USER MANUAL
v1.0

EN
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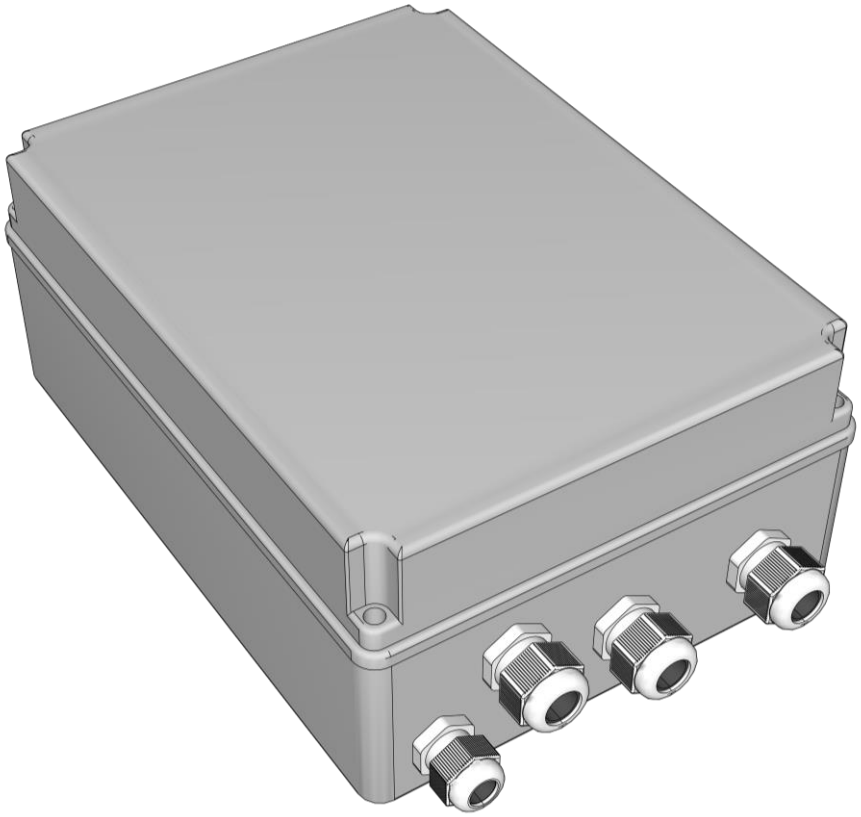
Supersedes edition:

SWSH-120

Power supply systems for PoE switches, 52VDC/120W, ABS enclosure IP56



Features:

- supply voltage **~200 - 240 V**
- high efficiency **(85%)**
- enclosure **ABS – IP56**
- used glands help to provide wires into enclosure
- possibility of pole mounting (requires OZB4 adapter - optional accessory)
- protections:
  - SCP short circuit protection
  - OLP overload protection
  - OVP overvoltage protection
  - surge protection
  - antisabotage protection: unwanted enclosure opening
- warranty – 2 years from production date

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1. Technical description.

1.1. General description.

SWSH-120 is designed for uninterrupted power supply of PoE switches with 52 V DC.
It was designed based on switching power supply module with high energy efficiency, placed in in **ABS (IP56)** enclosure**.** Device is equipped with removable universal mounting plate, which allows to mount PoE switches with dimensions up to 190x140x50 (WxHxD) [mm]. For example Pulsar's models: **S64WP, SG64WP, SFG64F1WP, SFG64WP, S108WP, SG108WP, ISFG42, ISFG64, ISF108**.

1.2. Block diagram (Fig.1).

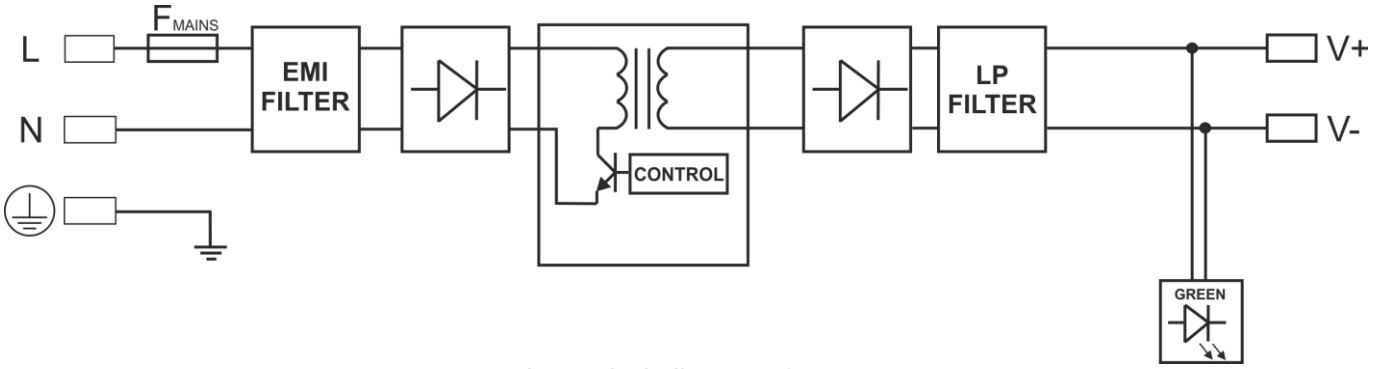


Fig. 1. Block diagram of PSU.

1.3. Description of PSU components and connectors.

Table 1. View of PSU (see Fig. 2).

Element no.	Description
[1]	Pressure compensation
[2]	switch power cable terminated with a DC 2.1 / 5.5 plug
[3]	Place for mounting switch
[4]	PSU module
[5]	~230 V supply connector with a terminal for connection of a protective conductor
[6]	Cable glands

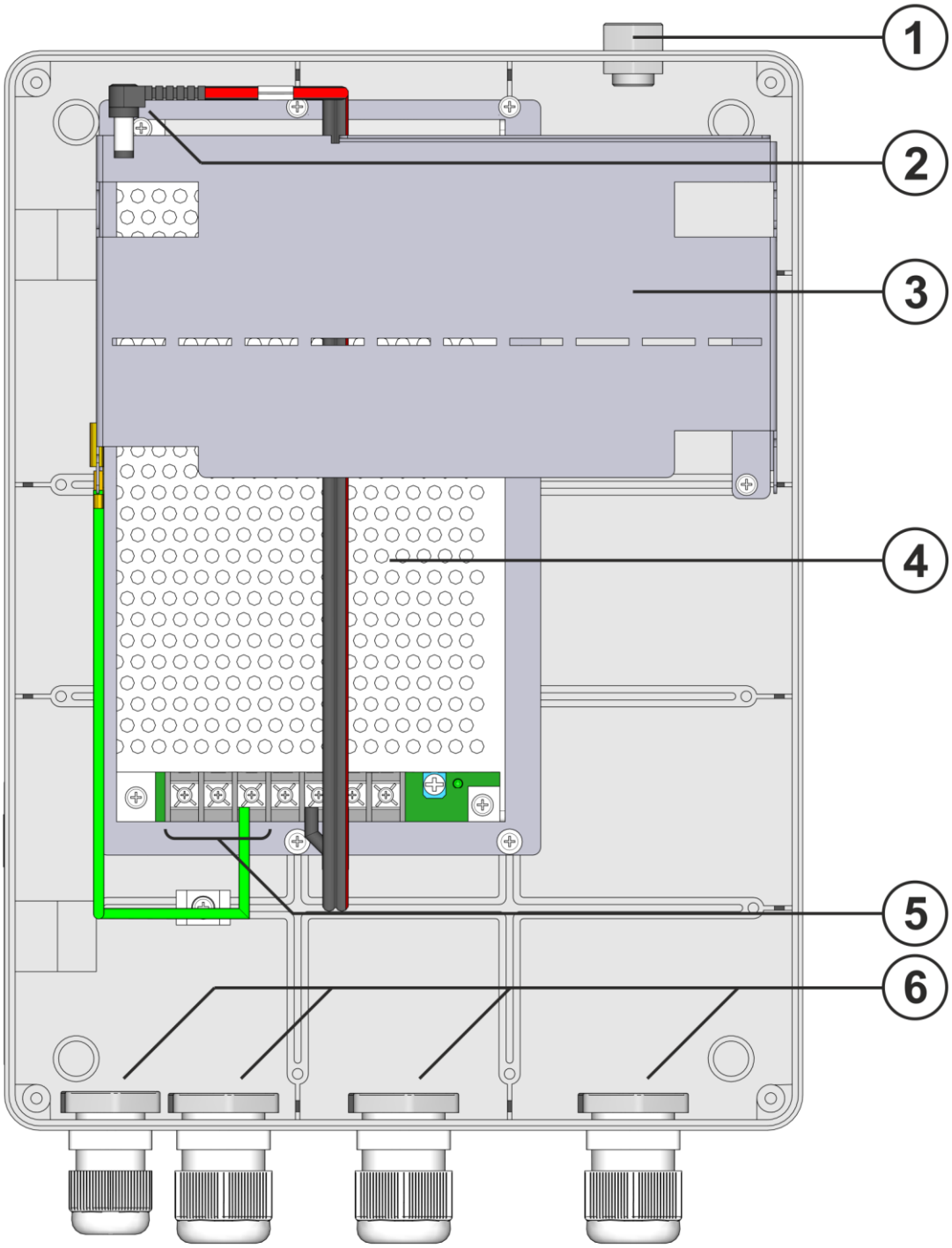


Fig. 2. View of PSU.

1.4. Equipment parameters:
- **specifications (Tab. 2)**
- **operation safety (Tab. 3)**
- **operating parameters (Tab. 4)**

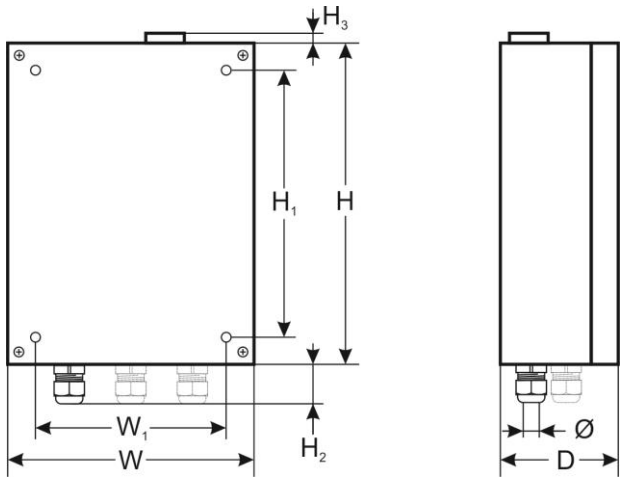


Table 2. Specifications.

Power supply	~ 200 – 240 V; 1 A; 50/60 Hz
Inrush current	50 A
Efficiency	85%
PoE supply	52 V DC; 120 W
Voltage adjustment range	48 V – 53 V DC
Ripple voltage	150 mV p-p max.
Short circuit protection (SCP)	electronic, automatic recovery
Overload protection (OLP)	105 – 150% PSU power, automatically recovered
Surge protection	varistors
Over voltage protection (OVP)	> 60 V (automatic return)
Connectors	Power input: Φ0,63-2,50 (AWG 22-10) PoE power supply output: DC 2,1/5,5 plug
External dimensions	W=225, H=308, D=130 [+/- 2mm]
Fixing	W_1=185, H_1=265 [+/- 2mm]
Height glands	H_2=37 [+/- 2mm]
Pressure compensation height	H_3=9 mm
Number of cable glands/cable diameter:	3 pc. / 13 - 18 mm + 1 pc. / 10 - 14 mm
Gland filling inserts	2x Φ5mm (1 pc.); 3x Φ5mm (2 pc.); 4x Φ5mm (3 pc.)
Enclosure	ABS enclosure, IP56
Closing	Screw x 4 (at front)
Additional equipment	Mounting screws (x6), DC wires, Gland filling inserts
Net/gross weight	2,05 / 2,2 [kg]
Declaration	CE

Table 3. Operation safety.

Protection class EN 62368-1	I (first)
Protection grade EN 60529	IP56
Electrical strength of insulation: - between input and output circuits of the PSU - between input circuit and protection circuit - between output circuit and protection circuit	 4000 V DC min. 2500 V DC min. 500 V DC min.
Insulation resistance: - between input circuit and output or protection circuit	 100 MΩ, 500 V DC

Table 4. Operating parameters.

Operating temperature	-10ºC...+40ºC
Storage temperature	-20ºC...+60ºC
Relative humidity	20%...90%, without condensation
Vibrations during operation	unacceptable
Impulse waves during operation	unacceptable
Direct insolation	unacceptable
Vibrations and impulse waves during transport	According to PN-83/T-42106

2. Installation.

2.1 Requirements.

Device is to be mounted by a qualified installer, holding relevant permits and licenses (applicable and required for a given country) with ~230 V mains supply. Unit should be mounted in confined spaces with normal relative humidity (RH=90% maximum, without condensing) and temperature from -10°C to +40°C. Device must be mounted in a vertical position with cable glands facing downwards. Mounting in any other position is not permitted. Ensure free convective airflow around enclosure.

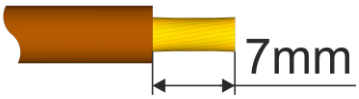
As power supply is designed for a continuous operation and is not equipped with a power-switch, therefore, an appropriate overload protection in power supply circuit should be provided. Moreover, the user shall be informed about the method of unplugging (most frequently through separating and assigning an appropriate fuse in the fuse-box).
The electrical system shall follow valid standards and regulations.

2.2 Installation procedure.

CAUTION!
Before installation, cut off voltage in 230 V power-supply circuit. To switch power off, use an external switch, in which distance between contacts of all poles in disconnection state is not less than 3mm.

It is required to install in the supply circuits, in addition to power supply, circuit breaker with 6 A nominal current.

1. Mount device and feed connection wires through glands and filler inserts. Then tighten the glands (unused ones should be blanked off).
2. Connect power cables (~230 V) to L-N clips of PSU. Connect ground wire to clip marked by earth symbol ⏚. Use a three-core cable (with a yellow and green protection wire) to make connection⏚). Lead the power cables to the relevant terminals of the power supply via an isolation conduit. Wires should be deisolated to a length of 7mm.



The shock protection circuit shall be done with a particular care: the yellow and green wire coat of the power cable should be connected to the terminal marked with the grounding symbol on the PSU enclosure. Operation of the PSU without the properly made and fully operational shock protection circuit is UNACCEPTABLE! It can cause damage to the equipment or an electric shock

3. Check output voltage and adjust if necessary using potentiometer.
4. Screw switch to mounting plate.
5. Connect switch using cable terminated with a DC 2.1 / 5.5 plug.
6. Switch on ~230 V supply.
7. After installing and checking proper working, the enclosure can be closed (ensure that cover fits evenly over its entire surface).

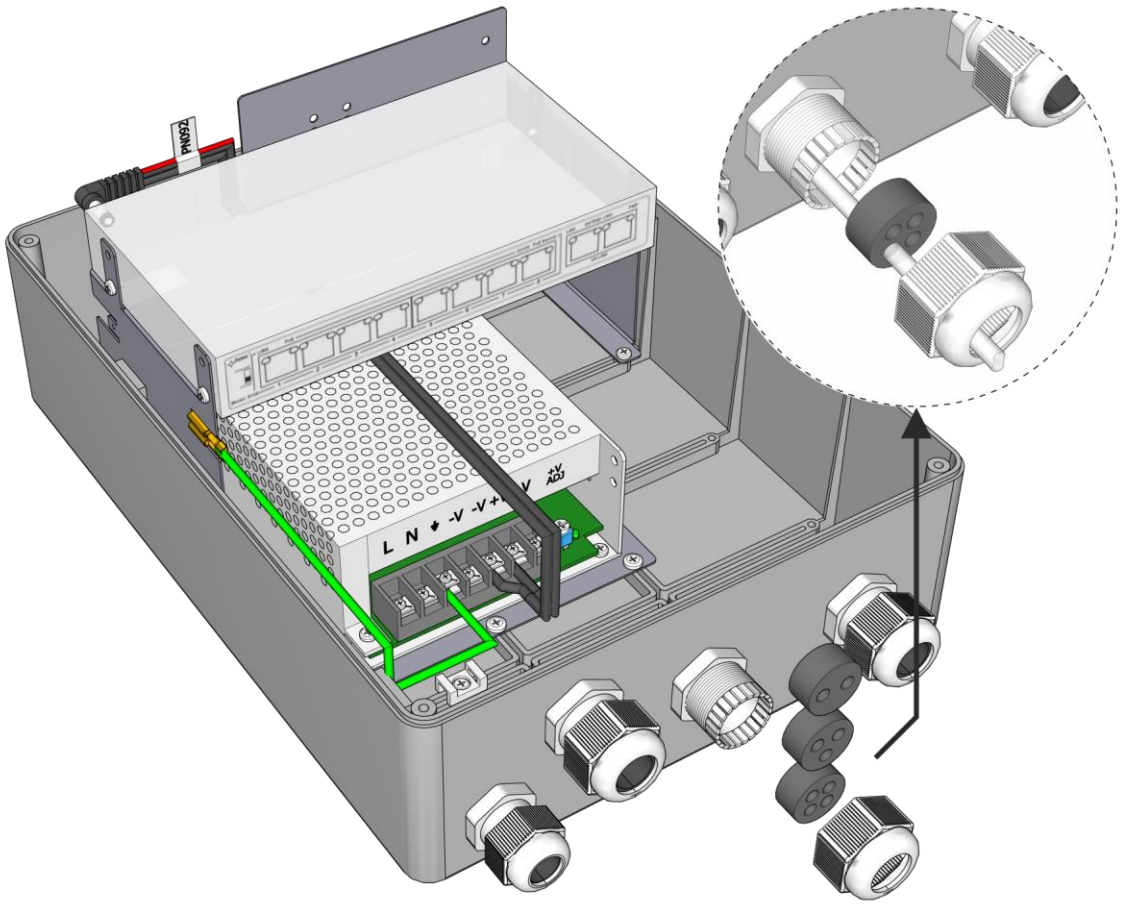


Fig. 3. Example of installation

3. Operating status indication.

Moreover, PSU is equipped with LED indicating presence of voltage at PSU output, located on PCB of PSU module.

4. Maintenance.

Any and all maintenance operations may be performed following the disconnection of the PSU from the power supply network. The PSU does not require performing any specific maintenance measures, however, in the case of significant dust rate, its interior is recommended to be cleaned with compressed air. In the case of a fuse replacement, use a replacement of the same parameters.

WEEE LABEL

Waste electrical and electronic equipment must not be disposed of with normal household waste. According to the European Union WEEE Directive, waste electrical and electronic equipment should be disposed of separately from normal household waste.

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