User Manual

Revision 1.001
English

Modbus TCP Slave / SNMP - Converter

(Order Code: HD67167-A1)

For Website information:
www.adfweb.com?Product=HD67167

For Price information:
www.adfweb.com?Price=HD67167-A1

Benefits and Main Features:

- Electrical isolation
- Temperature range: -40°C/+85°C (-40°F/+185°F)

User Manual

For others SNMP products, see also the following links:

Converter SNMP to	
www.adfweb.com?Product=HD67040	**(DMX)**
www.adfweb.com?Product=HD67092	**(M-Bus Wireless)**
www.adfweb.com?Product=HD67155	**(CAN)**
www.adfweb.com?Product=HD67156	**(CANopen)**
www.adfweb.com?Product=HD67158	**(EtherNet/IP Master)**
www.adfweb.com?Product=HD67159	**(EtherNet/IP Slave)**
www.adfweb.com?Product=HD67160	**(DeviceNet Master)**
www.adfweb.com?Product=HD67161	**(DeviceNet Slave)**
www.adfweb.com?Product=HD67162	**(J1939)**
www.adfweb.com?Product=HD67163	**(M-Bus Master)**
www.adfweb.com?Product=HD67164	**(Modbus Master)**
www.adfweb.com?Product=HD67165	**(Modbus Slave)**
www.adfweb.com?Product=HD67166	**(Modbus TCP Master)**
www.adfweb.com?Product=HD67168	**(PROFIBUS Master)**
www.adfweb.com?Product=HD67169	**(PROFIBUS Slave)**
www.adfweb.com?Product=HD67613	**(PROFINET Slave)**
www.adfweb.com?Product=HD67626	**(S7comm)**
www.adfweb.com?Product=HD67693	**(BACnet Slave)**
www.adfweb.com?Product=HD67726	**(BACnet Master)**
www.adfweb.com?Product=HD67754	**(IEC 61850 Server)**
www.adfweb.com?Product=HD67779	**(IEC 61850 Client)**
www.adfweb.com?Product=HD67820	**(KNX)**
www.adfweb.com?Product=HD67850	**(DALI)**
www.adfweb.com?Product=HD67878	**(IO-Link Master)**
www.adfweb.com?Product=HD67954	**(MQTT)**
www.adfweb.com?Product=HD67987	**(IO-Link Slave)**
www.adfweb.com?Product=HD67B23	**(OPC UA Client)**
www.adfweb.com?Product=HD67B48	**(OPC UA Server)**
www.adfweb.com?Product=HD67B77	**(PROFINET Master)**
www.adfweb.com?Product=HD67C79	**(EnOcean)**
www.adfweb.com?Product=HD67D41	**(LoRaWAN)**
www.adfweb.com?Product=HD67E25	**(EtherCAT Slave)**
www.adfweb.com?Product=HD67E75	**(EtherCAT Master)**
www.adfweb.com?Product=HD67F41	**(LoRaWAN Gateway)**

Do you have an your customer protocol?
www.adfweb.com?Product=HD67003

Do you need to choose a device? do you want help?
www.adfweb.com?Cmd=helpme

INDEX:

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.

REVISION LIST:

Revision	Date	Author	Chapter	Description
1.000	05/01/2015	Ff	All	First Release
1.001	16/01/2025	Ln	All	New design

WARNING:

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ADFweb.com is not responsible for any error this manual may contain.

TRADEMARKS:

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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

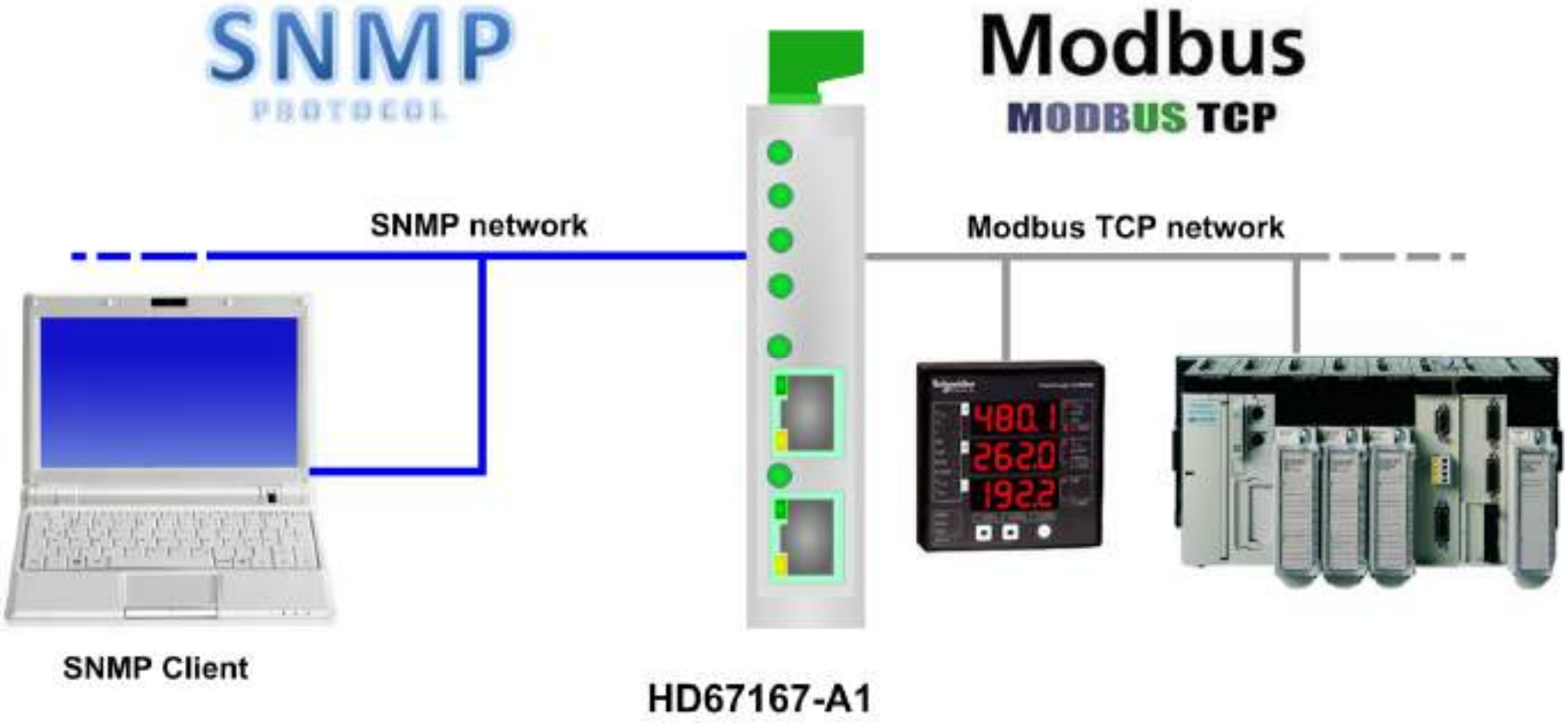
The device is state-of-the-art and is safe. The instruments can represent a potential hazard if they are inappropriately installed and operated by untrained personnel. These instructions refer to residual risks with the following symbol:

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 support@adfweb.com or give us a call if you need it.

EXAMPLES OF CONNECTION:



CONNECTION SCHEME:

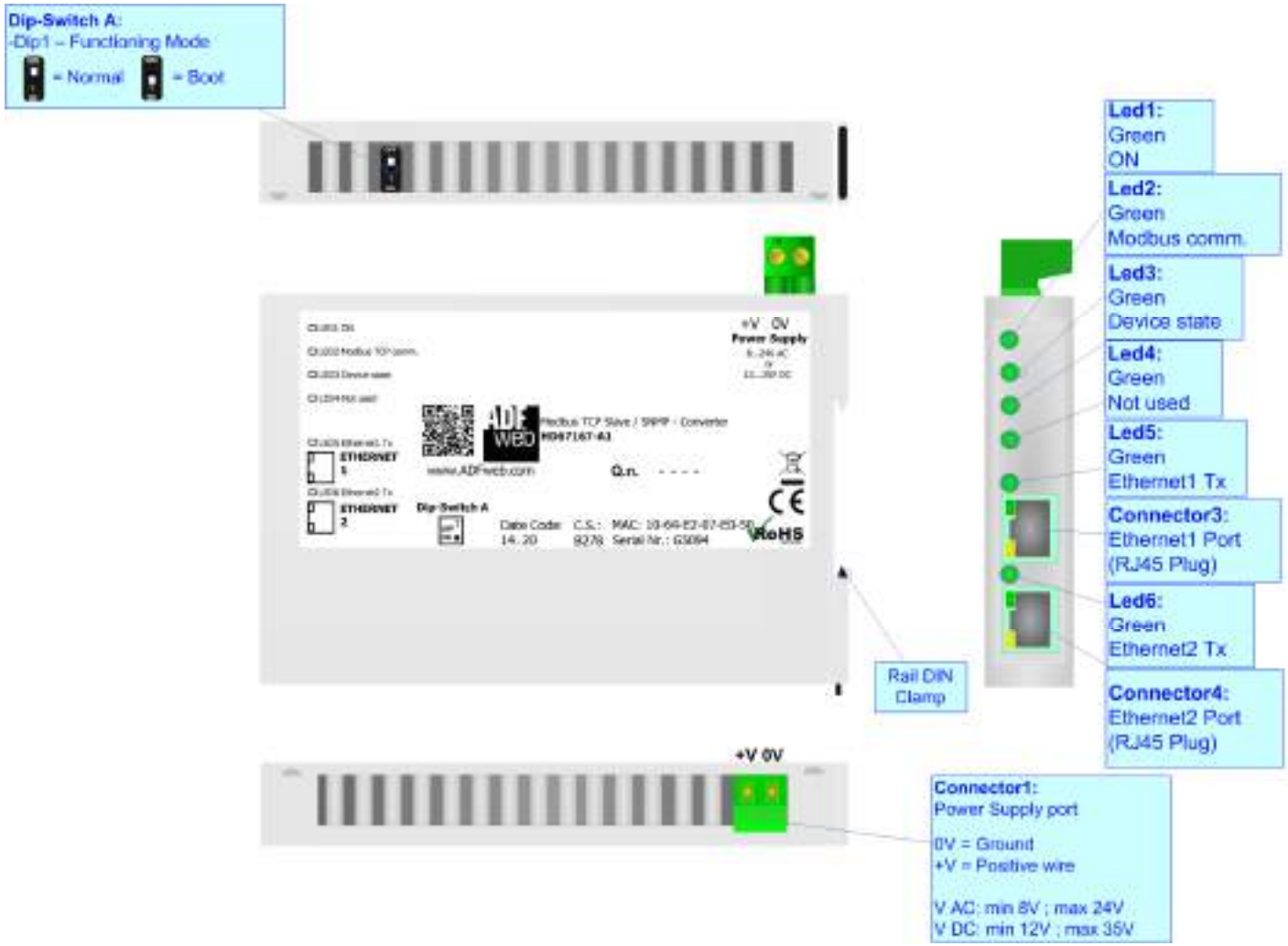


Figure 1: Connection scheme for HD67167-A1

CHARACTERISTICS:

The HD67167-A1 is a Modbus TCP Slave / SNMP Converter.

It has the following characteristics:

- Up to 1024 bytes in reading and 1024 bytes in writing;
- Isolation between Power Supply - Ethernet.
- Two-directional information between Modbus TCP bus and SNMP bus;
- Mountable on 35mm Rail DIN;
- Wide power supply input range: 8…24V AC or 12…35V DC;
- Wide temperature range: -40°C / +85°C [-40°F / +185°F].

CONFIGURATION:

You need Compositor SW67167 software on your PC in order to perform the following:

- Define the parameter of SNMP line;
- Define the parameter of Modbus TCP line;
- Update the device.

POWER SUPPLY:

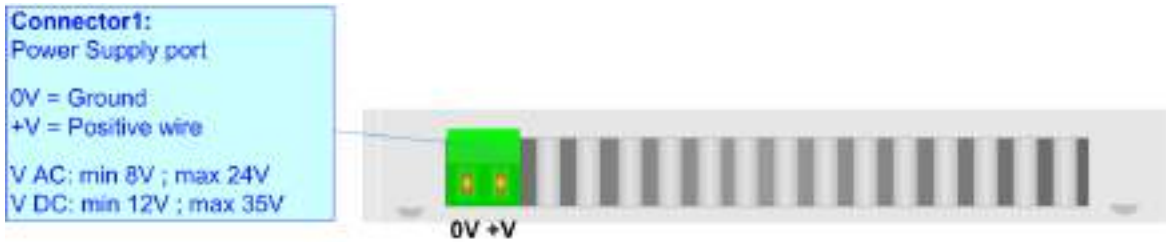
The devices can be powered at 8…24V AC and 12…35V DC. For more details see the two tables below.

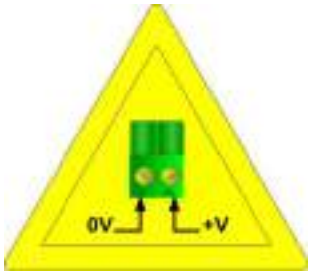
VAC ~		VDC ⎓	
Vmin	**Vmax**	**Vmin**	**Vmax**
8V	**24V**	**12V**	**35V**

Consumption at 24V DC:

Device	Consumption [W/VA]
HD67167-A1	3.5

Caution: Do not reverse the polarity power





HD67167-A1

FUNCTION MODES:

The device has got two function modes depending on 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 uploading 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 specific functions, see 'LEDS' section.

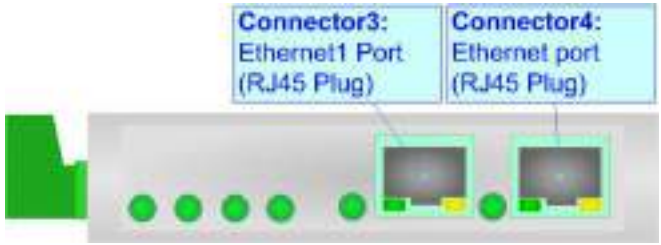
LEDS:

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

LED	Normal Mode	Boot Mode
1: ON [supply voltage] (green)	**ON:** Device powered **OFF:** Device not powered	**ON:** Device powered **OFF:** Device not powered
2: Modbus comm. (green)	Blinks when Modbus data are received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
3: Device state (green)	Blinks slowly (~1Hz)	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: Not used (green)	OFF	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Ethernet1 Tx (green)	Blinks when is transmitting Ethernet frames	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
6: Ethernet2 Tx (green)	Blinks when is transmitting Ethernet frames	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

ETHERNET:

The SNMP connection, Modbus TCP connection and the updating of the converters must be made using Connector3 and/or Connector4 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/PLC/other is recommended the use of a cross cable.



USE OF COMPOSITOR SW67167:

To configure the Converter, use the available software that runs with Windows called SW67167. 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 (XP, Vista, Seven, 8, 10 or 11; 32/64bit).

When launching the SW67167, the window below appears (Fig. 2).

Note:
It is necessary to have installed .Net Framework 4.

Figure 2: Main window for SW67167

NEW CONFIGURATION / OPEN CONFIGURATION:

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

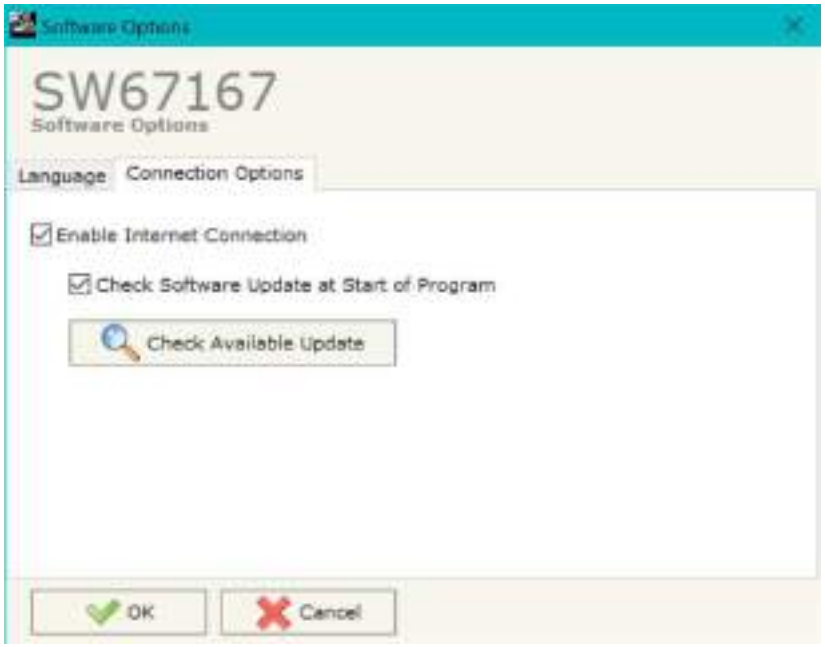
A device's configuration can also be imported or exported:

- To clone the configurations of a programmable "Modbus TCP Slave / SNMP - 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**".

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.



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 SW67167 check automatically if there are updatings when it is launched.

SET COMMUNICATION:

This section define the fundamental communication parameters of two buses, SNMP and Modbus TCP.

By Pressing the "**Set Communication**" button from the main window for SW67167 (Fig. 2) the window "Set Communication" appears (Fig. 3).
The window is divided in two sections, one for the SNMP and the other for the Modbus Slave.

The means of the fields for "SNMP" are:

- In the field "**IP ADDRESS**" insert the IP address that you want to give to the SNMP side;
- In the field "**SUBNET Mask**" insert the SubNet Mask of the SNMP side;
- In the field "**GATEWAY**" insert the default gateway that you want to use. 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 "**SNMP Name of Station**" is possible to assign a name to the SNMP node;
- In the field "**Contact**" the contact for SNMP Agent station is defined;
- In the field "**Location**" the location for SNMP Agent station is defined;
- In the field "**Map Type**" it is possible to select the type of SNMP map to use. It is possible to choose between "Dynamic Map (Recommended)" (see page 19) or "Fixed Map" (see page 24). It is suggested the "Dynamic Map".

The means of the fields for the "Modbus TCP Slave" section are:

- In the field "**IP ADDRESS**" insert the IP address that you want to give to the Modbus TCP side;
- In the field "**SUBNET Mask**" insert the SubNet Mask of the Modbus TCP side;
- In the field "**GATEWAY**" insert the default gateway that you want to use. 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 "**Port**" insert the TCP port for the Modbus TCP communication;
- If the field "**Read with Input Register / Status Function**" is checked, it is possible to read the Input bytes of SNMP side with Input Registers (Function 04) and write the Output bytes of SNMP side with Holding Registers (Function 06/16). The Output bytes are readable with Function 03. Otherwise, only Holding Registers will be used and the Output bytes of SNMP side cannot be read back;
- If the field "**Swap bytes of Registers**" the bytes inside the Modbus registers are swapped.

Figure 3: "Set Communication" window

SET SNMP ACCESS (only if "Dynamic Map" is used):

By pressing the "**Set SNMP Access**" button from the main window for SW67167 (Fig. 2) the "Set SNMP Access" window appears (Fig. 4). In this section, it is possible to create the OIDs for SNMP side to read or write using GET and SET commands or to be sent as TRAP messages. The window is divided into two tables, one for SNMP readings and one for SNMP writings.

Figure 4a: "Set SNMP Access -> SNMP Read" window

The data of the columns in the "SNMP Read" have the following meanings:

- If the field "**Enable**" is checked, the SNMP OID is enabled;
- In the field "**Community Name**" the name of the Community is defined;
- In the field "**Type**" the type of data of the OID is defined (Octet String or Integer);
- If the field "**On Change**" is checked, the OID is sent as Trap when the data from Modbus side change;
- If the field "**On Timer**" is checked, the OID is sent as Trap cyclically;
- In the field "**Time (ms)**" the delay time for the Trap send is defined (if "On Timer" option is checked);
- In the field "**Position**" the starting byte of the internal memory array where taking the data is defined;
- In the field "**Start Bit**" the starting bit of the selected Position is defined;
- In the field "**Num Bits/Bytes**" the dimension of the OID is defined. For 'Int' type the dimension is in bit, for 'String' type the dimension is in bytes;
- In the field "**Description**" the description/name of the OID is defined;
- In the field "**IP Address**" the IP Address of the SNMP device where addressing the Trap message is defined. This field is used only when 'On Change', 'On CMD' or 'On Timer' option is checked;
- In the field "**Conversion**" it is possible to select the data conversion to apply to the data (Float to Int);
- In the field "**Mnemonic**" a brief description of the OID is defined.

The data of the columns in the "SNMP Write" have the following meanings:

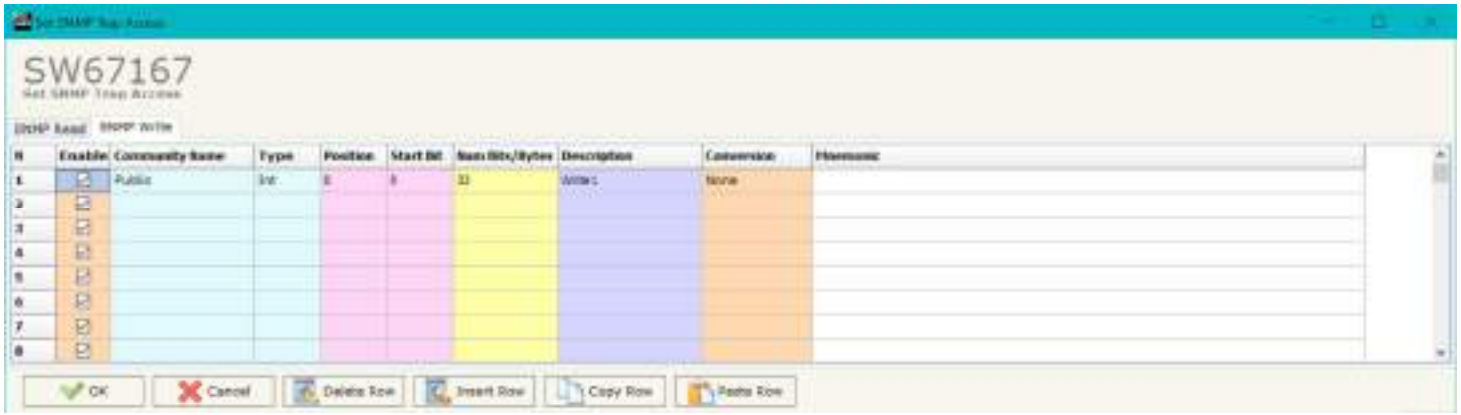


Figure 4b: "Set SNMP Access -> SNMP Write" window

- If the field "**Enable**" is checked, the SNMP OID is enabled;
- In the field "**Community Name**" the name of the Community is defined;
- In the field "**Type**" the type of data of the OID is defined (Octet String or Integer);
- In the field "**Position**" the starting byte of the internal memory array where mapping the data is defined;
- In the field "**Start Bit**" the starting bit of the selected Position is defined;
- In the field "**Num Bits/Bytes**" the dimension of the OID is defined. For 'Int' type the dimension is in bit, for 'String' type the dimension is in bytes;
- In the field "**Description**" the description/name of the OID is defined;
- In the field "**Conversion**" it is possible to select the data conversion to apply to the data (Int to Float);
- In the field "**Mnemonic**" a brief description of the OID is defined.

Note:
If the fields "On Change" and "On Timer" are disabled, the OID is readable using standard GET command. If one of these fields is enabled, the OID is sent as Trap and it is readable by GET command too.

Note:
The field "Description" must start with lowercase letter and it cannot contain special chars (just letters and numbers). All the "Description" fields must be different between them.

SNMP MIB (only if "Dynamic Map" is used):

By pressing the "**SNMP MIB**" button it is possible to save the MIB file for the SNMP Manager.

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.

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**";
- Press the "**Ping**" button, "Device Found!" must appear;
- Press the "**Next**" button;
- 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' at 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;
- Press the "**Ping**" button, must appear "Device Found!";
- Press the "**Next**" button;
- 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 update.

Figure 5: "Update device" windows

Note:
When you install a new version of the software, if it is the first time it is better you do the update of the Firmware in the HD67167 device.

Note:
When you receive the device, for the first time, you also have to update the Firmware in the HD67167 device.

Warning:
If Fig. 6 appears when you try to do the Update try these points before seeking assistance:

- 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, 10 or 11 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 or 11 you have to launch the "Command Prompt" with Administrator Rights;
- Pay attention at Firewall lock.

Figure 6: "Protection" window

In the case of HD67167 you have to use the software "SW67167": www.adfweb.com\download\filefold\SW67167.zip.

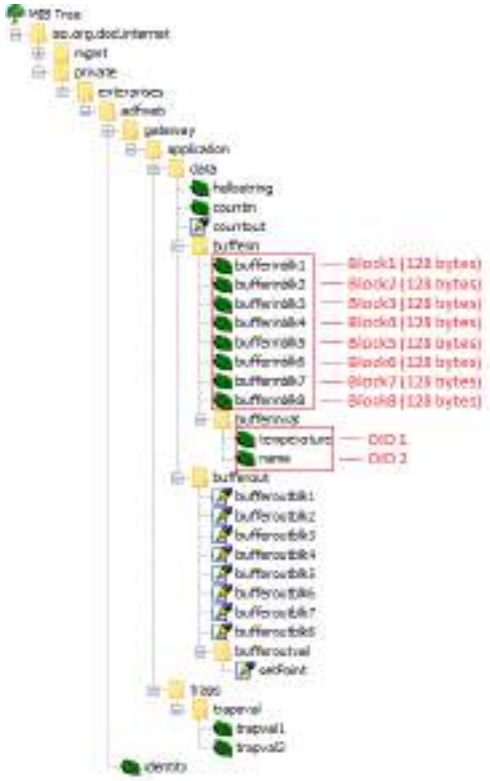
SNMP COMMUNICATION (Dynamic Map)

In order to read/write the data from/to Modbus TCP side, it is necessary to use specific SNMP commands in order to see the SNMP Input and write the SNMP Output.

Reading Modbus TCP data from SNMP:

In order to read the data from the HD67167, it is necessary to use the GET command.
Each OID defined in the section "Set SNMP Access -> SNMP Read" will be placed in the MIB tree of the converter.

In addition, it will be possible to read the entire internal map of the converter in memory blocks of 128 bytes: this feature is helpful in phase of configuration of the converter.



Each SNMP variable created will have its own OID and it will be created following this rule:

- OID 1 (first row of "Set SNMP Access -> SNMP Read" table): .1.3.6.1.4.1.49314.1.1.1.4.9.**1**
- OID 2 (second row of "Set SNMP Access -> SNMP Read" table): .1.3.6.1.4.1.49314.1.1.1.4.9.**2**
- OID X (Xth row of "Set SNMP Access -> SNMP Read" table): .1.3.6.1.4.1.49314.1.1.1.4.9.**X**

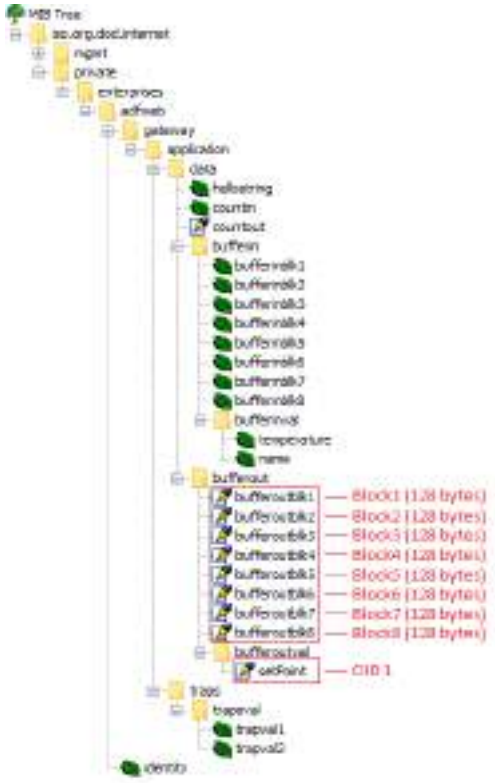
The memory blocks are accessible with these OIDs:

- Block1: .1.3.6.1.4.1.49314.1.1.1.4.1.0
- Block2: .1.3.6.1.4.1.49314.1.1.1.4.2.0
- Block3: .1.3.6.1.4.1.49314.1.1.1.4.3.0
- Block4: .1.3.6.1.4.1.49314.1.1.1.4.4.0
- Block5: .1.3.6.1.4.1.49314.1.1.1.4.5.0
- Block6: .1.3.6.1.4.1.49314.1.1.1.4.6.0
- Block7: .1.3.6.1.4.1.49314.1.1.1.4.7.0
- Block8: .1.3.6.1.4.1.49314.1.1.1.4.8.0

Writing Modbus TCP data from SNMP:

In order to write the data from the HD67167, it is necessary to use the SET command.
Each OID defined in the section "Set SNMP Access -> SNMP Write" will be placed in the MIB tree of the converter.

In addition, it will be possible to write the entire internal map of the converter in memory blocks of 128 bytes: this feature is helpful in phase of configuration of the converter.



Each SNMP variable created will have its own OID and it will be created following this rule:

- OID 1 (first row of "Set SNMP Access -> SNMP Write" table): .1.3.6.1.4.1.49314.1.1.1.5.9.**1**
- OID 2 (second row of "Set SNMP Access -> SNMP Write" table): .1.3.6.1.4.1.49314.1.1.1.5.9.**2**
- OID X (Xth row of "Set SNMP Access -> SNMP Write" table): .1.3.6.1.4.1.49314.1.1.1.5.9.**X**

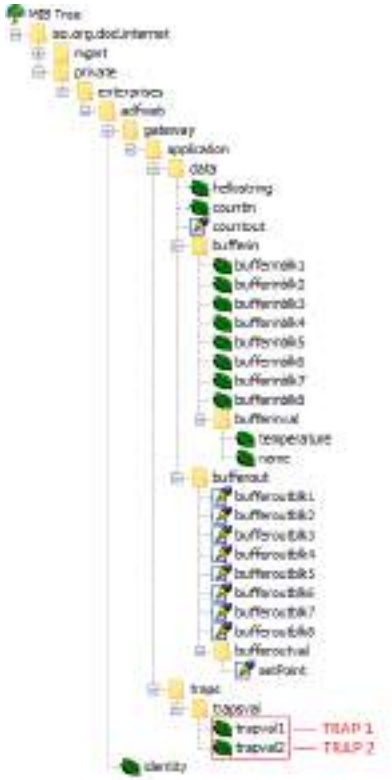
The memory blocks are accessible with these OIDs:

- Block1: .1.3.6.1.4.1.49314.1.1.1.5.1.0
- Block2: .1.3.6.1.4.1.49314.1.1.1.5.2.0
- Block3: .1.3.6.1.4.1.49314.1.1.1.5.3.0
- Block4: .1.3.6.1.4.1.49314.1.1.1.5.4.0
- Block5: .1.3.6.1.4.1.49314.1.1.1.5.5.0
- Block6: .1.3.6.1.4.1.49314.1.1.1.5.6.0
- Block7: .1.3.6.1.4.1.49314.1.1.1.5.7.0
- Block8: .1.3.6.1.4.1.49314.1.1.1.5.8.0

Note:
The OIDs in writing are readable too with GET command.

TRAP messages from SNMP:

All the OIDs defined in the "Set SNMP Access -> SNMP Read" table can be sent as TRAP messages too.



The TRAP messages are contained in the MIB tree and they have these OIDs:

- TRAP 1 (first row of "Set SNMP Access -> SNMP Read" table): .1.3.6.1.4.1.49314.1.1.2.1.**1**
- TRAP 2 (second row of "Set SNMP Access -> SNMP Read" table): .1.3.6.1.4.1.49314.1.1.2.1.**2**
- TRAP X (Xth row of "Set SNMP Access -> SNMP Read" table): .1.3.6.1.4.1.49314.1.1.2.1.**X**

SNMP COMMUNICATION (Fixed Map)

In order to read/write the data from/to Modbus side, it is necessary to use specific SNMP commands in order to see the SNMP Input and write the SNMP Output.

Reading Modbus TCP data from SNMP:

In order to read the data from the HD67167 it is necessary to use the "snmpget" command. The Input array is contained to this internal directory: 1.3.6.1.4.1.33118.1.1.1.4.x.0, where 'x' is the number of data block. Each data block has a dimension of 128 bytes.

Example: you want to read informations of the data block 3. The structure of the command to send is:

snmpget –v1 –cprivate "IP Address of the converter" 1.3.6.1.4.1.33118.1.1.1.4.**3**.0

Figure 7a: MIB Tree Input

Writing Modbus TCP data from SNMP:

In order to write the data to the HD67167 it is necessary to use the "snmpset" command. The Output array is contained to this internal directory: 1.3.6.1.4.1.33118.1.1.1.4.x.0, where 'x' is the number of data block. Each data block has a dimension of 128 bytes.

Example: you want to write informations of the data block 3 with the data '0123456789' (ASCII). The structure of the command to send is:

snmpset –v1 –cprivate "IP Address of the converter" 1.3.6.1.4.1.33118.1.1.1.5.**3**.0 s "0123456789"

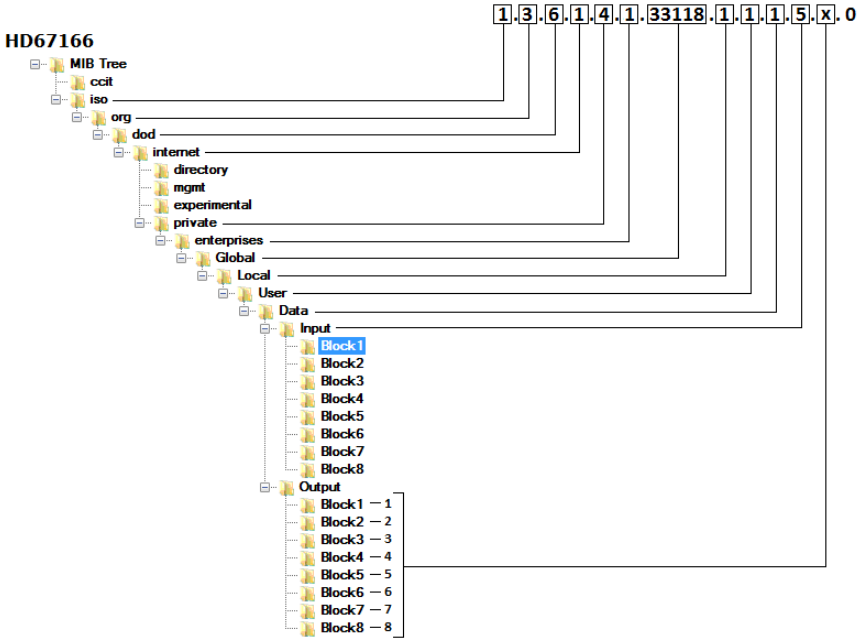


Figure 7b: MIB Tree Output

MODBUS MAP:

On Modbus side, the map is created automatically. In relation to the configuration defined, it is possible to have two different maps.

Read with Input Register / Status Function not enabled

Data in reading:

Type	Address	Function	Description
Holding Register	0	03	Input Bytes 0-1 of SNMP side
Holding Register	1	03	Input Bytes 2-3 of SNMP side
Holding Register	2	03	Input Bytes 4-5 of SNMP side
.			
.			
Holding Register	719	03	Input Bytes 1438-1439 of SNMP side

Data in writing:

Type	Address	Function	Description
Holding Register	0	06/16	Output Bytes 0-1 of SNMP side
Holding Register	1	06/16	Output Bytes 2-3 of SNMP side
Holding Register	2	06/16	Output Bytes 4-5 of SNMP side
.			
.			
Holding Register	719	06/16	Output Bytes 1438-1439 of SNMP side

Note:
The data can be read/written as single bits too using Coil Status (Function 01 and Functions 05/15).

Read with Input Register / Status Function enabled

Data in reading:

Type	Address	Function	Description
Input Register	0	04	Input Bytes 0-1 of SNMP side
Input Register	1	04	Input Bytes 2-3 of SNMP side
Input Register	2	04	Input Bytes 4-5 of SNMP side
.			
.			
Input Register	719	04	Input Bytes 1438-1439 of SNMP side

Data in writing:

Type	Address	Function	Description
Holding Register	0	R: 03 W: 06/16	Output Bytes 0-1 of SNMP side
Holding Register	1	R: 03 W: 06/16	Output Bytes 2-3 of SNMP side
Holding Register	2	R: 03 W: 06/16	Output Bytes 4-5 of SNMP side
.			
.			
Holding Register	719	R: 03 W: 06/16	Output Bytes 1438-1439 of SNMP side

Note:
The data can be read/written as single bits too using Input/Coil Status (Function 02 and Functions 01/05/15).

MECHANICAL DIMENSIONS:

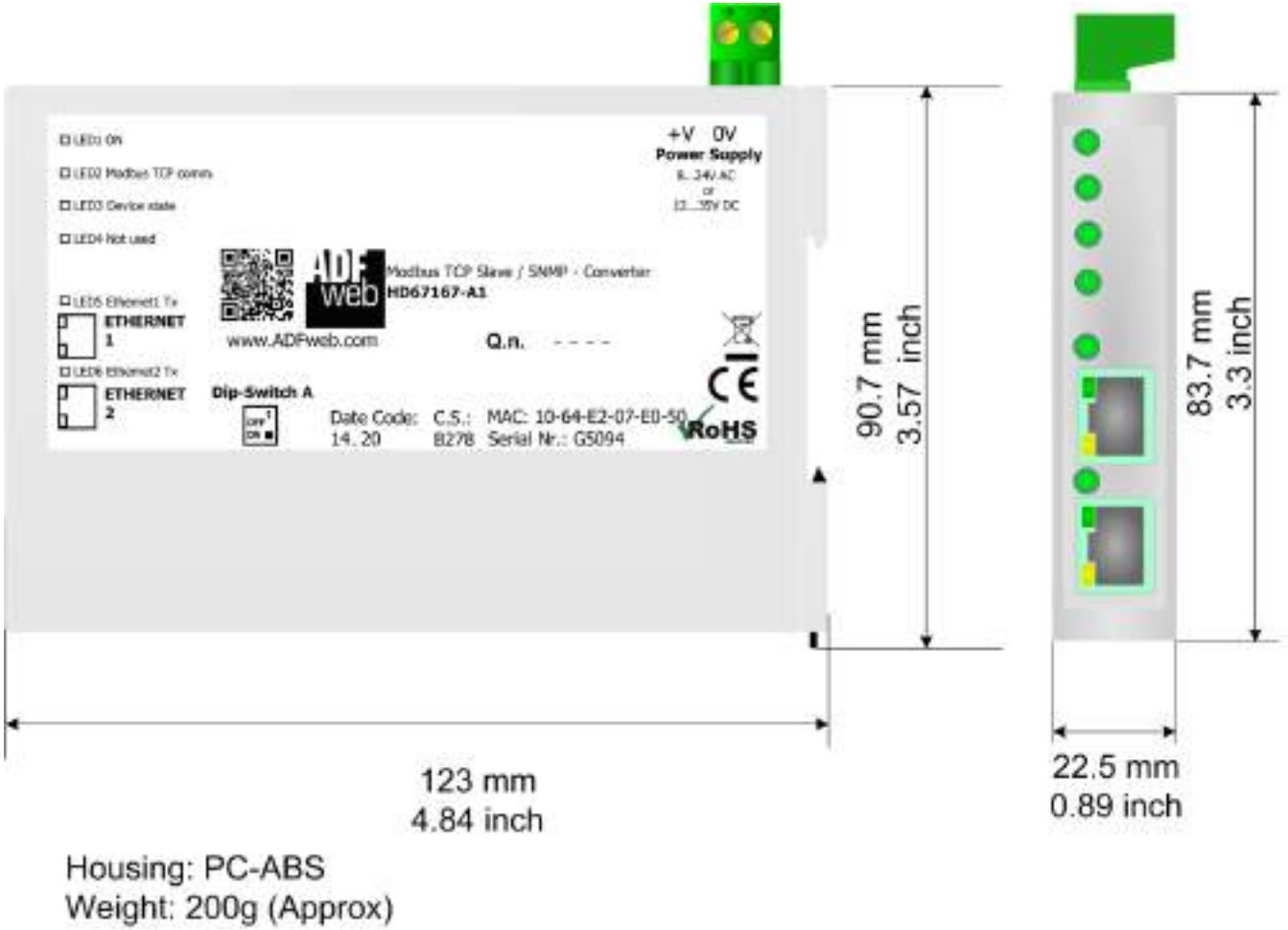


Figure 8: Mechanical dimensions scheme for HD67167-A1

ORDERING INFORMATIONS:

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

HD67167 – A1

Connectors Type
1: Removable 5mm Screw Terminal

Enclosure Type
A: 1M, 35mm DIN Rail mounting

Device Family
HD67167: Modbus TCP Slave / SNMP - Converter

Order Code: **HD67167-A1** **-** Modbus TCP Slave / SNMP – 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

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.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 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

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:

- 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.
- 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.

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