PS-251220
PS 12V/2A enclosed switch mode power supply

Edition: 4 from 07.03.2013
Supersedes edition: 3 from 04.02.2013

EN

Features of the power supply unit:

- power output 2A/12÷15VDC
- wide AC input voltage range 176÷264V
- high efficiency 74%
- LED optical signalisation
- protections:
  - SCP short-circuit protection
  - overvoltage OVP
  - overvoltage protection
  - overload (OLP)
- warranty – 2 year from the production date

1. Technical description.

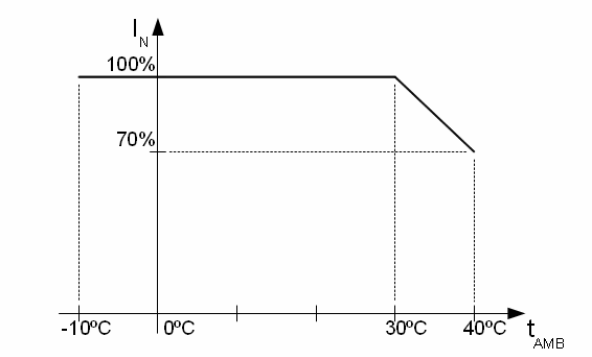
1.1. General description.

The power supply unit is intended for the feeding of alarm system equipments, which require 12V DC supply voltage and current load **I=2A**. 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
Current consumption	0,18A@230VAC max.
Supply power	25W max.
Efficiency	74%
Output voltage	12V DC
Output current	**2A**
Output current t_{AMB}<30℃	2A - see graph 1.
Output current t_{AMB}=40℃	1,4 A - see graph 1.
Voltage adjustment range	12 V ÷ 15V DC
Ripple voltage	100mV p-p max.
Short-circuit protection SCP	electronic, automatic recovery
Overload protection OLP	105-150% of power supply, automatic recovery
Surge protection	varistors
Overvoltage protection OVP	>16V (automatic return)
Optical signalisation	green LED – presence of DC voltage
Operation conditions	2-nd enviromental class, temperature: -10 ^{o}C÷40 ^{o}C relative humidity 20%...90%, without condensation
Dimensions (LxWxH)	110 x 78 x 36 [mm]
Net/gross weight	0,22kg / 0,24kg
Protection class PN-EN 60950-1:2007	I (first) – requires a protective conductor (PE)
Connectors	power-supply:Φ0,63-2,50 (AWG 22-10) outputs : Φ0,63-2,50 (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 MΩ, 500V/DC
Storage temperature	-20ºC...+60ºC
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℃ to +40℃.

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 ⏚).

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 ⏚ 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 -V).
5. Upon the completion of tests and trial activation, close the housing, cabinet etc.

2.3. Description of terminal.

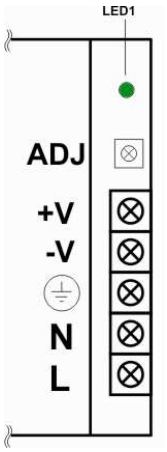


Fig.1. Description of terminal.

Elements/connectors [Fig.1]	Description
L, N, ⏚	**L-N** - input voltage connectors 230 V AC, ⏚ – protective conductor connector
-V	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 PS-251220 power supply.

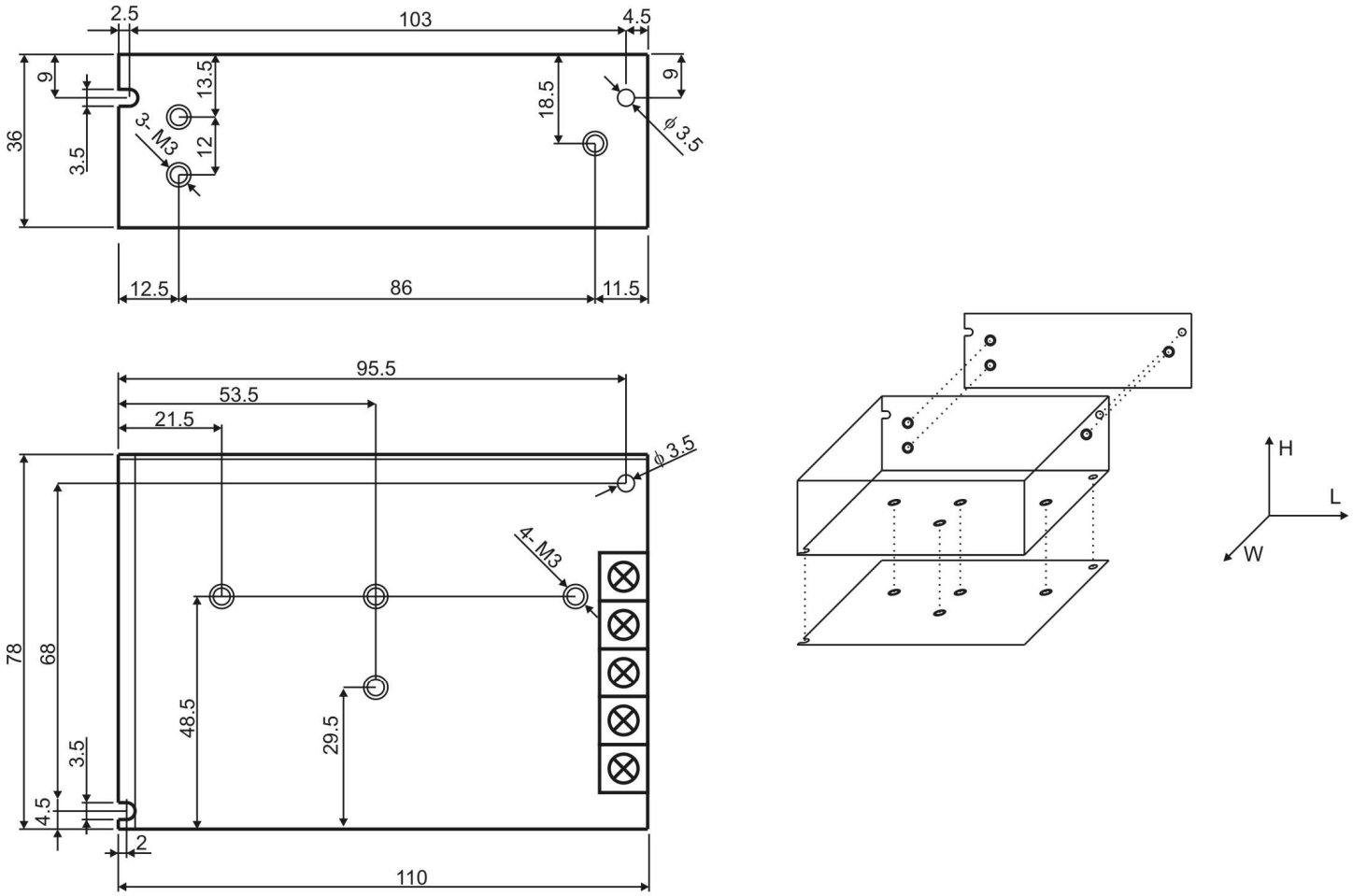


Fig. 2. Dimensions of power supply.

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. (the manufacturer) grants a two-year warranty for the equipment, , counted from the device's production date.
2. The warranty includes free-of-charge repair or replacement with an appropriate equivalent (the selection is at the manufacturer's discretion) if the malfunction is due to the manufacturer, includes manufacturing or material defects, unless such defects have been reported within the warranty period (item 1).
3. 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.
4. The warranty applies to complete equipment, accompanied by a properly filled warranty claim with a description of the defect.
5. Should the claim be accepted, the manufacturer is obliged to provide warranty repairs, at the earliest convenienve, however not later that within 14 days from the delivery to the service centre of the manufacturer.
6. The repair period mentioned in item 5 may be prolonged, if there are no technical possibilities to carry out the repairs, or if the equipment has been conditionally accepted, due to the breaking warranty terms by the claimant.
7. All the services rendered by force of the warranty arecarried out at the service centre of the manufacturer, exclusively.
8. 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's intended use
- fortuitous events, including lightning discharges, power failures, fire, flood, high temperatures and chemical agents,
- improper installation and configuration (in defiance with the manual),
9. The warranty is void in any of the following circumstances:
- construction changes
- repairs carried out by any unauthorized service center
- damage or removal of warranty labels
- modifications of the serial number
10. 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.
11. The manufacturer takes no reponsibility for the defects that result from:
- the damaging, malfunctioning or inability to operate the equipment
- defects that result from using the equipment outside its stated specifications and operating parameters failing to abide by the recommendations and requirements contained in the manual, or the use of the equipment.

Pulsar K.Bogusz Sp.j.
Siedlec 150, 32-744 Łapczyca, Poland
Tel. (+48) 14-610-19-40, Fax. (+48) 14-610-19-50
e-mail: biuro@pulsar.pl, sales@pulsar.pl
http:// www.pulsar.pl