

User Manual

Revision 1.000
English

IO Link Master / PROFIBUS Slave - Converter

(Order Code: HD67X4PB, HD67X4PK, HD67X8PB, HD67X8PK)

For Website information:

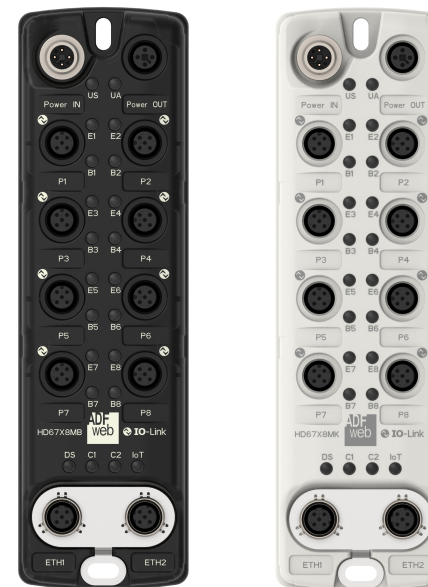
- www.adfweb.com/?Product=HD67X4PB
- www.adfweb.com/?Product=HD67X4PK
- www.adfweb.com/?Product=HD67X8PB
- www.adfweb.com/?Product=HD67X8PK

For Price information:

- www.adfweb.com/?Price=HD67X4PB
- www.adfweb.com/?Price=HD67X4PK
- www.adfweb.com/?Price=HD67X8PB
- www.adfweb.com/?Price=HD67X8PK

Benefits and Main Features:

- ✦ Up to 8 IO-Link ports
- ✦ One Ethernet port
- ✦ IO-Link Class configurable for each port
- ✦ Temperature range: -40°C/+85°C (-40°F/+185°F)



User Manual

For others IO-Link devices, see also the following links:

IO-Link from/to ...

- www.adfweb.com?Product=HD67860
- www.adfweb.com?Product=HD67861
- www.adfweb.com?Product=HD67862
- www.adfweb.com?Product=HD67864
- www.adfweb.com?Product=HD67865
- www.adfweb.com?Product=HD67866
- www.adfweb.com?Product=HD67867
- www.adfweb.com?Product=HD67868
- www.adfweb.com?Product=HD67869
- www.adfweb.com?Product=HD67870
- www.adfweb.com?Product=HD67871
- www.adfweb.com?Product=HD67872
- www.adfweb.com?Product=HD67873
- www.adfweb.com?Product=HD67874
- www.adfweb.com?Product=HD67875
- www.adfweb.com?Product=HD67876
- www.adfweb.com?Product=HD67877
- www.adfweb.com?Product=HD67878

- (Modbus Master)
- (Modbus Slave)
- (Modbus TCP Master)
- (BACnet Master)
- (BACnet Slave)
- (CAN)
- (CANopen)
- (DeviceNet Master)
- (DeviceNet Slave)
- (EtherNet/IP Master)
- (EtherNet/IP Slave)
- (J1939)
- (MQTT)
- (NMEA0183)
- (NMEA2000)
- (PROFINET Slave)
- (SNMP Manager)
- (SNMP Agent)

INDEX:

| | Page |
|---|------|
| INDEX | 2 |
| UPDATED DOCUMENTATION | 2 |
| REVISION LIST | 2 |
| WARNING | 2 |
| TRADEMARKS | 2 |
| SECURITY ALERT | 3 |
| EXAMPLE OF CONNECTION | 4 |
| CONNECTION SCHEME | 5 |
| CHARACTERISTICS | 9 |
| CONFIGURATION | 9 |
| POWER SUPPLY | 10 |
| LEDS | 11 |
| IO-LINK | 13 |
| ETHERNET | 14 |
| PROFIBUS | 15 |
| USE OF COMPOSITOR SW67X | 16 |
| NEW CONFIGURATION / OPEN CONFIGURATION | 17 |
| SOFTWARE OPTIONS | 18 |
| SET COMMUNICATION | 20 |
| IO-LINK SET ACCESS | 26 |
| MQTT SET TOPIC | 35 |
| OPC UA CLIENT ACCESS | 37 |
| OPC UA SERVER ACCESS | 41 |
| UPDATE DEVICE | 42 |
| DATA LIVE VIEW | 44 |
| TEMPLATE STRING: DEFINITION OF MQTT PAYLOAD | 45 |
| MECHANICAL DIMENSIONS | 47 |
| ORDERING INFORMATIONS | 49 |
| ACCESSORIES | 49 |
| DISCLAIMER | 50 |
| OTHER REGULATIONS AND STANDARDS | 50 |
| WARRANTIES AND TECHNICAL SUPPORT | 51 |
| RETURN POLICY | 51 |

UPDATED DOCUMENTATION:

Dear customer, we thank you for your attention and we remind you that you need to check that the following document is:

- Updated
- Related to the product you own

To obtain the most recently updated document, note the “document code” that appears at the top right-hand corner of each page of this document.

With this “Document Code” go to web page www.adfweb.com/download/ and search for the corresponding code on the page. Click on the proper “Document Code” and download the updates.

REVISION LIST:

| Revision | Date | Author | Chapter | Description |
|----------|------------|--------|---------|-----------------------|
| 1.000 | 23/02/2026 | Ln | 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.

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:

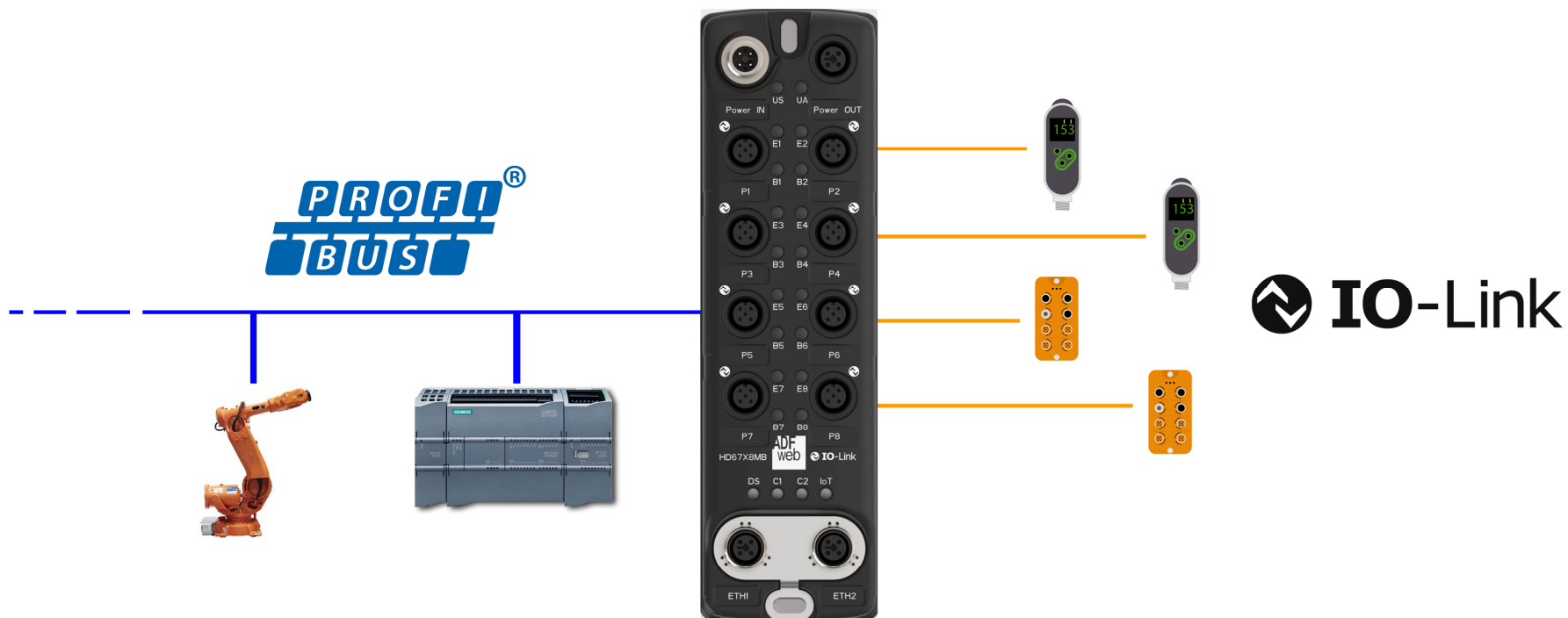


This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

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.

EXAMPLE OF CONNECTION:



ADFweb.com



+39 0438 309 131



+39 349 440 9592



support@adfweb.com

CONNECTION SCHEME:

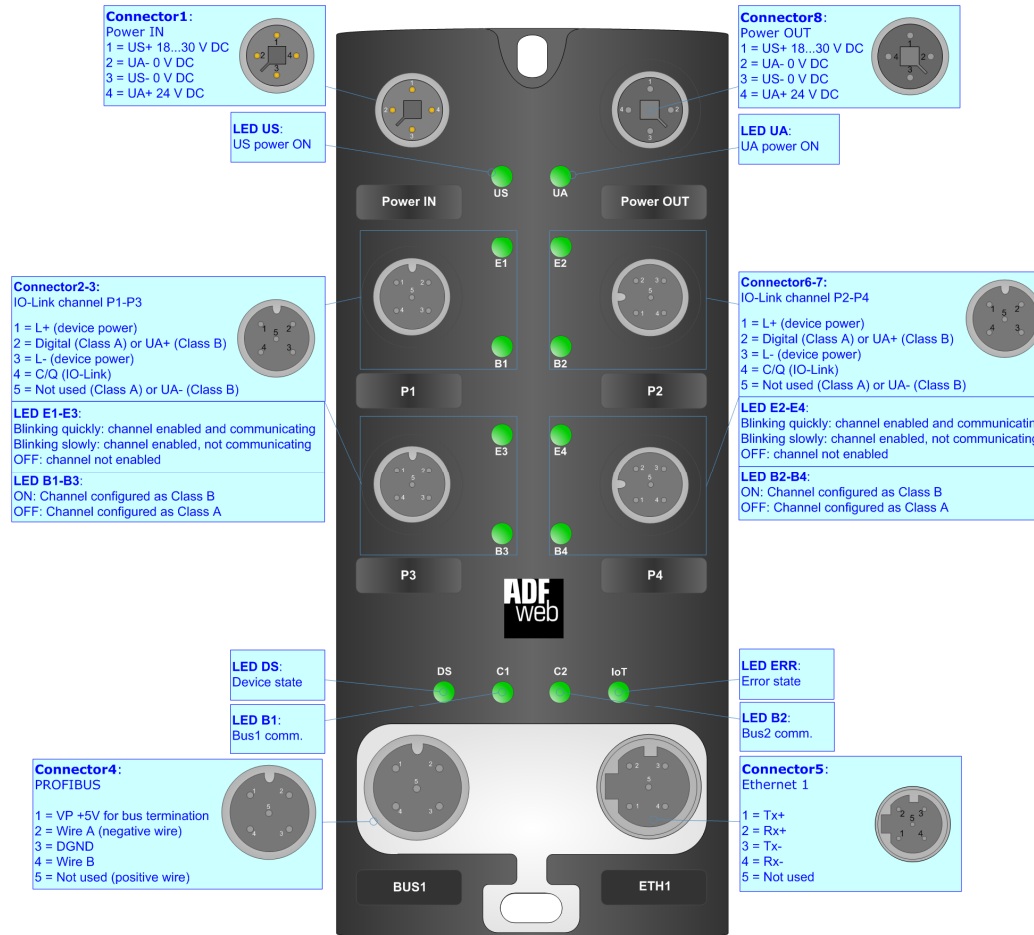


Figure 1a: Connection scheme for HD67X4PB

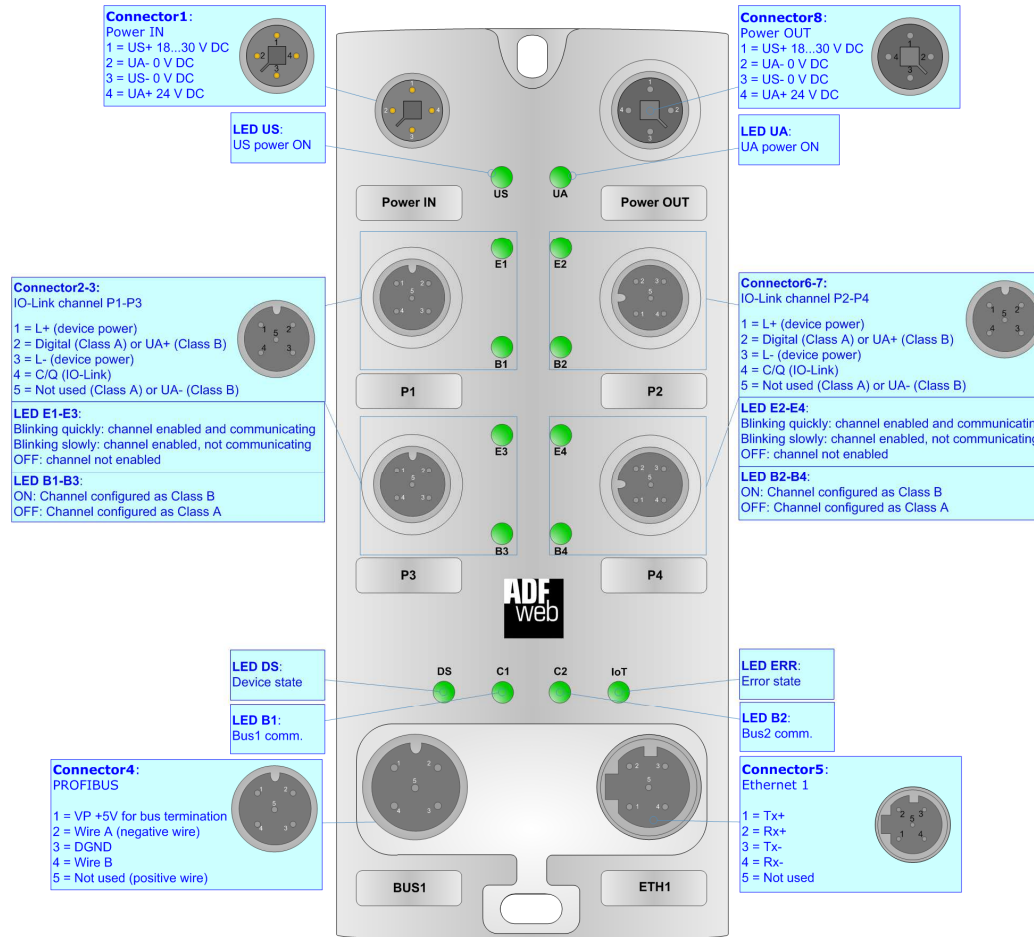


Figure 1b: Connection scheme for HD67X4PK

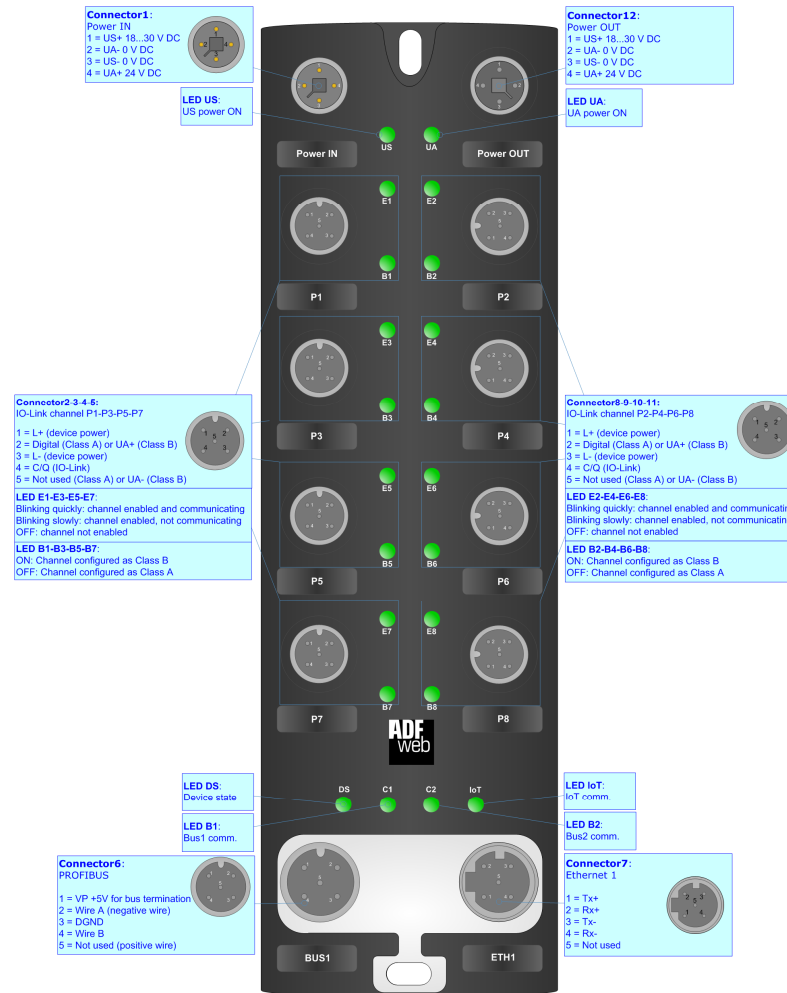


Figure 1c: Connection scheme for HD67X8PB

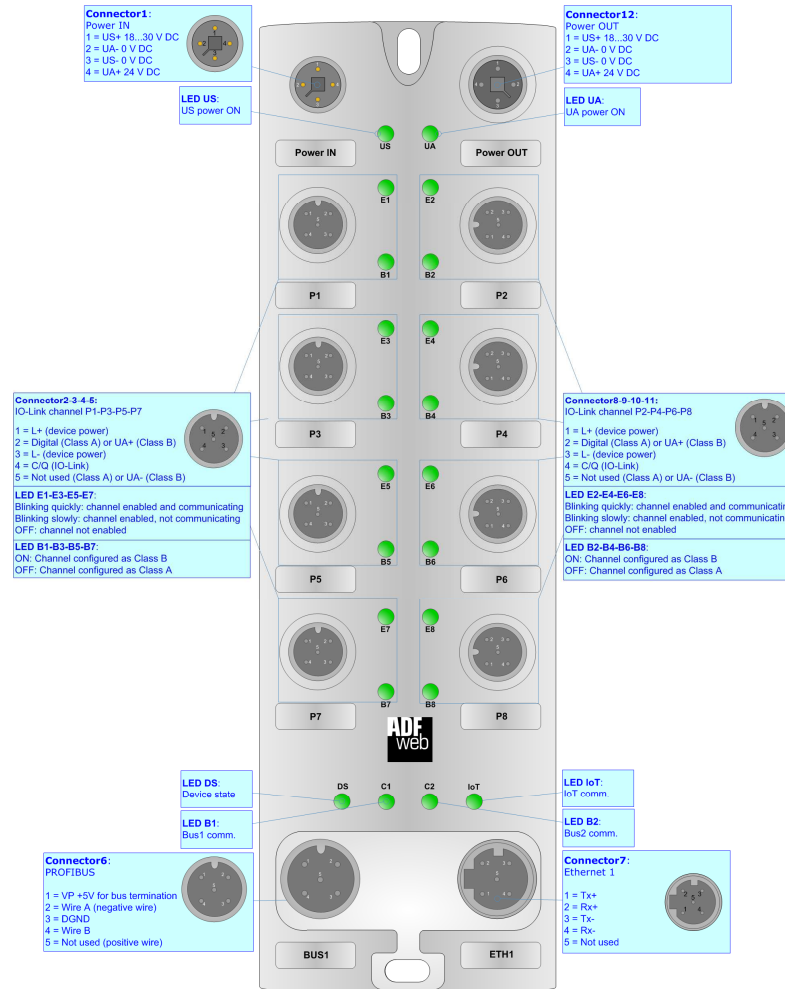


Figure 1d: Connection scheme for HD67X8PK

CHARACTERISTICS:

The HD67XxPx is a IO-Link / PROFIBUS Slave converter.

It allows the following characteristics:

- Two-directional information between PROFIBUS and IO-Link;
- Configurable IO-Link Class;
- IP rating from IP67 (HD67XxPB) to IP69K (HD67XxPK);
- Wide power supply input range: 18...30V DC;
- Wide temperature range: -40°C / +85°C [-40°F / +185°F].

CONFIGURATION:

You need Compositor SW67X software on your PC in order to perform the following:

- Define the parameters of IO-Link;
- Define the parameters of PROFIBUS protocol;
- Define IO-Link variables to be read;
- Define IO-Link variables to be written;
- Export the GSD file for PROFIBUS side;
- Monitor live data from/to IO-Link;
- Update the device.

POWER SUPPLY:

The devices can be powered between a wide range of voltages. The power supply ports use M12 T-coded connectors.

In the same connector, it is possible to wire US power supply and UA power supply (for IO-Link Class B):

- US power supply: used to feed the converter itself and provide the US power for IO-Link channels;
- UA power supply: used to provide UA power for Class B IO-Link devices.

For more details see the two tables below.

| | | |
|-----------------|------------------------|----------------|
| | US power supply | |
| | Vmin | Vmax |
| HD67XxPx | 18V DC | 30V DC |
| | UA power supply | |
| | Vmin | Vmax |
| HD67XxPx | 24 V DC | 24 V DC |

Consumption at 24V DC (no load on IO-Link side):

| Device | W/VA |
|----------|------|
| HD67XxPx | 4 |



Warning:

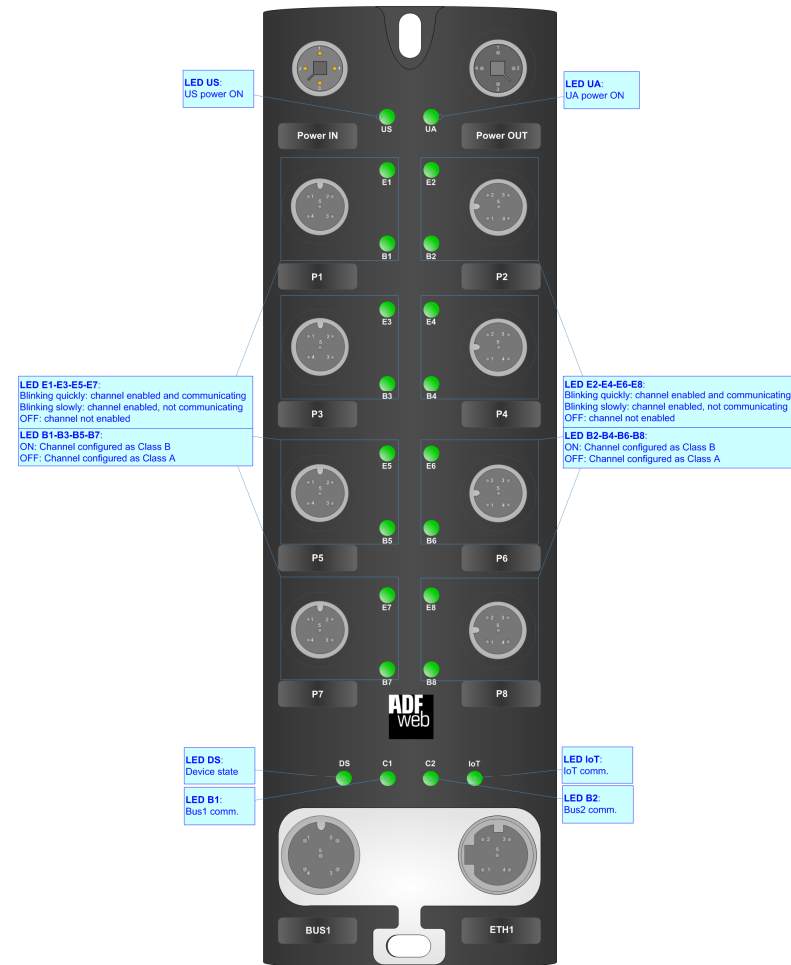
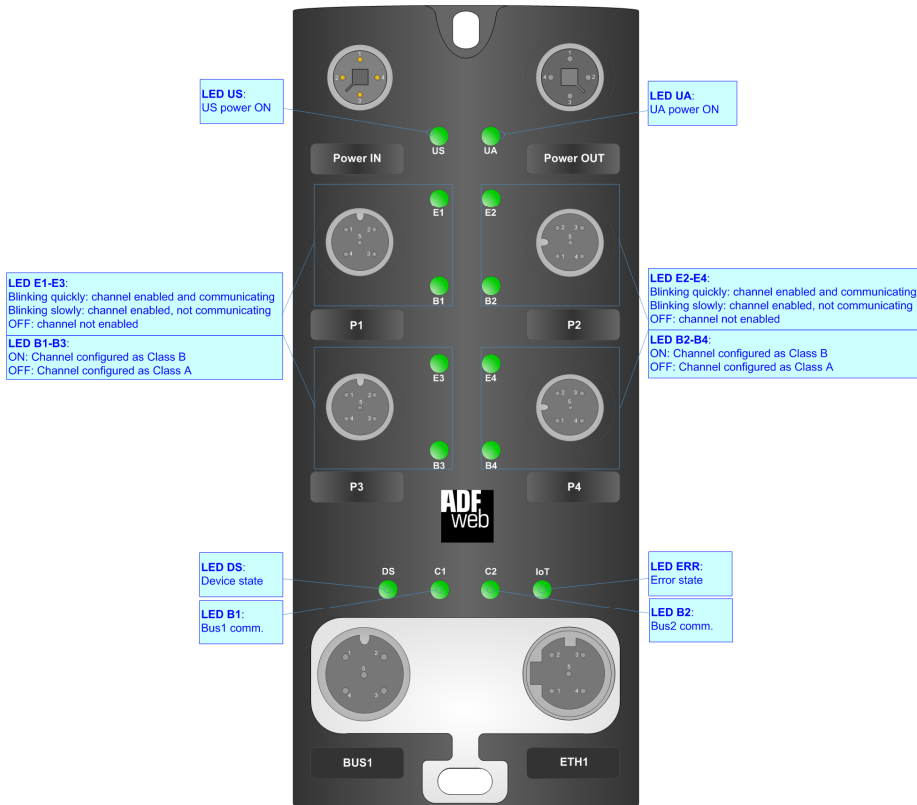
It is necessary to add to this consumption the one required by the IO-Link devices connected to the IO-Link channels.



LEDS:

The device has got 14 (for the hardware with 4 IO-Link ports) or 22 (for the hardware with 8 IO-Link ports) 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 |
|-------------------------|--|---|
| LED US: Device State | ON: US power supply present OFF: US power supply not present | ON: US power supply present OFF: US power supply not present |
| LED UA: Device State | ON: UA power supply present OFF: UA power supply not present | ON: UA power supply present OFF: UA power supply not present |
| LED Ex: IO-Link status | Flashing quickly: IO-Link channel configured and communicating Flashing slowly: IO-Link channel configured, but not communicating OFF: IO-Link channel not configured | Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress |
| LED Bx: IO-Link Class B | ON: IO-Link channel configured as Class B, no issues Fast blink: IO-Link channel configured as Class B, current exceeding the maximum limit configured OFF: IO-Link channel configured as Class A | Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress |
| LED DS: Device State | Blinks slowly (~1Hz) | Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress |
| LED C1: IO-Link comm. | Flashing: IO-Link communication OFF: No IO-Link communication | Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress |
| LED C2: PROFIBUS comm. | Flashing: PROFIBUS communication OFF: No PROFIBUS communication | Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress |
| LED IoT: IoT comm. | Flashing: IoT communication OFF: No IoT communication | Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress |

IO-LINK

IO-Link is the first globally standardized IO technology (IEC 61131-9) that communicates from the controller down to the lowest automation level. This universally applicable interface is a fieldbus-neutral point-to-point connection which uses standard unshielded cables. IO-Link sends all the sensor and actuator signals to the controller and in turn carries controller data to the sensor/actuator level with revolutionary consequences.

It is possible to have IO-Link device of two different type: IO-Link Class A and IO-Link Class B.

IO-Link Master / PROFIBUS converter can manage both thanks to the configurable IO-Link channels.

IO-Link channels use M12 A-coded connectors.

IO-LINK CLASS A:

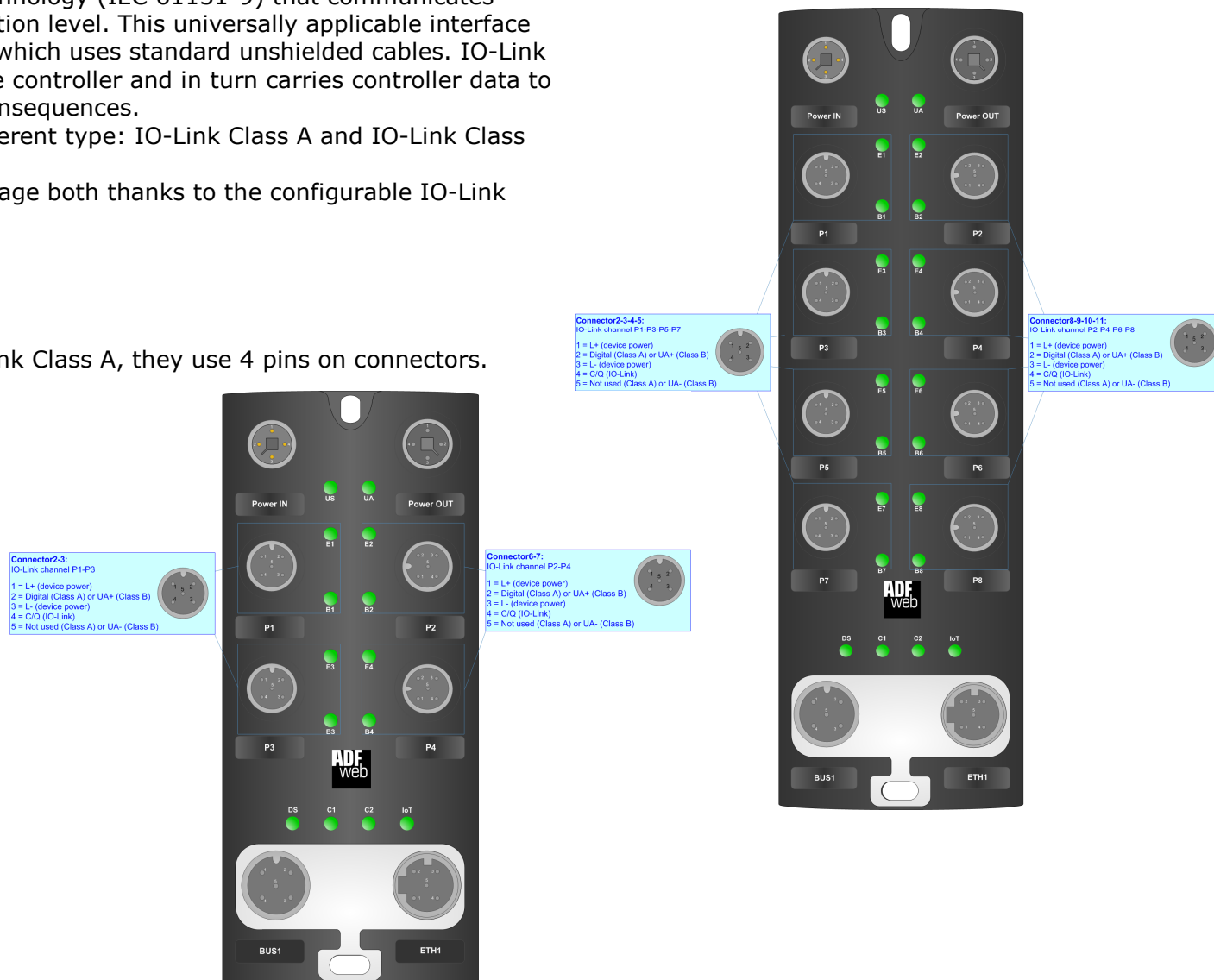
If the IO-Link channels are configured as IO-Link Class A, they use 4 pins on connectors.

The Class A devices are normally sensors and actuators that don't require UA power.

IO-LINK CLASS B:

If the IO-Link channels are configured as IO-Link Class B, they use 5 pins on connectors and they can provide an additional aux power supply (UA power supply) used for the actuation.

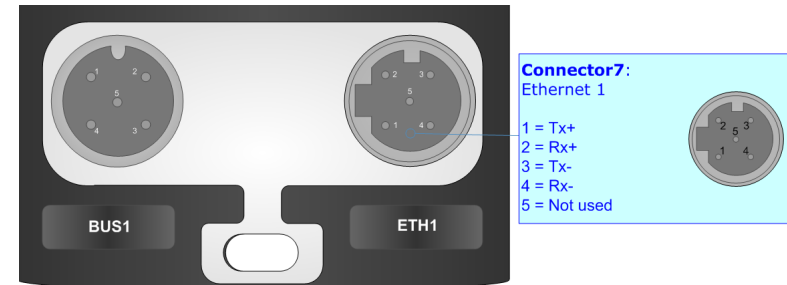
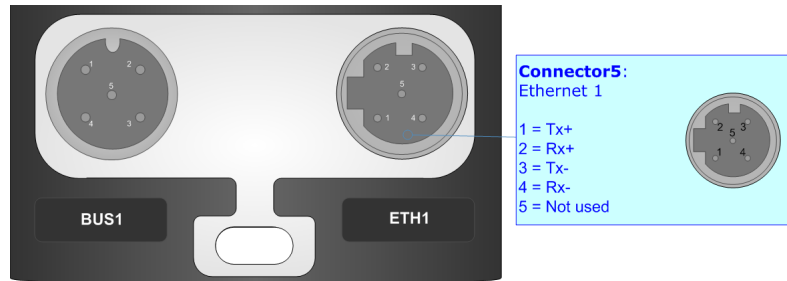
The Class B devices are normally actuators that require UA power.



ETHERNET:

The Ethernet connection must be made using Connector5 of HD67X4Px and Connector7 of HD67X8Px 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.

Ethernet ports use M12 D-coded connectors.

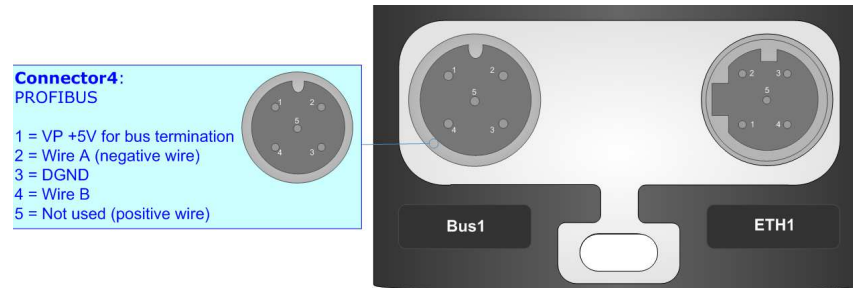


PROFIBUS:

The PROFIBUS uses a M12 connector. The pin assignment is defined like in the figure below.

Here some codes of cables:

- Belden: p/n 183079A - Continuous Armor DataBus® ISA/SP-50 PROFIBUS Cable.



USE OF COMPOSITOR SW67X:

To configure the Converter, use the available software that runs with Windows called SW67X. 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, 11; 32/64bit).

When launching the SW67X, the window below appears (Fig. 2).



Note:

It is necessary to have installed .Net Framework 4.

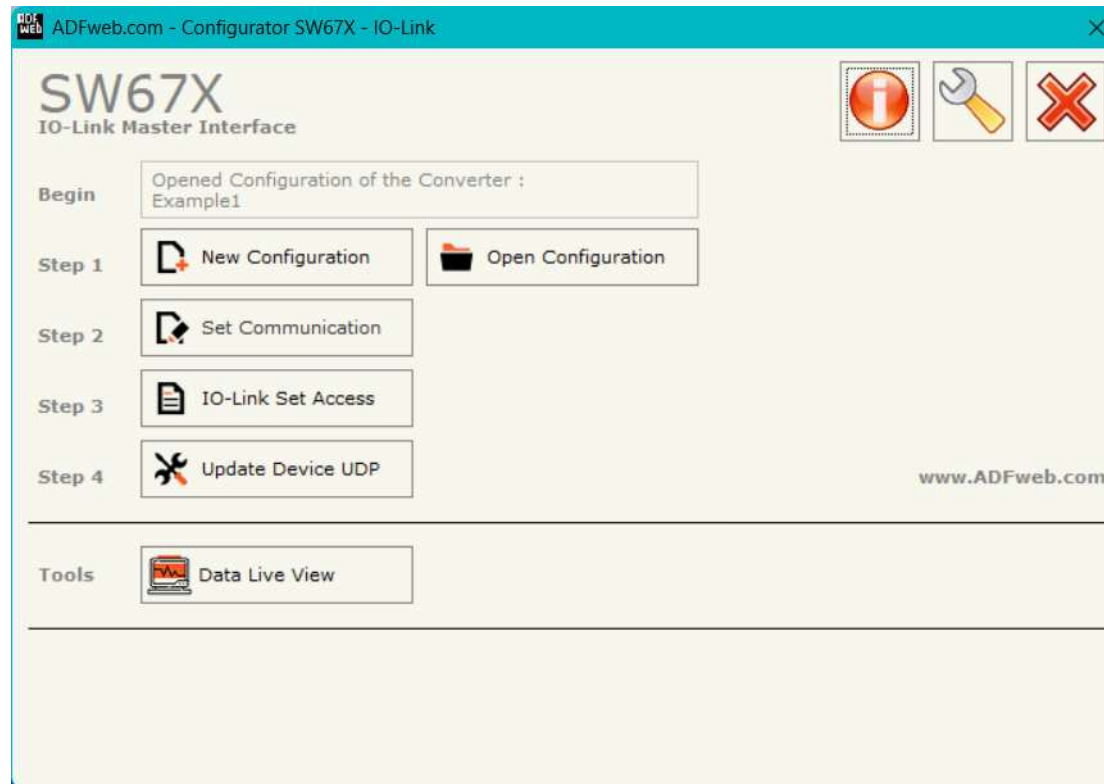
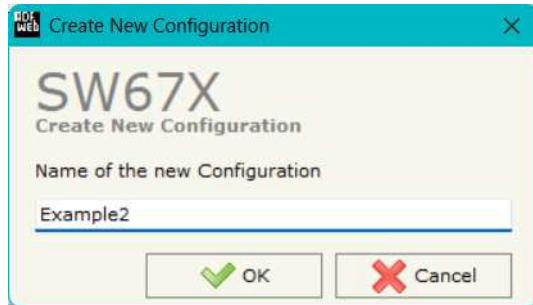


Figure 2: Main window for SW67X

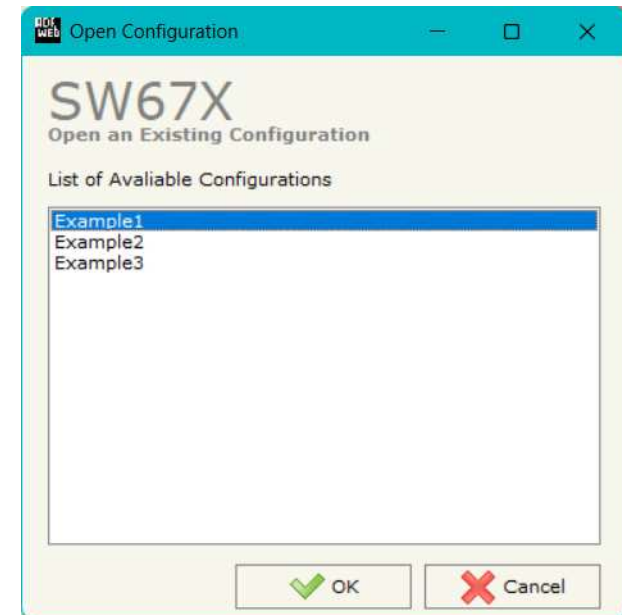
NEW CONFIGURATION / OPEN CONFIGURATION:

The “**New Configuration**” button creates the folder which contains the entire device’s configuration.




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

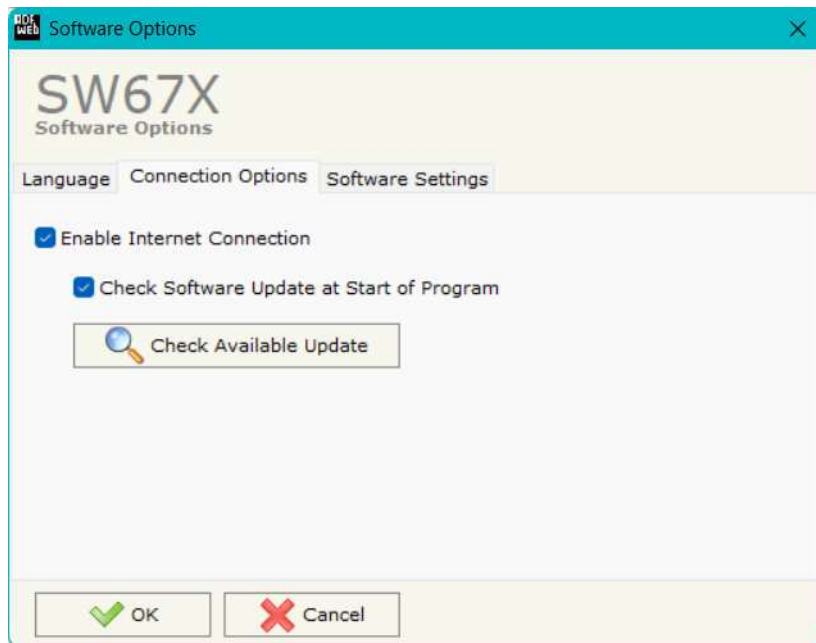
- To clone the configurations of a programmable “IO-Link Master / PROFIBUS Slave - Converter” in order to configure another device in the same manner, it is necessary to maintain the folder and all its contents;
- To clone a project in order to obtain a different version of the project, it is sufficient to duplicate the project folder with another name and open the new folder with the button “**Open Configuration**”.



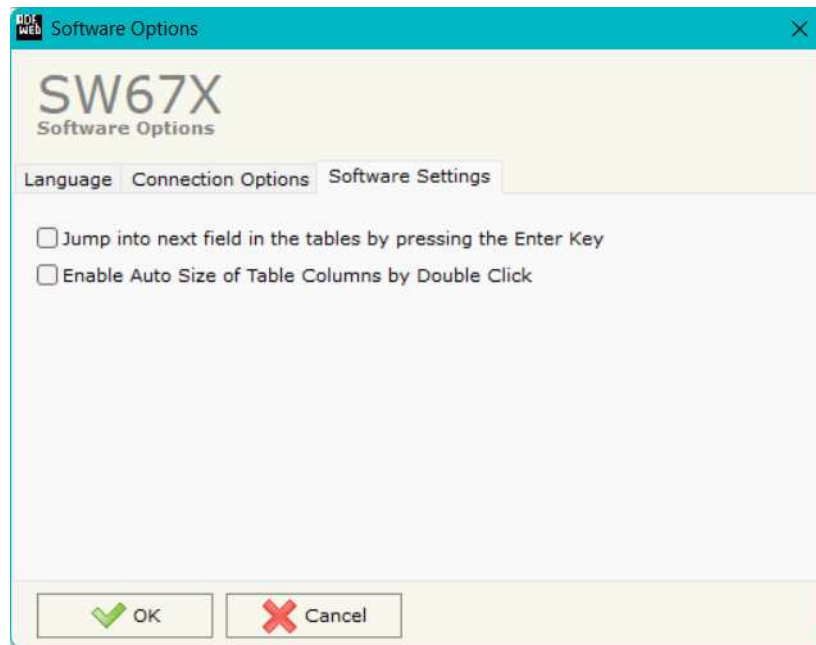
SOFTWARE OPTIONS:

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 SW67X check automatically if there are updatings when it is launched.



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

SET COMMUNICATION:

By Pressing the “**Set Communication**” button from the main window for SW67X (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:

- Select Device
- Select Protocol
- Select IIoT Protocol
- Ethernet Connection
- PROFIBUS
- MQTT or OPC UA Client or OPC UA Server
- Ethernet
- TLS (Transport Layer Security)
- NTP (Network Time Protocol)
- WebServer
- PLC

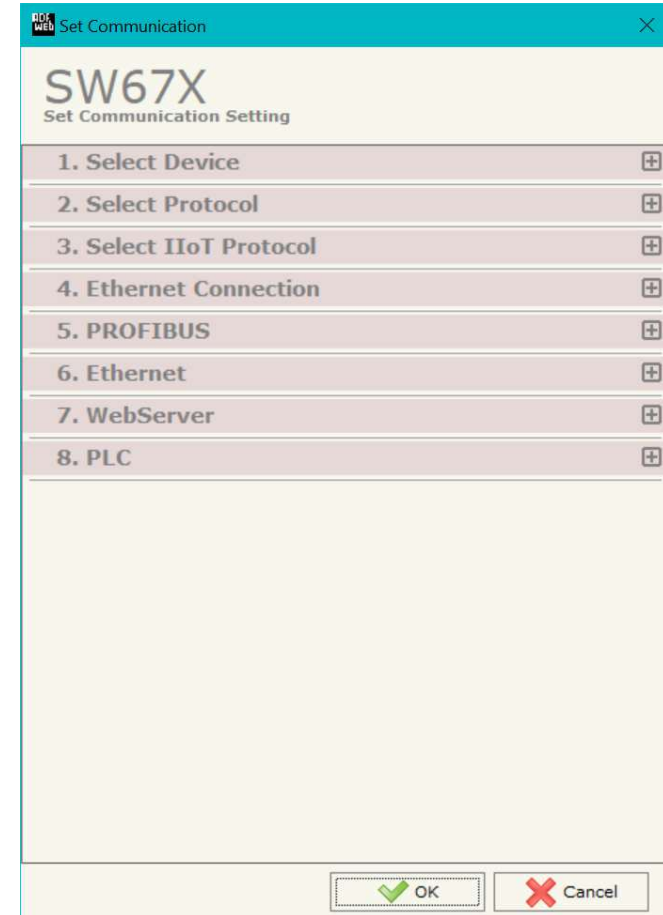


Figure 3a: “Set Communication” window

SELECT DEVICE:

This section is used to select the type of converter in use.

SELECT PROTOCOL:

This section is used to select the main protocol used. It is possible to select:

- PROFIBUS.

SELECT IIoT PROTOCOL:

This section is used to select the main protocol used. It is possible to select:

- MQTT;
- OPC UA Client;
- OPC UA Server.

ETHERNET CONNECTION:

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

- In the field "**Device Name (Hostname)**" the Hostname to assign to the converter is defined;
- If the field "**Obtain an IP Address Automatically (DHCP for Cable Connection)**" is checked, DHCP for LAN connection is enabled;
- If the field "**Obtain an IP Address Automatically (DHCP for Wi-Fi Connection)**" is checked, DHCP for Wi-Fi connection is enabled;
- If the field "**Enable DNS**" is checked, DNS protocol is enabled;
- In the field "**Primary DNS**" the IP Address of the primary DNS server is defined;
- In the field "**Secondary DNS**" the IP Address of the secondary DNS server is defined.

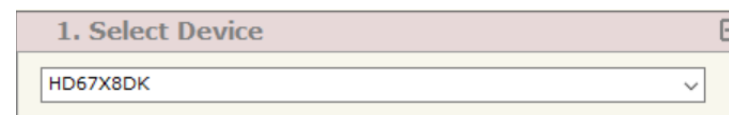


Figure 3b: "Set Communication → Select Device" window

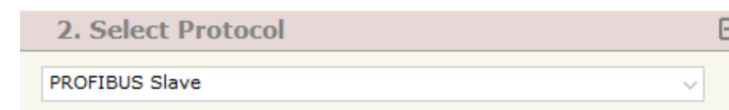


Figure 3c: "Set Communication → Select Protocol" window

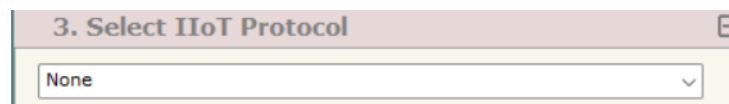


Figure 3d: "Set Communication → Select IIoT Protocol" window

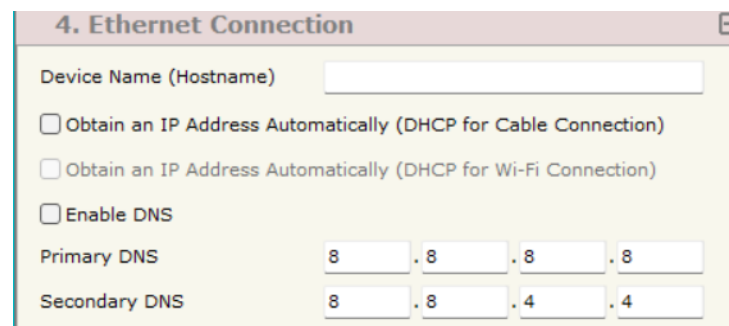


Figure 3e: "Set Communication → Ethernet connection" window

PROFIBUS:

This section is used to define the main parameters of PROFIBUS line.

The means of the fields are:

- In the field "**ID Device**", the address of the PROFIBUS side is defined;
- In the field "**Baudrate**", the baudrate of the PROFIBUS side is defined (fixed to "Auto Baudrate");
- In the field "**Number Byte In**", the number of Input bytes of PROFIBUS is defined (at maximum it is possible to use 244 byte);
- In the field "**Number Byte Out**", the number of Output bytes of PROFIBUS is defined (at maximum it is possible to use 244 byte);
- If the field "**Enable End-Line Resistor**" is enabled, the end-line resistor for the PROFIBUS line is enabled.

MQTT:

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 MQTT Server is defined;
- In the field "**Server Port**" the port used for MQTT 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 MQTT 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 MQTT Clients that

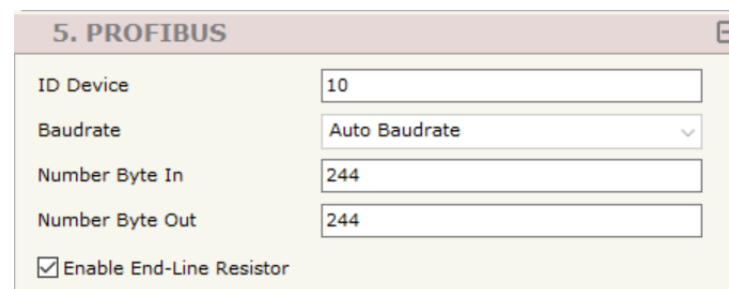


Figure 3f: "Set Communication → PROFIBUS" window

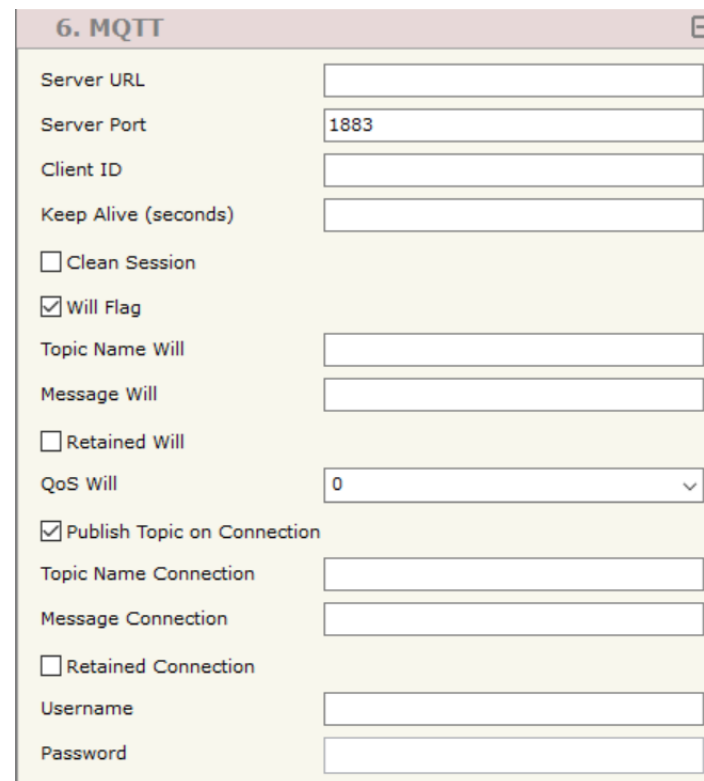


Figure 3g: "Set Communication → MQTT" window

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 "**QoS Will**" the QoS type for Will message is defined;
- If the field "**Publish Topic on Connection**" is checked, the converter will publish a topic at the connection to the Server;
- In the field "**Topic Name Connection**" the topic used for the connection message is defined;
- In the field "**Message Connection**" the payload of the connection topic is defined;
- In the field "**Retained Connection**" the converter will send the connection topic with Retain flag enabled. In this way, the Server will hold the last Connection message received;
- In the field "**Username**" the username for the connection to the MQTT server is defined;
- In the field "**Password**" the password for the connection to the MQTT server is defined.

OPC UA CLIENT:

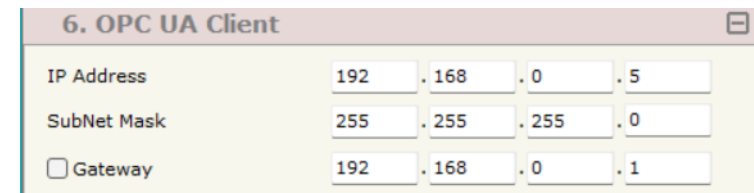
This section is used to define the main parameters of OPC UA Client line. The means of the fields are:

- In the field "**IP Address**" the IP address for OPC UA Client side of the converter is defined;
- In the field "**SubNet Mask**" the Subnet Mask for OPC UA Client side of the converter is defined;
- In the field "**Gateway**" the default gateway of the net is defined.

OPC UA SERVER:

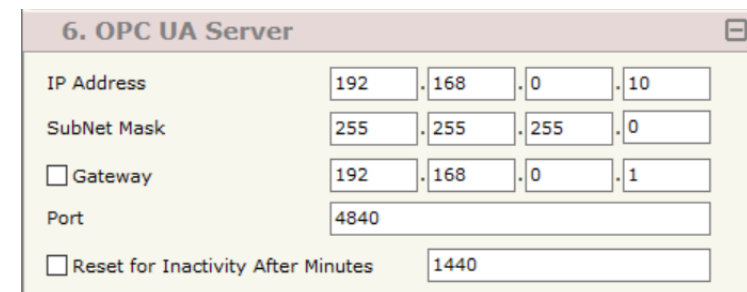
This section is used to define the main parameters of OPC UA Server line. The means of the fields are:

- In the field "**IP Address**" the IP address for the OPC UA Server side of the converter is defined;
- In the field "**SubNet Mask**" the Subnet Mask for the OPC UA Server of the converter is defined;



| 6. OPC UA Client | | | | |
|----------------------------------|-----|-------|-------|-----|
| IP Address | 192 | . 168 | . 0 | . 5 |
| SubNet Mask | 255 | . 255 | . 255 | . 0 |
| <input type="checkbox"/> Gateway | 192 | . 168 | . 0 | . 1 |

Figure 3h: "Set Communication → OPC UA Client" window



| 6. OPC UA Server | | | | |
|---|------|-------|-------|------|
| IP Address | 192 | . 168 | . 0 | . 10 |
| SubNet Mask | 255 | . 255 | . 255 | . 0 |
| <input type="checkbox"/> Gateway | 192 | . 168 | . 0 | . 1 |
| Port | 4840 | | | |
| <input type="checkbox"/> Reset for Inactivity After Minutes | 1440 | | | |

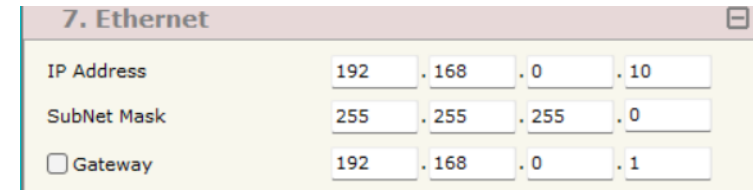
Figure 3i: "Set Communication → OPC UA Server" window

- In the field "**Gateway**" the default gateway of the net is defined;
- In the field "**Port**" the port of OPC UA Server is defined.

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.




| 7. Ethernet | | | | |
|---|-----|-------|-------|------|
| IP Address | 192 | . 168 | . 0 | . 10 |
| SubNet Mask | 255 | . 255 | . 255 | . 0 |
| <input checked="" type="checkbox"/> Gateway | 192 | . 168 | . 0 | . 1 |

Figure 3j: "Set Communication → Ethernet" window

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 "**CA Certificate**" the CA certificate is defined;
 - 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.



| 8. TLS (Transport Layer Security) | |
|---|----------------------|
| <input checked="" type="checkbox"/> Enable TLS | |
| <input checked="" type="checkbox"/> Server Authentication | |
| Server Certificate | <input type="text"/> |
| <input checked="" type="checkbox"/> Client Authentication | |
| Client Certificate | <input type="text"/> |
| Client Key | <input type="text"/> |
| Client Key Password | <input type="text"/> |

Figure 3k: "Set Communication → TLS" window

NTP (NETWORK TIME PROTOCOL):

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

- In the field "**Server URL**" the URL or the IP Address of the NTP Server is defined;
- In the field "**Poll Time (seconds)**" the polling time for the time synchronization is defined.

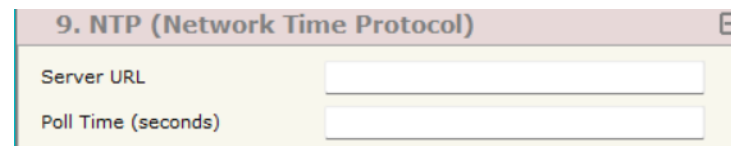


Figure 3l: "Set Communication → NTP" window

WEBSERVER:

This section is used to define the parameters of the integrated webserver. The means of the fields are:

- In the field "**Username**" the username for accessing to the webserver is defined;
- In the field "**Password**" the password for accessing to the webserver is defined.

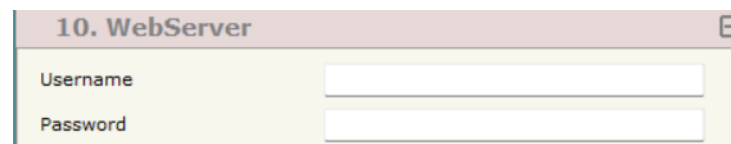


Figure 3m: "Set Communication → Webserver" window

PLC:

This section is used to define the parameters of the integrated PLC. The means of the fields are:

- If the field "**Enable PLC**" is checked, the internal PLC engine is enabled;
- In the field "**Type**" the type of PLC engine is defined.



Figure 3n: "Set Communication → PLC" window

IO-LINK SET ACCESS:

By Pressing the “**IO-Link Set Access**” button from the main window for SW67X (Fig. 2) the window “IO-Link Set Access” appears (Fig. 4). This section is used to define the list of IO-Link variables accessible from PROFIBUS side.

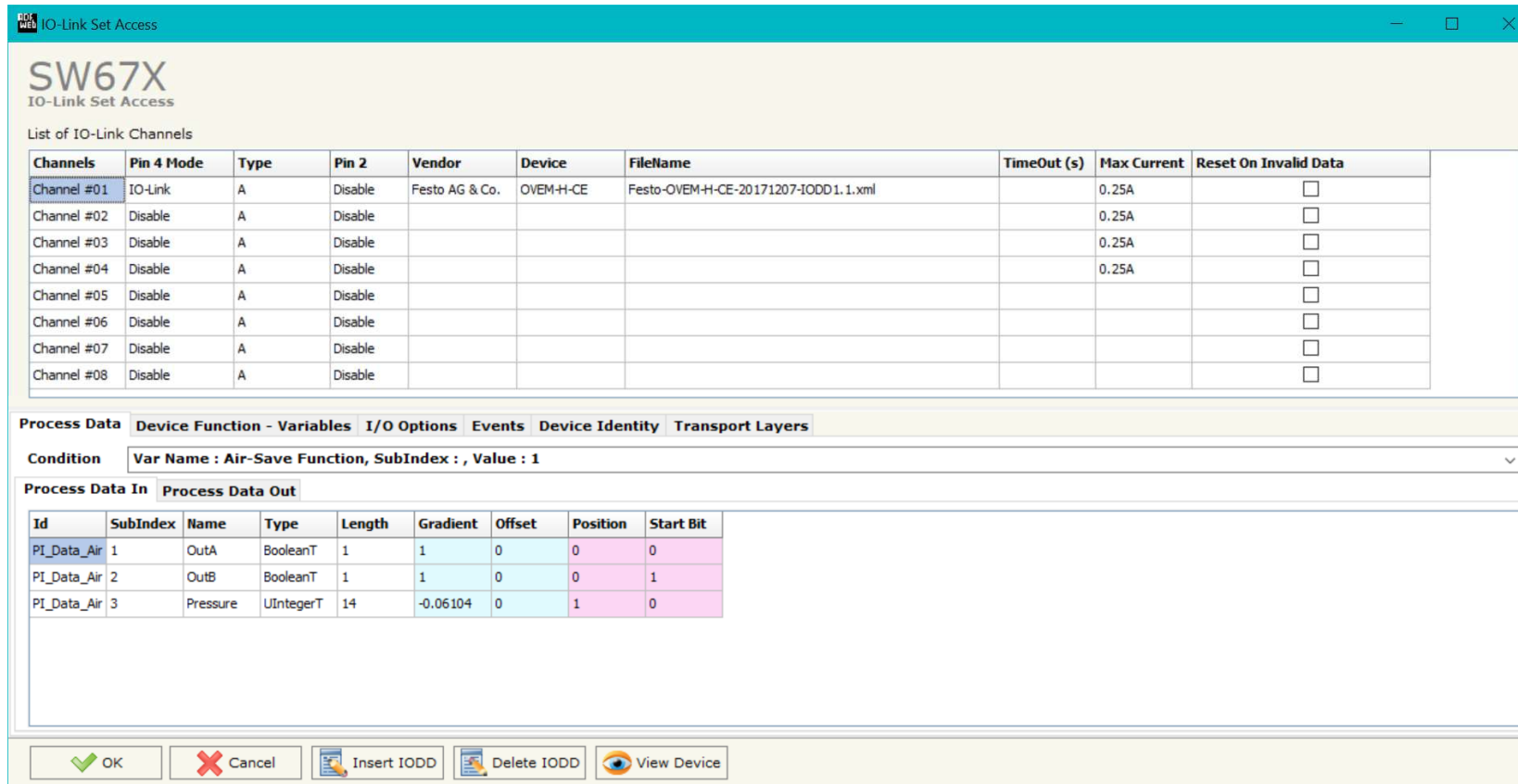


Figure 4a: "IO-Link Set Access" window

In the "List of IO-Link Channel" section it is possible to configure all the IO-Link channels of the converter (Fig. 4b).

| Channels | Pin 4 Mode | Type | Pin 2 | Vendor | Device | FileName | TimeOut (s) | Max Current | Reset On Invalid Data |
|-------------|------------|------|---------|----------------|-----------|--------------------------------------|-------------|-------------|--------------------------|
| Channel #01 | IO-Link | A | Disable | Festo AG & Co. | OVEM-H-CE | Festo-OVEM-H-CE-20171207-IODD1.1.xml | | 0.25A | <input type="checkbox"/> |
| Channel #02 | Disable | A | Disable | | | | | 0.25A | <input type="checkbox"/> |
| Channel #03 | Disable | A | Disable | | | | | 0.25A | <input type="checkbox"/> |

Figure 4b: "List of IO-Link Channel" section

The meanings of the fields are:

- In the field "**Channels**" the index of the IO-Link channel is defined;
- In the field "**Pin 4 Mode**" the mode of the pin 4 of the IO-Link device is defined (if "IO-Link" is selected, a file IODD is needed);
- If the field "**Read Pin 2**" is checked, the pin 2 of the IO-Link device is read (only for Class A channels);
- In the field "**Vendor**" the vendor of the IO-Link device is defined;
- In the field "**Device**" the name of the IO-Link device is defined;
- In the field "**FileName**" the name of the IODD file inserted is defined;
- In the field "**TimeOut (s)**", a timeout in seconds is defined. If the communication is not running for this time, the data on PROFIBUS side are reset to '0';
- In the field "**Max Current**" the maximum current allowed on UA line is defined (only for Class B channels);
- If the field "**Reset On Invalid Data**" is checked, if the converter receive the "Invalid" packet from IO-Link device, the module will restart the communication on the IO-Link channel.

By clicking on **Insert IODD**, the window "IO-Link IODD Catalog" appears (Fig. 4c). This section is used to select an IO-Link device. By clicking on **Add IODD** it is possible to add a new IODD file (the extension must be .xml).

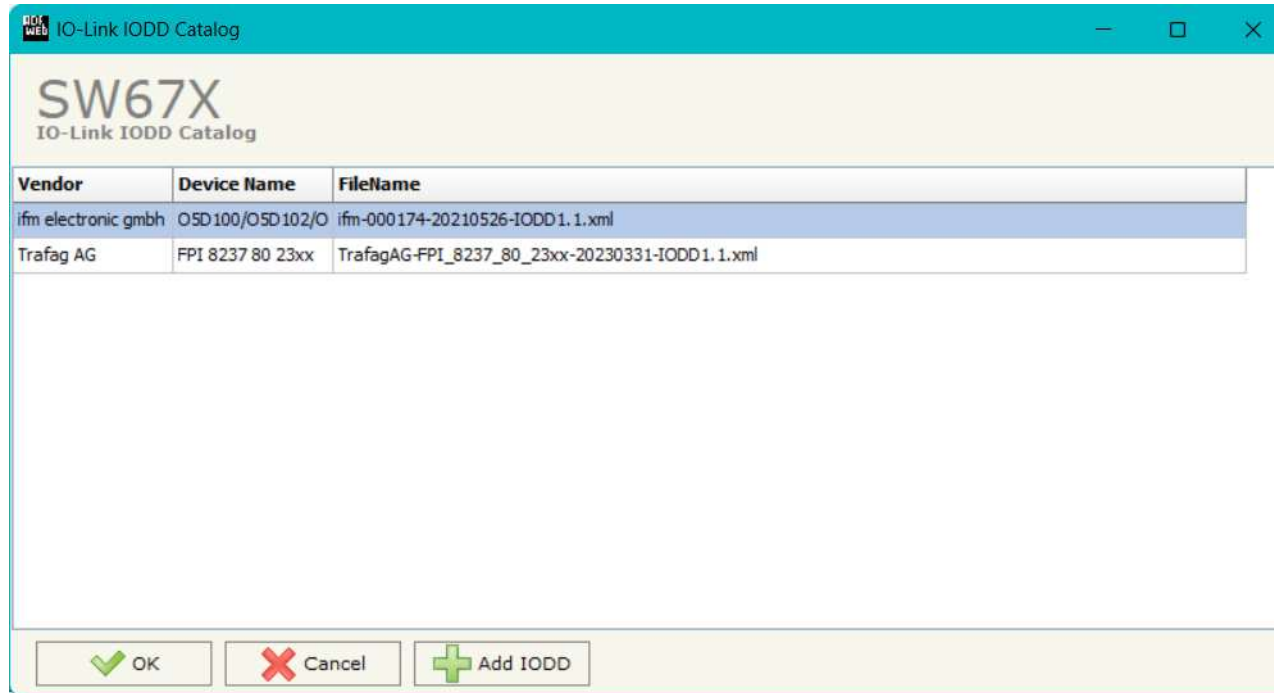
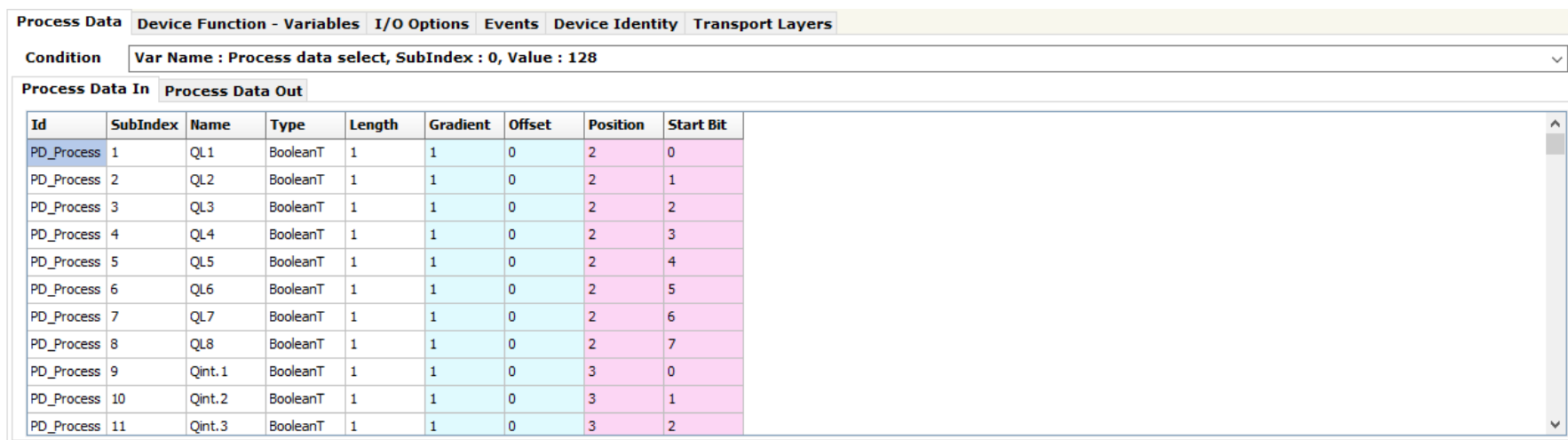


Figure 4c: "IO-Link IODD Catalog" section

The "Process Data" section is used to map the variables of the Process Data of the selected IO-Link device to PROFIBUS side (Fig. 4d).



| Id | SubIndex | Name | Type | Length | Gradient | Offset | Position | Start Bit |
|------------|----------|--------|----------|--------|----------|--------|----------|-----------|
| PD_Process | 1 | QL1 | BooleanT | 1 | 1 | 0 | 2 | 0 |
| PD_Process | 2 | QL2 | BooleanT | 1 | 1 | 0 | 2 | 1 |
| PD_Process | 3 | QL3 | BooleanT | 1 | 1 | 0 | 2 | 2 |
| PD_Process | 4 | QL4 | BooleanT | 1 | 1 | 0 | 2 | 3 |
| PD_Process | 5 | QL5 | BooleanT | 1 | 1 | 0 | 2 | 4 |
| PD_Process | 6 | QL6 | BooleanT | 1 | 1 | 0 | 2 | 5 |
| PD_Process | 7 | QL7 | BooleanT | 1 | 1 | 0 | 2 | 6 |
| PD_Process | 8 | QL8 | BooleanT | 1 | 1 | 0 | 2 | 7 |
| PD_Process | 9 | Qint.1 | BooleanT | 1 | 1 | 0 | 3 | 0 |
| PD_Process | 10 | Qint.2 | BooleanT | 1 | 1 | 0 | 3 | 1 |
| PD_Process | 11 | Qint.3 | BooleanT | 1 | 1 | 0 | 3 | 2 |

Figure 4d: "Process Data" section

The meanings of the fields are:

- In the field "**Id**" the Id of the variable is defined;
- In the field "**SubIndex**" the subindex of the variable is defined;
- In the field "**Name**" the name of the variable is defined;
- In the field "**Type**" the data format of the variable is defined;
- In the field "**Length**" the length in bit of the variable is defined;
- In the field "**Gradient**" the multiplication factor of the variable is defined;
- In the field "**Offset**" the offset of the variable is defined;
- In the field "**Position**" the starting byte of the internal memory arrays where mapping/getting the value is defined;
- In the field "**Start Bit**" the starting bit of the "Position" is defined.

The "Device Function – Variables" section is used to select which parameters reading and writing from PROFIBUS side (Fig. 4e).

| Process Data | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-------|--------|-------------------|---------------------------|-----------|------------|-------|-------|------|-----|-------|----------|-----------|--------------------------|--------------------------|------|----------|------|------|-------------|
| Device Function - Variables | | | | | | | | | | | | | | | | | | | | |
| I/O Options | | | | | | | | | | | | | | | | | | | | |
| Events | | | | | | | | | | | | | | | | | | | | |
| Device Identity | | | | | | | | | | | | | | | | | | | | |
| Transport Layers | | | | | | | | | | | | | | | | | | | | |
| Enable | Index | Sub Id | Name | Type | Access | Length | SindA | TotB | BitO | Def | Value | Position | Start Bit | On | On Timer | Time | Read Pos | Read | Read | Description |
| <input type="checkbox"/> | 0 | | V_DirectParameter | Direct Parameters 1 | RecordT | Read Write | 128 | False | 128 | 0 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 1 | V_DirectParameter | Reserved | UIntegerT | Read Write | 8 | False | 128 | 120 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 2 | V_DirectParameter | Master Cycle Time | UIntegerT | Read Write | 8 | False | 128 | 112 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 3 | V_DirectParameter | Min Cycle Time | UIntegerT | Read Write | 8 | False | 128 | 104 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 4 | V_DirectParameter | M-Sequence Capability | UIntegerT | Read Write | 8 | False | 128 | 96 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 5 | V_DirectParameter | IO-Link Version ID | UIntegerT | Read Write | 8 | False | 128 | 88 | 17 | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 6 | V_DirectParameter | Process Data Input Length | UIntegerT | Read Write | 8 | False | 128 | 80 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 7 | V_DirectParameter | Process Data Output | UIntegerT | Read Write | 8 | False | 128 | 72 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 8 | V_DirectParameter | Vendor ID 1 | UIntegerT | Read Write | 8 | False | 128 | 64 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 9 | V_DirectParameter | Vendor ID 2 | UIntegerT | Read Write | 8 | False | 128 | 56 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 10 | V_DirectParameter | Device ID 1 | UIntegerT | Read Write | 8 | False | 128 | 48 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 11 | V_DirectParameter | Device ID 2 | UIntegerT | Read Write | 8 | False | 128 | 40 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| <input type="checkbox"/> | 0 | 12 | V_DirectParameter | Device ID 3 | UIntegerT | Read Write | 8 | False | 128 | 32 | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |

Figure 4e: "Device Function - Variables" section

The meanings of the fields are:

- If the field "Enable" is checked, the parameters is enabled to reading and/or writing;
- In the field "Index" the Index of the IO-Link parameter is defined;
- In the field "SubIndex" the Subindex of the IO-Link parameter is defined;
- In the field "Id" the Id of the IO-Link parameter is defined;
- In the field "Name" the name of the IO-Link parameter is defined;
- In the field "Type" the data format of the IO-Link parameter is defined;
- In the field "Access" the access type of the IO-Link parameter is defined;
- In the field "Length" the length in bit of the IO-Link parameter is defined;
- In the field "SindAccSupp" the value of subindexAccessSupported attribute of the IO-Link parameter is defined;
- In the field "TotBitLen" the length in bit of the array to which the IO-Link parameter refers is defined;
- In the field "BitOff" the bit offset of the IO-Link parameter is defined;
- In the field "Default" the default value of the IO-Link parameter is defined;
- In the field "Value" the value to be written to the IO-Link parameter at start-up is defined;
- In the field "Position" the starting byte of the internal memory arrays where getting the value to write from PROFIBUS is defined;

- In the field "**Start Bit**" the starting bit of the byte of the field "Position" is defined;
- If the field "**On Change**" is checked, the IO-Link parameter is written when the data from Ethernet side changes the value;
- If the field "**On Timer**" is checked, the IO-Link parameter is written cyclically;
- In the field "**Time**" the delay in ms for writing commands is defined (used if "On Timer" is checked);
- In the field "**Read Pos**" the starting byte of the internal memory arrays where mapping the value is defined;
- In the field "**Read Start Bit**" the starting bit of the "Read Pos" is defined;
- In the field "**Read Time**" the delay in ms for reading requests is defined;
- In the field "**Description**" a description of the IO-Link parameter is defined.

The “Events” section is used to define the IO-LINK events to map on PROFIBUS side (Fig. 4g).

| Process Data | | Device Function - Variables | | I/O Options | Events | Device Identity | | Transport Layers | |
|--------------------------|-------|----------------------------------|---------|-------------|----------|-----------------|----------|------------------|--|
| Enable | Code | Name | Type | TimeOut | Position | Start Bit | Mnemonic | | |
| <input type="checkbox"/> | 20497 | Non volatile memory loss | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 16384 | Temperature fault | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 20480 | Device hardware fault | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 25376 | Parameter error | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 30480 | Short circuit | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 16912 | Device temperature over-run | Warning | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 16928 | Device temperature under-run | Warning | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 35856 | Process variable range over-run | Warning | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 35888 | Process variable range under-run | Warning | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 6144 | Modules Initialisation | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 6145 | Hardware Incompatibility | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 6146 | Filesystem Mounting | Error | 0 | 0 | 0 | | | |
| <input type="checkbox"/> | 6147 | Boot Config Failure | Error | 0 | 0 | 0 | | | |

Figure 4g: “Events” section

The meanings of the fields are:

- If the field “**Enable**” is checked, the event reading is enabled;
- In the field “**Code**” the code of the IO-Link event is defined;
- In the field “**Name**” the name of the IO-Link event is defined;
- In the field “**Type**” the type of the IO-Link event is defined;
- In the field “**TimeOut**” the duration of the IO-Link event after its activation is defined;
- In the field “**Position**” the starting byte of the internal memory arrays where mapping the value is defined;
- In the field “**Start Bit**” the starting bit of the byte of the field “Position” is defined;
- In the field “**Mnemonic**” a description of the variable is defined.

In “Device Identity” section (Fig.4h) and “Transport Identity” section (Fig. 4i), the main features of the selected IO-Link device are reported. These characteristics are read from the IODD file.

| Process Data | Device Function - Variables | I/O Options | Events | Device Identity | Transport Layers |
|---------------------------|--|------------------------|--------|-----------------|------------------|
| Vendor ID | 1531 | | | | |
| Vendor Name | Trafag AG | | | | |
| Device ID | 100085 | | | | |
| Vendor Text | www.trafag.com/io-link | | | | |
| Vendor URL | www.trafag.com | | | | |
| Device Name | FPI 8237 80 23xx | | | | |
| Device Family | Pressure Transmitter | | | | |
| Device Variant Collection | | | | | |
| Product ID | Name | Description | | | |
| 8237 80 2393 35 | 8237 80 2393 35, 0 ... 25 bar, (0 ... 362.5 psi) | FPI 8237; 0 ... 25 bar | | | |

Figure 4h: “Device Identity” section

| Process Data | Device Function - Variables | I/O Options | Events | Device Identity | Transport Layers |
|-----------------------|-----------------------------|-------------|--------|-----------------|------------------|
| BitRate | COM3 | | | | |
| Min Cycle Time | 1000 | | | | |
| SIO Supported | True | | | | |
| M Sequence Capability | 43 | | | | |

Figure 4i: “Transport Layers” section

MQTT SET TOPIC (if “MQTT” is enabled):

By Pressing the “**MQTT Set Topic**” button from the main window for SW67X (Fig. 2) the window “Set MQTT Topics” appears (Fig. 5). This section is used to define the MQTT topics the converter will publish with the data from IO-Link and the topic that the converter will subscribes for writing the data to IO-Link.

MQTT PUBLISH

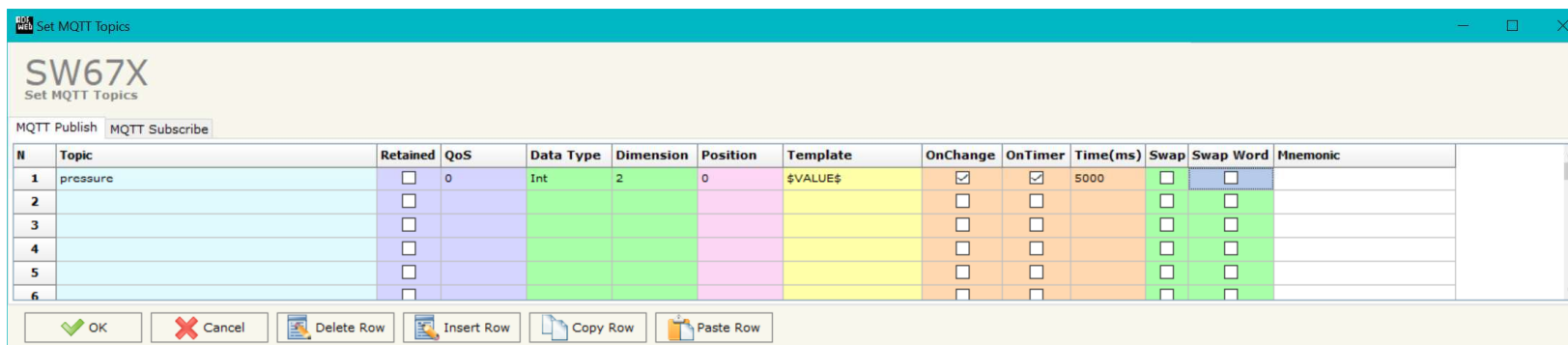


Figure 5a: “Set MQTT Topics → MQTT Publish” window

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 internal memory 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;
- If the field “**On Change**” is checked, the converter publishes the topic when the data from IO-Link changes;
- If the field “**On CMD**” is checked, the converter publishes the topic when a new response from IO-Link is received;
- If the field “**On Timer**” is checked, the converter publishes the topic cyclically with the delay defined in the field “**Time (ms)**”;
- If the field “**Swap**” is checked, the data bytes published to MQTT broker are swapped;

- If the field "**Swap Word**" is checked, the data words published to MQTT broker are swapped;
- In the field "**Mnemonic**" a description of the topic is defined.

MQTT SUBSCRIBE

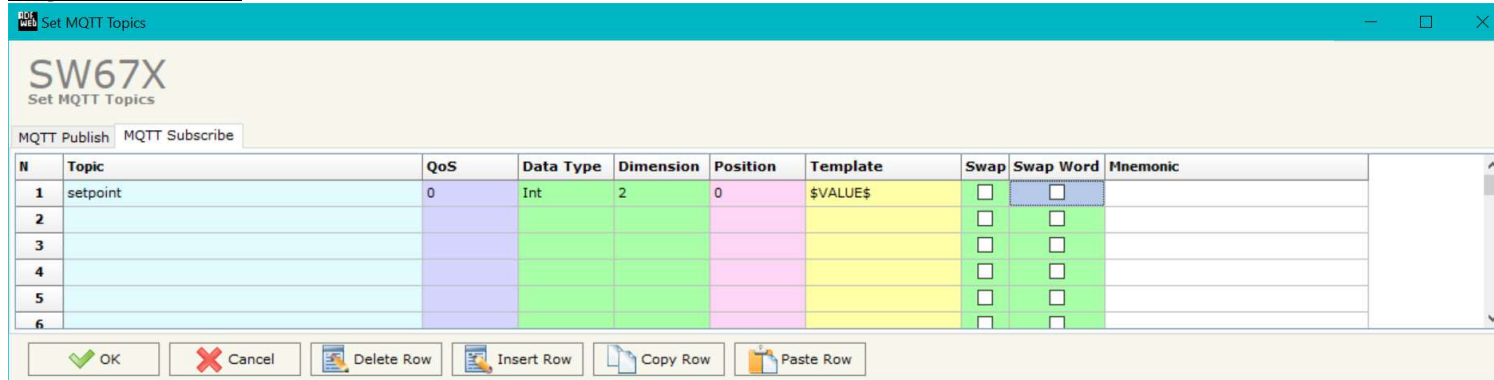


Figure 5b: "Set MQTT Topics → MQTT Subscribe" window

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 internal memory 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;
- If the field "**Swap**" is checked, the data bytes subscribed from MQTT broker are swapped;
- If the field "**Swap Word**" is checked, the data words subscribed from MQTT broker are swapped;
- In the field "**Mnemonic**" a description of the topic is defined.

OPC UA ACCESS (if "OPC UA Client" is enabled):

By Pressing the "OPC UA Client Access" button from the main window for SW67X (Fig. 2) the window "OPC UA Client Access" appears (Fig. 6).

This section is used to define the list of the OPC UA Servers to read/write with the OPC UA Client.

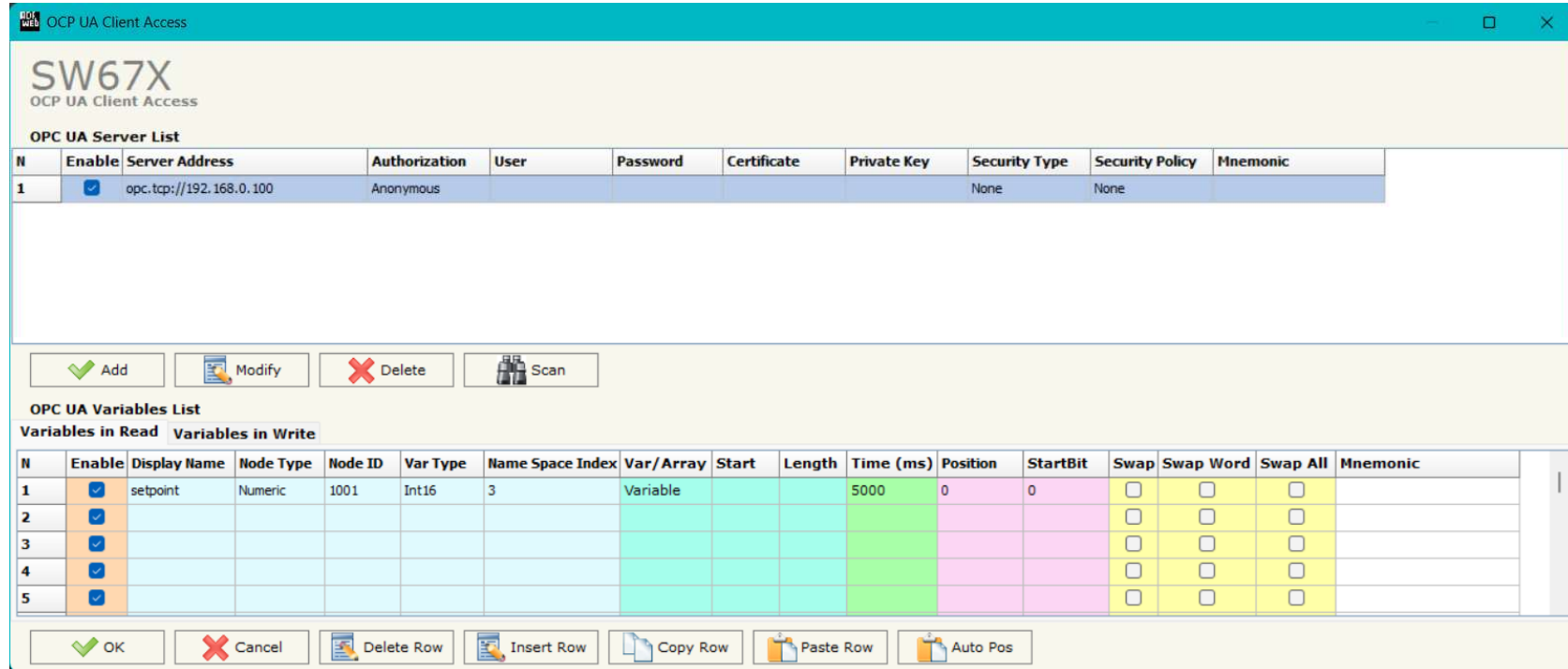


Figure 6a: "OPC UA Client Access" window

By clicking on “**Add**” or “**Modify**”, it is possible to add or modify a new OPC UA Server inserting its characteristics (Server Address, Authorization, Security Type...). The window “Add OPC UA Server” appears (Fig. 6b).



SW67X
Add OPC UA Server

Enable OPC UA Server

Server Address

Authorization

Username

Password

Security Type

Security Policy

Mnemonic

Figure 6b: “Add OPC UA Server”

The “Variables in Read” section is used to define the OPC UA variables to read on PROFIBUS side (Fig. 6c).

| OPC UA Variables List | | | | | | | | | | | | | | | | |
|--------------------------------------|-------------------------------------|--------------|-----------|---------|----------|------------------|-----------|-------|--------|-----------|----------|----------|--------------------------|--------------------------|--------------------------|----------|
| Variables in Read Variables in Write | | | | | | | | | | | | | | | | |
| N | Enable | Display Name | Node Type | Node ID | Var Type | Name Space Index | Var/Array | Start | Length | Time (ms) | Position | StartBit | Swap | Swap Word | Swap All | Mnemonic |
| 1 | <input checked="" type="checkbox"/> | setpoint | Numeric | 1001 | Int16 | 3 | Variable | | | 5000 | 0 | 0 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2 | <input checked="" type="checkbox"/> | | | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3 | <input checked="" type="checkbox"/> | | | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4 | <input checked="" type="checkbox"/> | | | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5 | <input checked="" type="checkbox"/> | | | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Figure 6c: “Variables in Read” section

The means of the fields are:

- If the field “**Enable**” is checked, the OPC UA variable is enabled;
- In the field “**Display name**” the name of the OPC UA variable is defined;
- In the field “**Node Type**” the type of the identification of the OPC UA variable in the server is defined;
- In the field “**Node ID**” the identification of the OPC UA variable is defined;
- In the field “**Var Type**” the data format of the OPC UA variable is defined;
- In the field “**Name Space Index**” the Name Space Index of the variable is defined;
- In the field “**Var/Array**” the format of the value is defined;
- In case of Array format, the fields “**Start**” and “**Length**” are used to define which bytes of the array taken;
- In the field “**Time (ms)**” the delay in ms between two readings of the variable is defined;
- In the field “**Position**” the starting byte of the internal memory array where saving the value is defined;
- If the field “**Swap**” is checked, the bytes’ of the words are swapped;
- If the field “**Swap Word**” is checked, the words are swapped each other;
- If the field “**Swap All**” is checked, the bytes’ order is fully reversed;
- In the field “**Mnemonic**” a description of the variable is defined.

The “Variables in Write” section is used to define the OPC UA variables to write from PROFIBUS side (Fig. 6d).

| OPC UA Variables List | | | | | | | | | | | | | | | | | |
|--------------------------------------|-------------------------------------|--------------|-----------|---------|----------|------------------|------------|-------------------------------------|--------------------------|--------------------------|-----------|----------|----------|--------------------------|--------------------------|--------------------------|----------|
| Variables in Read Variables in Write | | | | | | | | | | | | | | | | | |
| N | Enable | Display Name | Node Type | Node ID | Var Type | Name Space Index | Str Length | On Change | On CMD | On Timer | Time (ms) | Position | StartBit | Swap | Swap Word | Swap All | Mnemonic |
| 1 | <input checked="" type="checkbox"/> | pressure | Numeric | 1001 | Int16 | 3 | 0 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0 | 0 | 0 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2 | <input checked="" type="checkbox"/> | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3 | <input checked="" type="checkbox"/> | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4 | <input checked="" type="checkbox"/> | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5 | <input checked="" type="checkbox"/> | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Figure 6d: “Variables in Write” section

The means of the fields are:

- If the field “**Enable**” is checked, the OPC UA variable is enabled;
- In the field “**Display name**” the name of the OPC UA variable is defined;
- In the field “**Node Type**” the type of the identification of the OPC UA variable in the server is defined;
- In the field “**Node ID**” the identification of the OPC UA variable is defined;
- In the field “**Var Type**” the data format of the OPC UA variable is defined;
- In the field “**Name Space Index**” the Name Space Index of the variable is defined;
- If the field “**On Change**” is checked, the OPC UA variable is written when the data from IO-Link changes;
- If the field “**On CMD**” is checked, the OPC UA variable is sent when a IO-Link response is received;
- If the field “**On Timer**” is checked, the OPC UA variable is sent cyclically;
- In the field “**Time (ms)**” the delay in ms between two writings of the variable is defined (if “On Timer” is checked);
- In the field “**Position**” the starting byte of the internal memory array where getting the value is defined;
- If the field “**Swap**” is checked, the bytes’ of the words are swapped;
- If the field “**Swap Word**” is checked, the words are swapped each other;
- If the field “**Swap All**” is checked, the bytes’ order is fully reversed;
- In the field “**Mnemonic**” a description of the variable is defined.

OPC UA SERVER ACCESS (if "OPC UA Server" is enabled):

By Pressing the "OPC UA Server Access" button from the main window for SW67X (Fig. 2) the window "OPC UA Server Access" appears (Fig. 7).

This section is used to define the list of OPC UA variables to read/write.

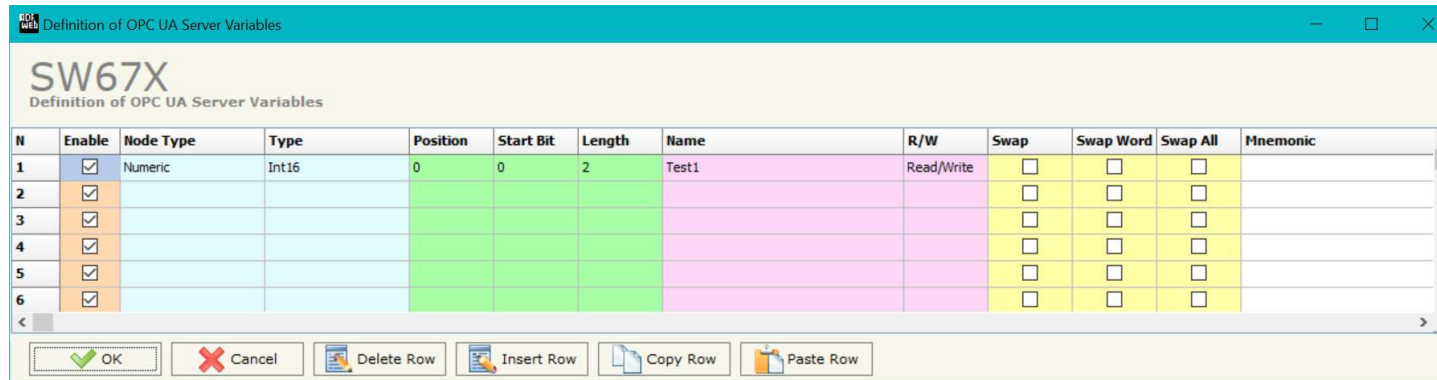


Figure 7: "OPC UA Server Access" window

The means of the checkboxes inside the table are:

- If the field "Enable" is checked, the OPC UA variable is enabled;
- In the field "Node Type" the type of the identification of the OPC UA variable in the server is defined;
- In the field "Type" the data format of the OPC UA variable is defined;
- In the field "Position" the starting byte of the internal memory arrays where getting the value is defined;
- In the field "Start Bit" insert the start bit of the first byte of the field "Position" where start to insert the data read. Valid only for the "Coil Status" and "Input Status".
- In the field "Length" the byte length of the OPC UA variable is defined;
- In the field "Name" the name of the OPC UA variable is defined;
- In the field "R/W" the access type of the OPC UA variable is defined;
- If the field "Swap" is checked, the bytes' of the words are swapped;
- If the field "Swap Word" is checked, the words are swapped each other;
- If the field "Swap All" is checked, the bytes' order is fully reversed;
- In the field "Mnemonic" a description of the OPC UA variable is defined.

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, it is possible to use the **“Search”** function and follow these steps:

- Turn OFF the device;
- Connect Ethernet cable;
- Click on **“Search”** button;
- Turn ON the device;
- The IP Address and the MAC Address of the device will appear;
- Press **“Select”** button;
- Set the IP Address of your PC in the same range of the IP Address of the device;
- Select which operations you want to do;
- Press the **“Execute update firmware”** button to start the upload;
- When all the operations are **“OK**, the update is complete and the window can be closed.

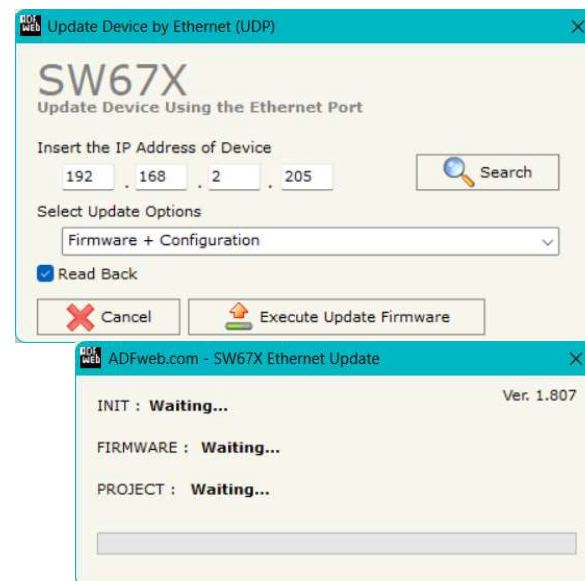


Figure 8a: **“Update device”** windows

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

- Turn ON the device;
- Connect Ethernet cable;
- 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 update is complete and the window can be closed.

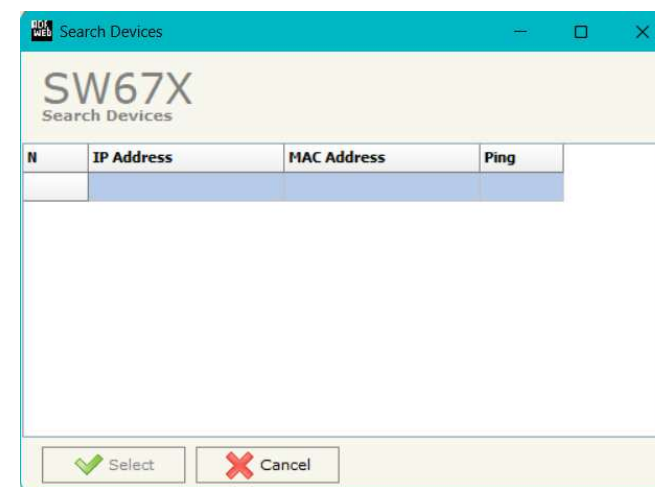


Figure 8b: **“Update device”** windows

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



Note:

When you receive the device, for the first time, you also have to update the firmware in the HD67XxPx device.



Warning:

If Fig. 9 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.

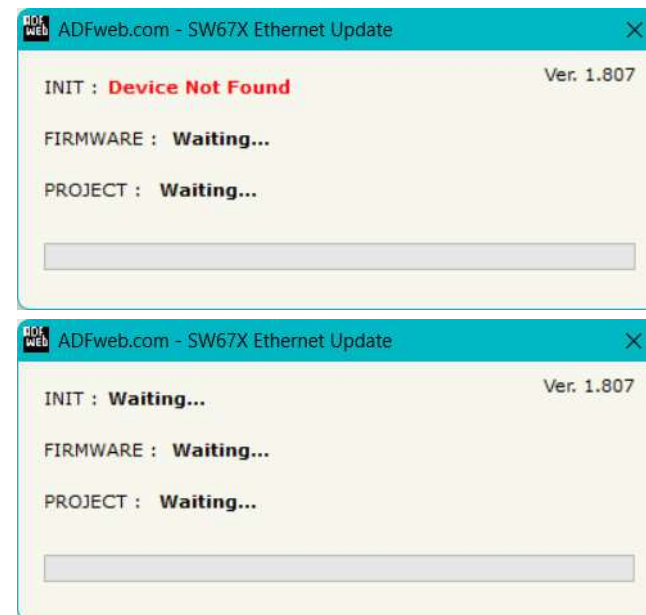


Figure 9: "Error" window



Warning:

In the case of HD67XxPx you have to use the software "SW67X": www.adfweb.com/download/filefold/SW67X.zip.

DATA LIVE VIEW FUNCTION:

“Data Live View” functions are integrated in the configurator software SW67X. It is possible to access to these functions by simple click on the “Data Live View” button from main window of SW67X (Fig. 2).

It has the following characteristics:

- Possibility to scan IO-Link channels;
- Live monitor of IO-Link data;
- Writing process data and parameters.

TEMPLATE STRING: DEFINITION OF MQTT PAYLOAD

Mode 1: mapping a single variable for each topic using tables

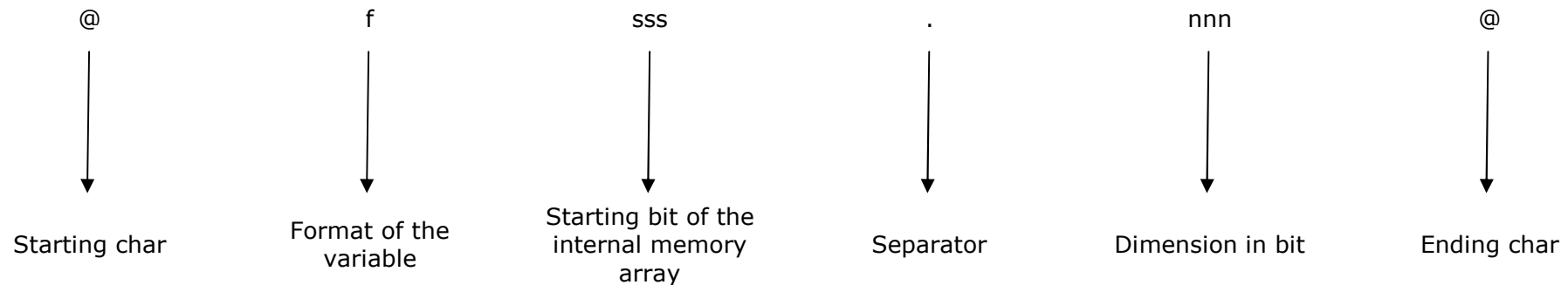
In this mode, it is possible to define which is the IO-Link data to map inside the MQTT topics using the Position field inside "MQTT Set Topic" section. This simplifies the configuration because the variable to be mapped is selected using the table, but it allows you to map a single variable for each topic.

In order to link the data into the MQTT topic, you can use the keyword `$VALUE$`. The keyword will be replaced with the real value coming from/to IO-Link.

Mode 2: mapping more variables for each topic using keywords

In this mode, it is possible to define which is the IO-Link data to map inside the MQTT topics specific keywords. Position field, format and dimension of "MQTT Set Topic" section will be ignored.

In order to link the data into the MQTT topic, you can use these keywords:



Below the type of format allowed:

| FORMAT | IDENTIFIER |
|------------------|------------|
| Unsigned Integer | u |
| Signed Integer | i |
| Float | f |
| Binary | b |
| String | s |
| Hexadecimal | x |
| Base64 | l |

Example:

We have two variables mapped respectively into Position 0 and 4. The first one is an signed integer value of 16 bit, the second one is a floating point. In order to compose a JSON, the template can be filled in this way:

```
{
  "var1": @i0.16@,
  "var2": @f32.32@
}
```



Note:

It is not possible to use both modes in the template.

MECHANICAL DIMENSIONS:



Figure 10a: Mechanical dimensions scheme for HD67X4Px

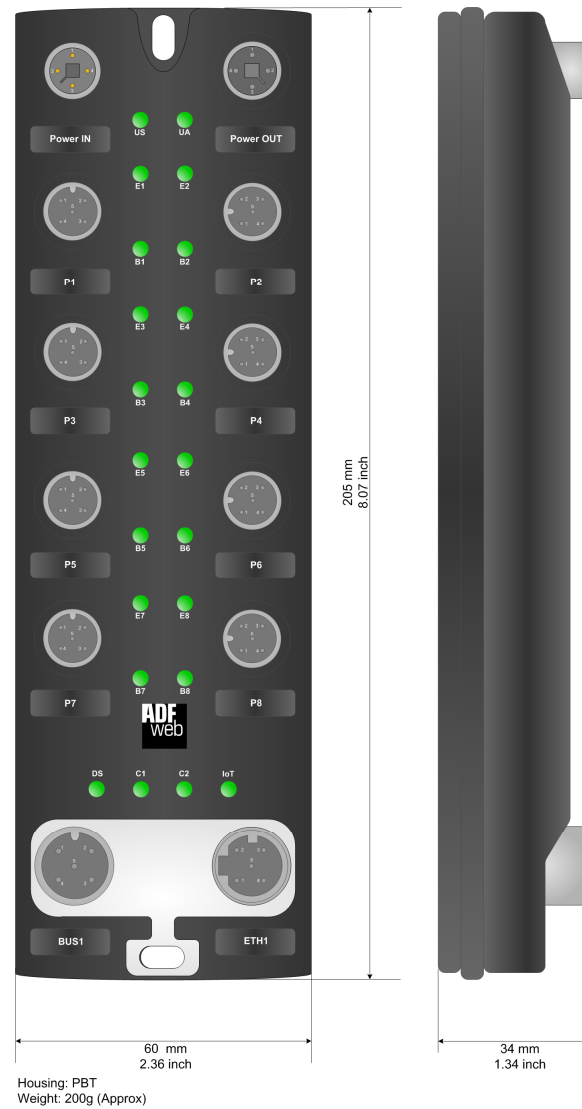
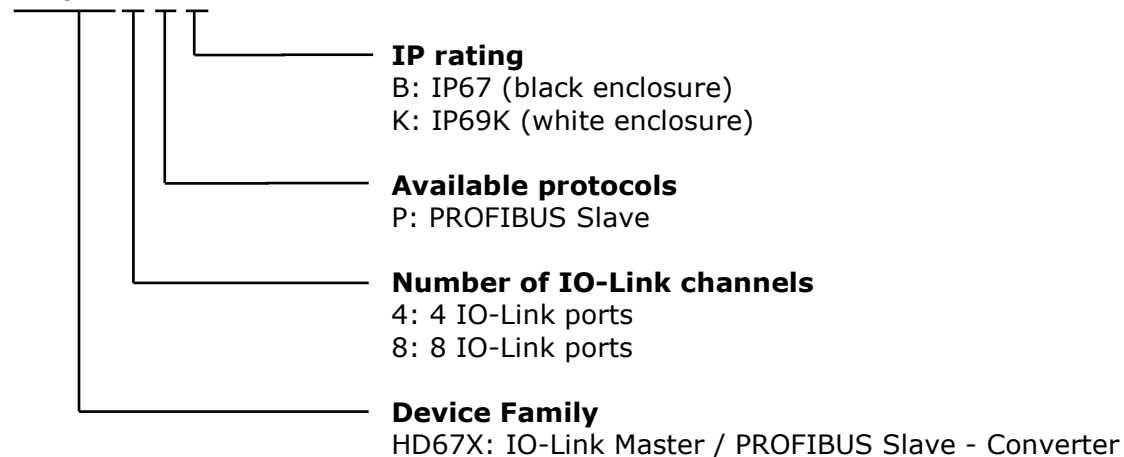


Figure 10b: Mechanical dimensions scheme for HD67X8Px

ORDERING INFORMATIONS:

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

HD67X x P x



- | | | |
|-----------------------------|---|---|
| Order Code: HD67X4PB | - | IO-Link Master / PROFIBUS Slave – Converter (IP67) |
| Order Code: HD67X4PK | - | IO-Link Master / PROFIBUS Slave – Converter (IP69K) |
| Order Code: HD67X8PB | - | IO-Link Master / PROFIBUS Slave – Converter (IP67) |
| Order Code: HD67X8PK | - | IO-Link Master / PROFIBUS Slave – Converter (IP69K) |

ACCESSORIES:

- | | | |
|----------------------------|---|---|
| Order Code: AC34011 | - | Rail DIN - Power Supply 220/240V AC 50/60Hz – 12 V DC |
| Order Code: AC34012 | - | 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.



ADFweb.com S.r.l.
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

