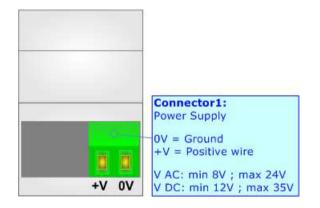
## **POWER SUPPLY:**

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

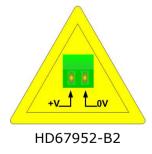
vac $\sim$		VDC	
Vmin	Vmax	Vmin	Vmax
8V	24V	12V	35V

Consumption at 24V DC:

De	evice	Consumption [W/VA]
HD67952-B2		3.5



**Caution:** Not reverse the polarity power





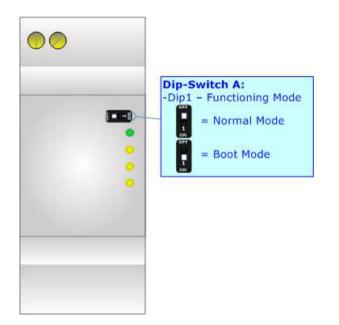
#### **FUNCTION MODES:**

The device has got two functions mode depending of the position of the 'Dip1 of Dip-Switch A':

- ✤ The first, with 'Dip1 of Dip-Switch A' at "OFF" position, is used for the normal working of the device.
- ✤ The second, with `Dip1 of Dip-Switch A' at ``ON" position, is used for upload the Project and/or Firmware.

For the operations to follow for the updating, see 'UPDATE DEVICE' section.

According to the functioning mode, the LEDs will have specifics functions, see 'LEDS' section.





## LEDS:

The device has got five LEDs that are used to give information of the functioning status. The various meanings of the LEDs are described in the table below.

LED	Normal Mode	Boot Mode
1: Device State (green)	Blinks slowly (~1Hz)	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
2: PROFINET communication (yellow)	Blinks when PROFINET communication is running	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
3: MQTT status (yellow)	ON: MQTT not connected OFF: MQTT connected Blinking: MQTT communication	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
4: Not used (yellow)	OFF	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
5: Ethernet Link (green)	ON: Ethernet cable connected OFF: Ethernet cable disconnected	<b>ON:</b> Ethernet cable connected <b>OFF:</b> Ethernet cable disconnected
	Led5: Green Link Ethernet	Led1:         Green         Device state         Led2:         Yellow         PROFINET         comm.         Led3:         Yellow         MQTT status         Led4:         Yellow         Not used

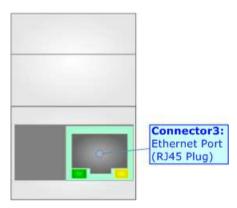


Document code: MN67952\_ENG Revision 1.000 Page 10 of 33

## **ETHERNET:**

The Ethernet port is used for programming the device and for MQTT and PROFINET communication.

The Ethernet connection must be made using Connector2 of HD67952-B2 with at least a Category 5E cable. The maximum length of the cable should not exceed 100m. The cable has to conform to the T568 norms relative to connections in cat.5 up to 100 Mbps. To connect the device to an Hub/Switch is recommended the use of a straight cable, to connect the device to a PC is recommended the use of a cross cable.





Document code: MN67952\_ENG Revision 1.000 Page 11 of 33

#### **USE OF COMPOSITOR SW67952:**

To configure the Converter, use the available software that runs with Windows called SW67952. It is downloadable on the site <u>www.adfweb.com</u> and its operation is described in this document. The software works with MS Windows (XP, Vista, Seven, 8, 10; 32/64bit).

When launching the SW67952, the window below appears (Fig. 2).



It is necessary to have installed .Net Framework 4.

ADFweb.c	com - Configurator SW67952 - PR	OFINET / MQTT	×
	67952 T / MQTT - Converter		
Begin	Opened Configuration of the Example1	Converter :	]
Step 1	New Configuration	Dpen Configuration	]
Step 2	Set Communication		
Step 3	MQTT Set Topic		
Step 4	PROFINET XML		
Step 5	X Update Device UDP		www.ADFweb.com

Figure 2: Main window for SW67952



Document code: MN67952\_ENG Revision 1.000 Page 12 of 33

## **NEW CONFIGURATION / OPEN CONFIGURATION:**

The "New Configuration" button creates the folder which contains the entire device's configuration.



A device's configuration can also be imported or exported:

- To clone the configurations of a Programmable "PROFINET / MQTT 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 Configuration".

We Open Configuration	-		$\times$
SW67952 Open an Existing Configuration List of Avaliable Configurations			
Example2 Example3			
ок		Cance	21



Document code: MN67952\_ENG Revision 1.000 Page 13 of 33

## **SOFTWARE OPTIONS:**

By pressing the "**Settings**" () button there is the possibility to change the language of the software and check the updatings for the compositor.

In the section "Language" it is possible to change the language of the software.

Software Options	×
SW67952 Software Options	
Language Connection Options Software Settings	
Enable Internet Connection	
Check Software Update at Start of Program	
Check Available Update	
OK X Cancel	

Web Software	Options		×
	67952		
Language	Connection Options	Software Settings	
Selected	Language :		
	English		
		Page 1 / 1	
	ок 🗙 Са	ancel	

In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website. Checking the option "**Check Software Update at Start of Program**", the SW67952 check automatically if there are updatings when it is launched.

Document code: MN67952 ENG Revision 1.000 Page 14 of 33

 $\times$ the different sections of the software.

In the section "Software Settings", it is possible to enable/disable some keyboard's commands for an easier navigation inside the tables contained in



SW67952 Software Options

Web Software Options

Language Connection Options	Software Settings	
Jump into next field in the tab	blee by pressing the E	inter Kou
Jump into next held in the tat	bles by pressing the E	nter key
Enable Auto Size of Table Co	lumns by Double Click	k l
🔰 🗸 ОК 🔰 💥 Са	ancel	



#### SET COMMUNICATION:

By Pressing the "**Set Communication**" button from the main window for SW67952 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The window is divided in different sections in order to define the different parameters of the converter:

- → PROFINET
- + MQTT
- Ethernet
- 🔶 Wi-Fi
- TLS (Transport Layer Security)
- NTP (Network Time Protocol)

User Manual **PROFINET / MQTT** 

Document code: MN67952\_ENG Revision 1.000 Page 15 of 33

🟙 Set Communication	×
SW67952 Set Communication Setting	
1. PROFINET	÷
2. MQTT	÷
3. Ethernet	÷
4. Wi-Fi	÷
5. TLS (Transport Layer Security)	÷
6. NTP (Network Time Protocol)	÷
OK X Cancel	

Figure 3a: "Set Communication" window



Document code: MN67952\_ENG Revision 1.000 Page 16 of 33

## **PROFINET:**

This section is used to define the main parameters of PROFINET line. The means of the fields are:

- In the fields "IP ADDRESS" the IP address to assign to the converter is defined;
- In the fields "SUBNET Mask" the SubNet Mask is defined;
- In the fields "GATEWAY" the default gateway of the net is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
- In the field "Name of Station" the name of the PROFINET node is defined;
- In the fields "Number Byte IN" the number of input byte of the converter is defined;
- In the fields "Number Byte Out" the number of output byte of the converter is defined.

1. PROFINET		Ξ
IP Address	192 .168 .0 .5	
SubNet Mask	255 . 255 . 255 . 0	
Gateway	192 .168 .0 .1	
Name of Station	devicename1	
Number Bytes Input	1438	
Number Bytes Output	1438	

Figure 3b: "Set Communication → PROFINET" window

#### MOTT:

This section is used to define the main parameters of MQTT line. The means of the fields are:

- ✤ In the field "Server URL" the URL or the IP Address of the MOTT Server is defined;
- In the field "Server Port" the port used for MOTT communication is defined;
- In the field "**Client ID**" the Client ID of the converter is defined (if ned);
- In the field "Keep Alive (seconds)" the delay with which the Keep Alive message is sent on MOTT is defined;
- If the field "Clean Session" is checked, the last MQTT messages are deleted by the Server and the Client in case of missing ACK. If unchecked, the Server and the Client hold the last MQTT messages and, in case of incorrect disconnection or missing ACK, they try to send again them since all the ACK messages are exchanged correctly (valid only for QoS 1 and QoS 2);
- If the field "Will Flag" is checked, the converter will publish the Will topic at the connection to the Server. With this feature, in case of incorrect disconnection, the Server will publish this topic to all the MOTT Clients that subscribed it;
- In the field "Topic Name Will" the topic used for Will message is defined;
- In the field "Message Will" the payload of the Will message is defined;
- In the field "Retained Will" the converter will send the Will message with Retain flag enabled. In this way, the Server will hold the last Will message;
- In the field "Oos Will" the Oos type for Will message is defined;
- Im the field "Username" the username for the connection to the MOTT server is defined;
- In the field "Password" the password for the connection to the MOTT server is defined;
- In the field "Send Time (seconds)" the delay with which the MQTT messages are published is defined.

2. MQTT		Ξ
Server URL	test.mosquitto.org	
Server Port	1883	
Client ID		
Keep Alive (seconds)	60	
Clean Session		
✓ Will Flag		
Topic Name Will		
Message Will		
Retained Will		
QoS Will	0 ~	
Username		
Password		



User Manual **PROFINET / MOTT** 

Document code: MN67952 ENG Revision 1.000 Page 17 of 33





## **ETHERNET:**

This section is used to define the general parameters of Ethernet. The means of the fields are:

- In the field "Ip Address" the IP address of the converter is defined;
- In the field "SubNet Mask" the Subnet Mask of the converter is defined;
- In the field "Gateway" the default gateway of the net is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
- In the field "DNS" the DNS address is defined. This field is required if the server address is define by URL and not IP Address.

## <u>WI-FI:</u>

This section is used to define the general parameters of Wi-Fi. It is possible to defined the type of Wi-Fi communication:

- Access Point;
- Client.

The means of the fields for Access Point configuration are:

- In the field "IP Address" the IP address of the converter is defined;
- In the field "Subnet Mask" the SubNet Mask of the converter is defined;
- In the field "GATEWAY" the default gateway of the net is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
- In the field "DNS" the DNS address is defined. This field is required if the server address is define by URL and not IP Address.
- In the field "Port" the port used for MQTT communication is defined;
- In the field "SSID" the name of the Wi-Fi network to create is defined;
- In the field "Password" the password used for Wi-Fi connection is defined;
- In the field "Type" the type of security protocol used by the Wi-Fi network is defined;

# User Manual **PROFINET / MQTT**

Document code: MN67952\_ENG Revision 1.000 Page 18 of 33

3. Ethernet					Ξ
IP Address	192	. 168	. 0	. 10	
SubNet Mask	255	. 255	. 255	.0	
Gateway	192	. 168	. 0	. 1	
	8	. 8	. 8	. 8	

Figure 3d: "Set Communication → Ethernet" window

4. Wi-Fi					Ξ
Гуре	Access P	oint		~	
P Address	192	. 168	. 0	. 11	
SubNet Mask	255	. 255	. 255	. 0	
Gateway	192	. 168	.0	.1	
DNS	8	. 8	. 8	.8	
Port	502				
SSID					
Secure Type	Unsecure	ed		~	
Enable DHCP					
OHCP First IP Address	192	. 168	. 0	. 200	
OHCP SubNet Mask	255	. 255	. 255	.0	
ease Time (seconds)	86400				
Max Client	1			~	
Channel	1			~	

Figure 3e: "Set Communication → Wi-Fi" window

- If the field "Enable DHCP" is checked, the converter acts as DHCP Server for the Clients connected. If the option is enabled, in the fields "DHCP First IP Address" and "DHCP SUBNET Mask" the IP Addresses range used for DHCP is defined. In the field "Lease Time (seconds)" the required time for the renewing of the IP Address assigned to the Client is defined;
- In the field "Max Client" the maximum number of Wi-Fi Clients accepted is defined;
- In the field "Channel" the channel for Wi-Fi communication is defined.

The means of the fields for Client configuration are:

- If the field "Obtain an IP Address automatically" is checked, the converter gets the IP Address using DHCP. Otherwise, the IP Address is defined as static;
- In the field "IP Address" the IP address of the converter is defined;
- In the field "Subnet Mask" the SubNet Mask of the converter is defined;
- In the field "GATEWAY" the default gateway of the net is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
- In the field "DNS" the DNS address is defined. This field is required if the server address is define by URL and not IP Address.
- In the field "Port" the port used for MQTT communication is defined;
- In the field "SSID" the name of the Wi-Fi network to connect is defined;
- In the field "Password" the password used to connect to the Wi-Fi network is defined.

4. Wi-Fi	
Туре	Client Mode 🗸 🗸
Obtain an IP Address autom	atically
IP Address	192 . 168 . 0 . 11
SubNet Mask	255 . 255 . 255 . 0
Gateway	192 . 168 . 0 . 1
	8.8.8.8
Port	502
SSID	
Password	

Figure f "Set Communication → Wi-Fi" window

User Manual **PROFINET / MQTT** 

Document code: MN67952\_ENG Revision 1.000 Page 19 of 33



#### TLS (TRANSPORT LAYER SECURITY):

This section is used to define the parameters of TLS protocol. The means of the fields are:

- → If the field "Enable TLS" is checked, the TLS protocol for secure connection is enabled;
- + If the field "Server Authentication" is checked, the authentication of the Server using TLS is enabled. If enabled, in the field "Server Certificate" the certificate from the Server is defined:
- ✤ If the field "Client Authentication" is checked, the authentication of the Client using TLS is enabled. If enabled:
  - in the field "Client Certificate" the certificate from the Client is defined:
  - in the field "Client Key" the private key of the Client is defined;
  - in the field "Client Key Password" the password for the private key of the Client is defined.

#### **NTP (NETWORK TIME PROTOCOL):**

defined;

ADFweb.com S.r.l.

This section is used to define the parameters of NTP protocol. The means of the	6. NTP (Network Ti	me Protocol)	
fields are:	Server URL	pool.ntp.org	
In the field "Server URL" the URL or the IP Address of the NTP Server is	Poll Time (seconds)	1000	-

"**Poll Time (seconds)**" the polling time for the time Figure 3h: "Set Communication  $\rightarrow$  NTP" window In the field synchronization is defined.

5. TLS (Transport La	yer Security)	Ξ
Enable TLS		
Server Authentication		
Server Certificate		
Client Authentication		
Client Certificate		
Client Key		
Client Key Password		

## Figure 3q: "Set Communication $\rightarrow$ TLS" window

Document code: MN67952 ENG Revision 1.000 Page 20 of 33





Document code: MN67952\_ENG Revision 1.000 Page 21 of 33

## **MQTT SET TOPIC:**

By Pressing the "**MQTT Set Topic**" button from the main window for SW67952 (Fig. 2) the window "Set MQTT Topics" appears (Fig. 4). This section is used to define the MQTT topics where the converter will publish the data from PROFINET and the topic that the converter will subscribes for writing the data to PROFINET.

## MQTT PUBLISH

Web Se	t MQTT Topics								—	×
	W67952 MQTT Topics									
MQTT	Publish MQTT Subscribe									
N	Торіс	Retained	QoS	Data Type	Dimension	Position	Template	Mnemonic		^
1	Test1		0	Int	4	0	\$VALUE\$			
2	Test2		1	String	8	4	\$VALUE\$			
3										
4										
5										~
	VOK     Cancel     Insert Row     Copy Row     Paste Row									

Figure 4a: "Set MQTT Topics → MQTT Publish" window

The means of the fields are:

- In the field "Topic" the MQTT topic is defined;
- ✤ If the field "Retained" is defined, the retained flag is enabled. The MQTT server will hold the last topic published;
- In the field "QoS" the QoS level is defined;
- In the field "Data Type" the type of data to use is defined;
- In the field "Dimension" the dimension in byte of the data is defined;
- ✤ In the field "Position" the starting byte of the PROFINET array where taking the data is defined;
- In the field "Template" the structure of the MQTT payload is defined. With a double click on it, it is possible to open a window for editing it;
- ✤ In the field "Mnemonic" a description of the topic is defined.

Document code: MN67952\_ENG Revision 1.000 Page 22 of 33

## MQTT SUBSCRIBE

	t MQTT Topics						—	×
Set	W67952 MQTT Topics Publish MQTT Subscribe							
N	Topic	QoS	Data Type	Dimension	Position	Template	Mnemonic	^
1	Test3	0	Int	4	0	\$VALUE\$		
2								
3								
4								
5								~
	OK     Cancel     Insert Row     Copy Row     Paste Row							

Figure 4b: "Set MQTT Topics → MQTT Subscribe" window

The means of the fields are:

- In the field "Topic" the MQTT topic is defined;
- In the field "QoS" the QoS level is defined;
- In the field "Data Type" the type of data to use is defined;
- In the field "Dimension" the dimension in byte of the data is defined;
- In the field "Position" the starting byte of the PROFINET array where placing the data is defined;
- In the field "Template" the structure of the MQTT payload is defined. With a double click on it, it is possible to open a window for editing it;
- ✤ In the field "Mnemonic" a description of the topic is defined.



Document code: MN67952\_ENG Revision 1.000 Page 23 of 33

#### **PROFINET XML:**

By Pressing the "**PROFINET XML**" button from the main window for SW67952 (Fig. 2) it is possible to generate the xml file to be imported into the master PROFINET.

PROFINET XML File Name		×
SW67952 Create the PROFINET XML Select the PROFINET XML Fil		
Fixed Part GSDML-V2.31-ADFweb-HD67952	User Part HD67952	Fixed Part -20180521.xml
🗸 ок	Cancel	

Figure 5: "PROFINET XML File Name" window



#### **UPDATE DEVICE:**

By pressing the "**Update Device**" button, it is possible to load the created Configuration into the device; and also the Firmware, if necessary. This by using the Ethernet port.

If you don't know the actual IP address of the device you have to use this procedure:

- Turn OFF the Device;
- Put Dip1 of 'Dip-Switch A' in ON position;
- Turn ON the device
- Connect the Ethernet cable;
- Insert the IP "192.168.2.205";
- Select which operations you want to do;
- Press the "Execute update firmware" button to start the upload;
- When all the operations are "OK" turn OFF the Device;
- Put Dip1 of 'Dip-Switch A' in OFF position;
- Turn ON the device.

If you know the actual IP address of the device, you have to use this procedure:

- Turn ON the Device with the Ethernet cable inserted;
- Insert the actual IP of the Converter;
- Select which operations you want to do;
- Press the "Execute update firmware" button to start the upload;
- ✤ When all the operations are "OK" the device automatically goes at Normal Mode.

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

User Manual **PROFINET / MQTT** 

Document code: MN67952\_ENG Revision 1.000 Page 24 of 33

Update Device by Ethernet (UDP)	×
SW67952 Update Device Using the Ethernet Port	
Insert the IP Address of Device 192 . 168 . 2 . 205	
Select Update Options	
Firmware + Configuration	~
Read Back	
Cancel	
ADFweb.com - SW67934 Ethernet Update	×
ADFweb.com - SW67934 Ethernet Update	× Ver. 1.500
	X Ver. 1.500
INIT : Waiting	X Ver. 1.500
INIT : Waiting FIRMWARE : Waiting	× Ver. 1.500
INIT : Waiting FIRMWARE : Waiting	X Ver. 1.500

Figure 6: "Update device" windows

When you receive the device, for the first time, you also have to update the Firmware in the HD67952 device.

#### Warning:

Note:

If Fig. 7 appears when you try to do the Update try these points before seeking assistance:

- Check if the serial COM port selected is the correct one;
- Check if the serial cable is connected between the PC and the device;
- Try to repeat the operations for the updating;
- Try with another PC;
- Try to restart the PC;
- Check the LAN settings;
- If you are using the program inside a Virtual Machine, try to use in the main Operating System;
- If you are using Windows Seven, Vista, 8 or 10 make sure that you have the administrator privileges;
- In case you have to program more than one device, using the "UDP Update", you have to cancel the ARP table every time you connect a new device on Ethernet. For do this you have to launch the "Command Prompt" and write the command "arp d". Pay attention that with Windows Vista, Seven, 8, 10 you have to launch the "Command Prompt" with Administrator Rights;
- Pay attention at Firewall lock.

Abi web.com - Ethemet opdate	<u>^</u>
INIT : Device Not Found	Ver. 1.500
FIRMWARE : Waiting	
PROJECT : Waiting	
ADFweb.com - Ethernet Update	×
INIT : PROTECTION	Ver. 1.500
FIRMWARE : Waiting	
PROJECT : Waiting	

#### Figure 7: "Error" window

## <u>Warning:</u>

In the case of HD67952 you have to use the software "SW67952": <u>www.adfweb.com\download\filefold\SW67952.zip</u>.

Document code: MN67952\_ENG Revision 1.000 Page 25 of 33





Document code: MN67952\_ENG Revision 1.000 Page 26 of 33

## **TEMPLATE STRING: DEFINITION OF MQTT PAYLOAD**

In the section "Set Communication" of the SW67952, it is possible to define a Template string for the MQTT messages. The template is necessary in order to define the structure of the payload of the MQTT message and the info contained. It is possible to have a simple text format or a JSON format.

The definition of the template can be done using Key words, used to link a specific information from/to PROFINET. The key words used and their meanings are:

- ✤ <u>VALUE</u>: value of the PROFINET data
- TIME: date and time of the MQTT message
- ✤ <u>DESC</u>: description of the message



Warning:

The key words must be defined between "\$" chars in order to be recognized (Ex.: \$VALUE\$).

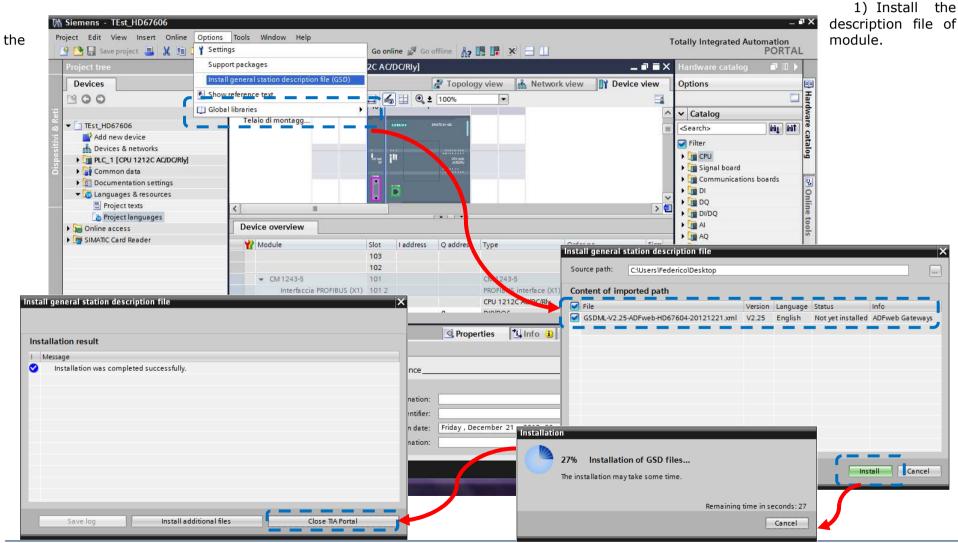


Document code: MN67952\_ENG Revision 1.000 Page 27 of 33

## **PLC CONFIGURATION:**

The configuration and commissioning of the PROFINET Converter as described on the following pages was accomplished with the help of the TIA Portal software by Siemens. In the case of using a control system from another supplier, refer to attend to the associated documentation.

These are the steps to follow:



ADFweb.com S.r.l.

2) Import the module in the network; connect the device to the PLC network and edit the parameters of IP, station name etc.

🕒 🔁 🔁	t View Insert Online Options Tools Window Help Save project 🝶 💥 🗐 🖹 🗙 🎝 🛨 (?* ± 🎧 🐁 🔃 🎧 🖳 🎧 🖉 Go online 🖉 Go offline 🍶 🖪 🖪 🛠 🖃 🛄	- ■ X Totally Integrated Automation PORTAL
Project t		
Device		
Mi Siemens - Guide		
<u>Project E</u> dit <u>V</u> iew Insert <u>O</u> nline Optio <u>n</u> s <u>T</u>	ools <u>Window</u> <u>H</u> elp Totally Integrated Automation	a da
📑 📴 🔚 Save project 🔳 🐰 🏥 🛅 🗙 🍤 🗄	E (* ± 🖬 🗟 🖳 🖬 🖳 🖉 Go online 🖉 Go online 🛔 🖪 🖪 🗰 🛠 🖃 🛄 PORTAL	
Project tree 🛛 🔳 🖣	Guide → Devices & networks	Drives
Devices	🚰 Topology view 🔥 Network view 🛐 Device view	Drives
	Streetwork       Connections       S7 connection       ▼       ■	Siemens AG
10	4 IO system: PLC_1.PROFINET IO-System (100)	Siemens AG         Image: Comparison of the comparis
a v ☐ Guide		• 🚰 HD67078
Add new device	PLC_1 SERIAL CAN DP-HORM	🕨 🌆 HD6707882
Devices & networks	CPU 1212C CAN DP-HORM	▶ 🚂 HD67602
• PLC_1 [CPU 1212C AC/DC/Rly]	PLC_1	• 🛅 HD67603
Common data		
Documentation settings		🖌 🕨 🌆 HD67604a1 👘 🖳
Languages & resources      Dim Online access	PLC_1.PROFINET IO-Syste	• 🛅 HD67605
SIMATIC Card Reader		HD67604     HD67604a1     HD67605     HD67606     HD67606     HD67606     HD67606     Indefended
P Car Simile Cald Reader		CAN CAN
	Network overview Connections	HD67609-A1
	Y Device Type Address in subnet Subnet Master system Comment	HD67679
	✓ SIMATIC 1200 station_1 SIMATIC 1200 station	HD67609     HD67609     HD67609A1     HD67679     ation
	PLC_1 CPU 1212C AC/DC/R/y	addin a si
		HD67606-A1
	SERIAL CAN	
		GSDML-V2.25-ADFWEE▼
	IE1 Sector Diagnostics I = V	č
	General	
	General 🖉 🖉 Use IP protocol	N Adapter
	Ethernet address 💿 Set IP address in the project	×
	Advanced options     IP address: 192.168.2.189	de opened.
	Subnet mask: 255, 255, 255, 0	
	Use IP router	
	Routeraddress: 0 0 0 0	
> Details view	Set IP address using a different method	
🖣 Portal view 🔛 Overview	Devices & ne 🖌 Project Guide opened.	



Document code: MN67952\_ENG Revision 1.000 Page 29 of 33

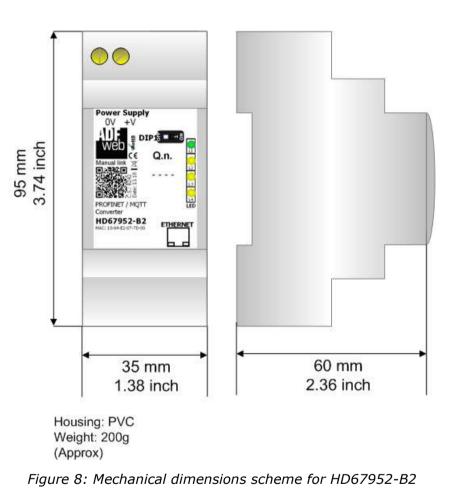
# 3) Load the configuration into the PLC.

	Configured acces:	s nodes of "PLC_1"							
	Device	Device type	Туре	Address	Subnet				
	PLC_1	CPU 1212C AC/D		192.168.2.50	PN/IE_1				
	CM 1243-5	CM 1243-5	PROFIBUS	2					
		Ţ	pe of the PG/PC inter PG/PC inter Connection to sub 1st gate	ace: Broadc	com NetLink (TM) G V C G				
	Accessible device	es in target subnet:		E	<u>Show all accessible devices</u>				
	Device	Device type	Туре	Address	Target device				
	PLC_1	CPU 1212C AC/D.		192.168.2.50	PLC_1	Load preview			
a	-		PN/IE	Access address		Check	before loading		
Flash LED						Status !		Message	Action
TIUSTICED						+1 🛇	▼ PLC_1	Ready for loading.	
- Hosti CCO									
TUSTILLU					<u>R</u> efresh	<ul> <li>Image: Second sec</li></ul>	Stop modules	All modules will be stopped for downloading to device.	Stop all
Inline status information:					4 <u>111111111111111111</u> 1				
nline status information: 모 Connected to addres	ss 192.168.2.50				4 <u>111111111111111111</u> 1	0		All modules will be stopped for downloading to device. Delete and replace system data in target	
Online status information:	ss 192.168.2.50				<u>B</u> efresh				Stop all Download to device Consistent downloa
Online status information:	ss 192.168.2.50					0	<ul><li>Device configurati.</li><li>Software</li></ul>	. Delete and replace system data in target	Download to device
Online status information: ₽ Connected to addres	ss 192.168.2.50				4 <u>111111111111111111</u> 1	0	<ul><li>Device configurati.</li><li>Software</li></ul>	. Delete and replace system data in target Download software to device	Download to device
Online status information:	ss 192.168.2.50					0	<ul><li>Device configurati.</li><li>Software</li></ul>	. Delete and replace system data in target Download software to device	Download to device
Online status information: ♀ Connected to addres ✓ Scanning ended.	55 192.168.2.50					0	<ul><li>Device configurati.</li><li>Software</li></ul>	. Delete and replace system data in target Download software to device	Download to device
Online status information:	ss 192.168.2.50					0	<ul><li>Device configurati.</li><li>Software</li></ul>	. Delete and replace system data in target Download software to device	Download to device
Online status information: ₽ Connected to addres	ss 192.168.2.50					0	<ul><li>Device configurati.</li><li>Software</li></ul>	. Delete and replace system data in target Download software to device	Download to device Consistent downloa



Document code: MN67952\_ENG Revision 1.000 Page 30 of 33

## **MECHANICAL DIMENSIONS:**



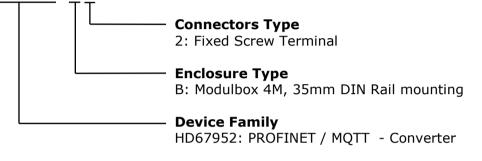


Document code: MN67952\_ENG Revision 1.000 Page 31 of 33

#### **ORDERING INFORMATIONS:**

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

#### HD67952 - B 2



Order Code: HD67952-B2 - PROFINET / MQTT – Converter

#### **ACCESSORIES:**

- Order Code: AC34011 35mm Rail DIN Power Supply 220/240V AC 50/60Hz 12 V DC
- Order Code: **AC34012** 35mm Rail DIN Power Supply 220/240V AC 50/60Hz 24 V DC



Document code: MN67952\_ENG Revision 1.000 Page 32 of 33

#### **DISCLAIMER:**

All technical content within this document can be modified without notice. The content of the document is a under continual renewal. 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.I. 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.I. 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 impact of 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

**C** The product conforms with the essential requirements of the applicable EC directives.



Document code: MN67952\_ENG Revision 1.000 Page 33 of 33

#### WARRANTIES AND TECHNICAL SUPPORT:

For fast and easy technical support for your ADFweb.com SRL products, consult our internet support at <u>www.adfweb.com</u>. 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:

- Obtain a Product Return Number (PRN) from our internet support at <u>www.adfweb.com</u>. Together with the request, you need to provide detailed information about the problem.
- 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.



ADFweb.com S.r.I. Via Strada Nuova, 17 IT-31010 Mareno di Piave TREVISO (Italy) Phone +39.0438.30.91.31 Fax +39.0438.49.20.99 www.adfweb.com

