



PS15012100
PS 12V/10A enclosed switch mode power supply



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EN

Features of the power supply unit:

- wide AC input voltage range 176÷264V
- high efficiency 83%
- LED optical signalisation
- protections:
 - SCP short-circuit protection
 - overvoltage OVP
 - overvoltage protection (AC input)
 - overload (OLP)

1. Technical description.

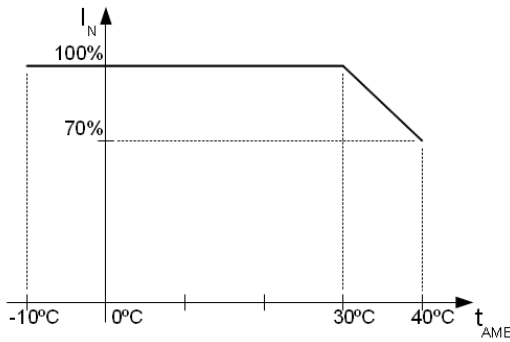
1.1. General description.

The power supply unit is intended for the feeding of alarm system equipments, which require 12V DC supply voltage and current load **I=10A**. The design enables simple changing of the output voltage, within the range of 12V÷15V DC, using a potentiometer. The power supply unit is protected against short-circuit, overload and overvoltage.

1.2. Technical parameters.

Supply voltage	176 ÷ 264 V AC 50÷60Hz
Current consumption	1,1A@230VAC max.
Supply power	150W max.
Efficiency	83%
Output voltage	12V DC
Output current	10A
Output current $t_{AMB}<30^{\circ}C$	10A - see graph 1.
Output current $t_{AMB}=40^{\circ}C$	7A - see graph 1.
Voltage adjustment range	12 V ÷ 15V DC
Ripple voltage	100mV p-p max.
Short-circuit protection SCP	electronic (activation requires disconnecting load or supply for about 5 s.)
Overload protection OLP	105-150% of power supply (activation requires disconnecting load or supply for about 5 s.)
Overvoltage protection OVP	$U>115\% \div 135\%$ of the output, (activation requires disconnecting load or supply for about 20 s.)
Optical signalisation	green LED – presence of DC voltage
Operation conditions	2-nd environmental class, temperature: $-10^{\circ}C \div 40^{\circ}C$ relative humidity 20%...90%, without condensation
Dimensions (LxWxH)	199 x 110 x 50 [mm]
Net/gross weight	0,73kg / 0,78kg
Protection class PN-EN 60950-1:2007	I (first) – requires a protective conductor (PE)
Connectors	power-supply: $\Phi 0,63-2,50$ (AWG 22-10) outputs : $\Phi 0,63-2,50$ (AWG 22-10)
Electrical strength of insulation: - between input (network) circuit and output circuits of power-supply (I/PO/P) - between input circuit and PE protection circuit (I/P-FG) - between output circuit and PE protection circuit (O/P-FG)	3000 V/AC min. 1500 V/AC min. 500 V/AC min.
Insulation resistance: - between input circuit and output or protection circuit	100 M Ω , 500V/DC
Storage temperature	$-20^{\circ}C \dots +60^{\circ}C$
Vibrations and impulse waves during transport	according to PN-83/T-42106

1.3. Output current vs temperature.



Graph 1.
Allowable output current from the power supply depending on ambient temperature.

2. Installation.

2.1. Requirements.

The power supply shall be mounted by the qualified installer having appropriate (required and necessary for a given country) permissions and qualifications for connecting (operating) low-voltage installations. The unit shall be mounted in closed rooms, according to the environment class II, of the normal air humidity (RH=90% max. without condensation) and the temperature within the range from -10°C to +40°C.

The power supply shall be mounted in a close casing (a cubicle, a terminal device) and in order to fulfill LVD and EMC requirements the rules for power-supply, encasing and shielding shall be observed according to application.

Due to the power supply design, the PE wire has to be connected to the corresponding connector of the supply unit. Operation without proper grounding of the power supply is not allowed!

2.2. Installation procedure.

1. Prior to installation of the power supply unit, make sure that power leads have been disconnected from the 230VAC mains.
2. Install the unit in the previously selected place.
3. Connect the 230VAC power leads. Connect the PE cable (yellow-green) to an appropriate terminal on the power supply unit (marked with \perp).



The circuit of the shock protection shall be performed with a particular care, i.e. the yellow and green protection wire of the power cable shall be connected from one side to the terminal marked by the symbol of \perp in the casing of the power-supply. Operation of the power-supply without the properly made and fully operational circuit of the shock protection is

UNACCEPTABLE!

It can result in failure of devices and electric shock.

4. Connect load/loads to proper output connectors of the power supply (positive end is marked as +V, negative end as COM).
5. Upon the completion of tests and trial activation, close the housing, cabinet etc.

2.3. Description of terminal.

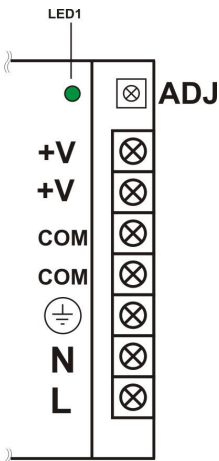


Fig.1. Description of terminal.

Elements/connectors [Fig.1]	Description
L, N, \perp	L-N - input voltage connectors 230 V AC, \perp - protective conductor connector
COM	Power supply output (0V)
+V	Power supply output (+12V)
LED1	LED signals the presence of voltage at the unit's output
ADJ	Potentiometer - output voltage adjust

2.4. Dimensions and fitting of the PS15012100 power supply.

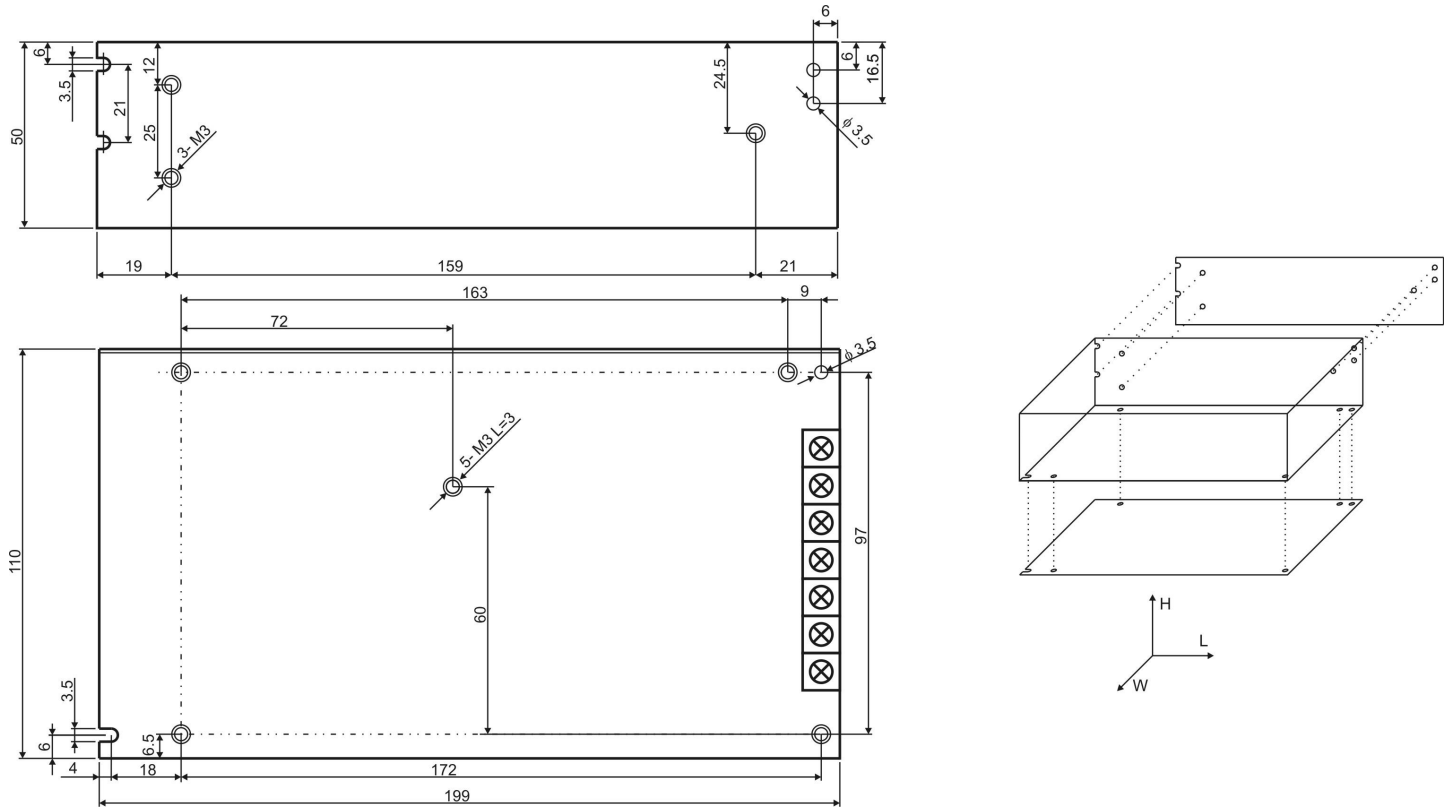


Fig. 2. Dimensions of power supply.

3. Maintenance.

All maintenance procedures can be performed after the disconnection of the power supply from the electrical grid. The power supply does not require any special maintenance procedures, but in the case of significant dust accumulation, dusting using compressed air is recommended.



WEEE designation

The waste electric and electronic equipment worn out may not be disposed of together with standard household waste. According to the WEEE directive, applicable in the EU, the separate neutralization methods should be used for electric and electronic equipment.

GENERAL WARRANTY CONDITIONS

1. Pulsar K. Bogusz Sp.j. (manufacturer) grants a two-year quality warranty for the equipment, starting from the date of purchase placed on the purchase order.
2. Should such purchase order be missing when the claim is submitted, the three-year guarantee period is counted from the date of the manufacturing of the device.
3. The warranty includes free-of-charge repairing or replacing with a functional equivalent (the selection is made by the manufacturer) of the malfunctioning device, due to reasons attributable to the manufacturer, including manufacturing and material defects, unless such defects have been reported beyond the warranty period (item 1 and 2).
4. The equipment subject to warranty is to be brought to the place where it was purchased, or directly to the main office of the manufacturer.
5. The warranty applies to complete equipment, including the type of defect specified in writing, using a properly filled warranty claim.
6. Should the claim be accepted, the manufacturer is obliged to render warranty repairs, as soon as possible, however not later than within 14 days from the delivering of the equipment to the service centre of the manufacturer.
7. The repair period mentioned in item 6 may be prolonged, if there is no technical capability to carry out the repairs, and in the case that the equipment has been accepted conditionally, due to the failing of the warranty terms by the claimant.
8. All the services rendered by force of the warranty are carried out at the service centre of the manufacturer, exclusively.
9. The warranty does not cover the defects of the equipment, resulting from:
 - reasons beyond the manufacturer's control,
 - mechanical damage,
 - improper storage and transport,
 - use that violates the operation manual or equipment application,
 - random events, including lightning discharges, failures of power networks, fire, flooding, high temperatures and chemical agents,
 - improper installation and configuration (at variance with the rules set forth in the manual),
10. Each confirmation of structural modifications or repairs, carried out beyond the service centre of the manufacturer, or any modification of serial numbers or warranty labels, results in the loss of the rights resulting from the warranty.
11. The liability of the manufacturer towards the buyer is limited to the value of the equipment, determined according to the wholesale prices suggested by the manufacturer on the day of purchase.
12. The manufacturer shall not be responsible for the defects that resulted from the damaging, malfunctioning or inability to operate the equipment, particularly, if such defects are the result of failing to abide by the recommendations and requirements contained in the manual, or the use of the equipment.

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