



Switch mode buffer power supply units for building in

PSB202401, PSB552402, PSB1002403

EN



Edition: 2nd from 15.11.2010
Supercedes edition: 1st from 10.07.2010

1. Technical description.

1.1 General description.

The power supply units are intended for the feeding of alarm system equipment, which requires uninterruptible supply of 27,6V DC voltage, provided by 230V AC mains.

The power supply units are protected against short-circuit, overload and overvoltage. They also have an in-built charging system and battery status monitoring system, which protect the battery against damaging, as a result of excessive discharging.

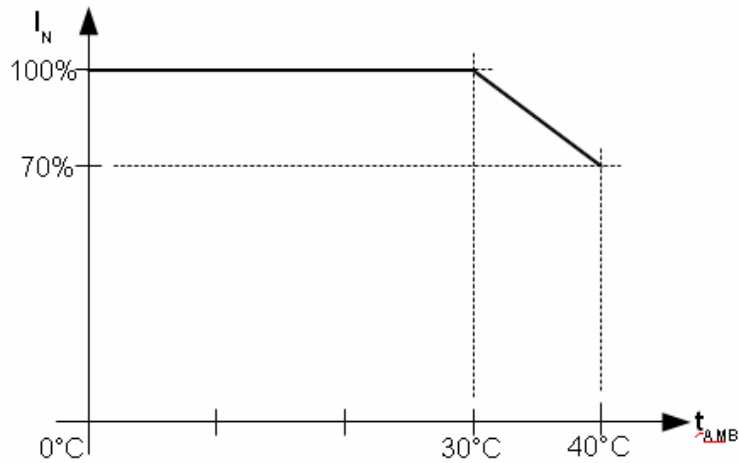
1.2 Technical parameters.

	PSB202401	PSB552402	PSB1002403
Dimensions (L x W x H)	111 x 78 x 36mm	160 x 98 x 39mm	199 x 98 x 39mm
Net/Gross weight	265g / 280g	455g / 485g	635g / 670g
Input voltage	85 ÷ 264 V AC 120 ÷ 370 V DC	85 ÷ 264 V AC 120 ÷ 370 V DC	170 ÷ 264 V AC
Leakage current	<0,5mA / 230 V AC	<0,7mA / 230V AC	<0,7mA / 230V AC
Output voltage	24 V DC – AC operation 19,5 V ÷ 27,1 V – battery operation	27,6 V DC – AC operation 19,5 V ÷ 26,5 V – battery operation	27,6 V DC – AC operation 19,5 V ÷ 27,1 V – battery operation
Output power	20W	55W	100W
Output current for t_{AMB} < 30°C	0,7 A*	2,0 A*	3,0 A*
Output current for t_{AMB} = 40°C	0,5 A*	1,4 A*	2,1 A*
Battery charging current	0,2 A	0,16 A	0,5 A
Output ripple	<150mV	<100mV	<100mV
Short circuit protection	YES	YES	YES
Overload protection	110% - 150% output power	110% - 150% output power	110% - 130% output power
Overvoltage protection	YES	YES	YES
Over temperature protection	NO	NO	NO
Battery's protection against excessive discharging	YES	YES	YES
Operation conditions	0 °C ÷ 40°C , RH 20 ÷ 90 % , no condensation		

REMARKS:

Output current (*):

Maximum continuous output current depends of the ambient temperature – refer to graph 1.



Graph 1. Relation between ambient temperature and maximum continuous output current of the PSU.

Battery operation:

In the PSB552402 model the battery is activated only after the decaying of the supply voltage at the AC input. Connecting of the battery to the power supply unit will not generate voltage at the input. In the PSB202401 and PSB1002403 models, connecting of the battery results in the immediate generating of voltage at the input.

Battery test:

In the PSB1002403 model, it is possible to force a temporary battery operation, if there is AC supply (e.g. to check battery's condition). To do that, short-circuit appropriate contacts of the BT junction – see chapter 2.3 of this instruction.

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 0°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.

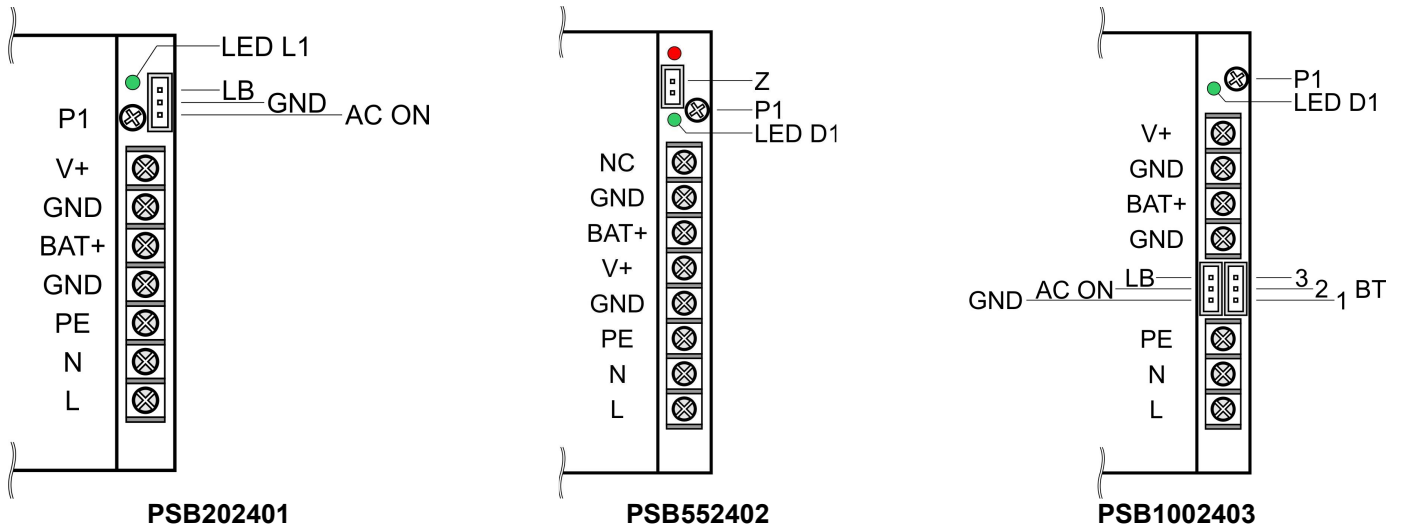
1. Prior to installation of the power supply unit, make sure that power leads have been disconnected from the 230VAC mains.
2. Install the unit in the previously selected place.
3. Connect the 230VAC power leads. Connect the PE cable (yellow-green) to an appropriate terminal on the power supply unit (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 junctions of the power supply unit (positive end is marked as V+, negative end as GND).
5. Connect battery to the unit (NOTE! PSB202401 and PSB1002403 – when battery is connected to the unit, there is voltage at the unit's output; in PSB551204 model, battery is connected only when the AC voltage has decayed).
6. Upon the completion of tests and trial activation, close the housing, cabinet etc.

2.3 Connectors description.



Connectors/elements description:

Elements/terminals	Description
L, N, PE	L-N - input voltage connectors 230 V AC, PE – protective conductor connector
GND	Output ground (0V)
V+	Power supply output
BAT+	Battery output (+).
LED D1	Diode signals the presence of voltage at the unit's output
BT	Battery test: to switch to battery operation, short pin 1 or 2 with pin 3 of the BT connector
P1	Potentiometer - output voltage adjust

2.4 Layout of assembly openings.

The symbol of a threaded opening, as presented in the figures below, means that the opening in the unit's housing is of the threaded type. The threaded openings are not of the pass-through type.

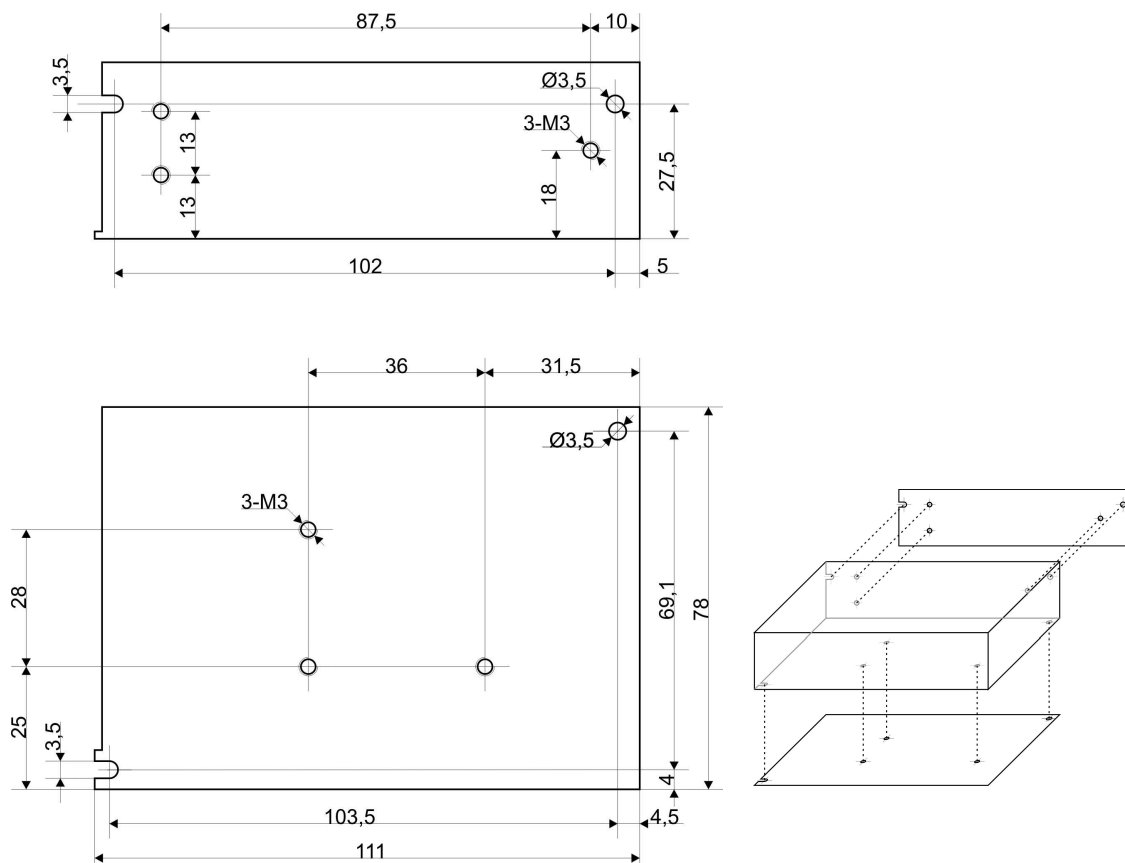


Fig. 1 Layout of assembly openings for the PSB202401 power supply unit.

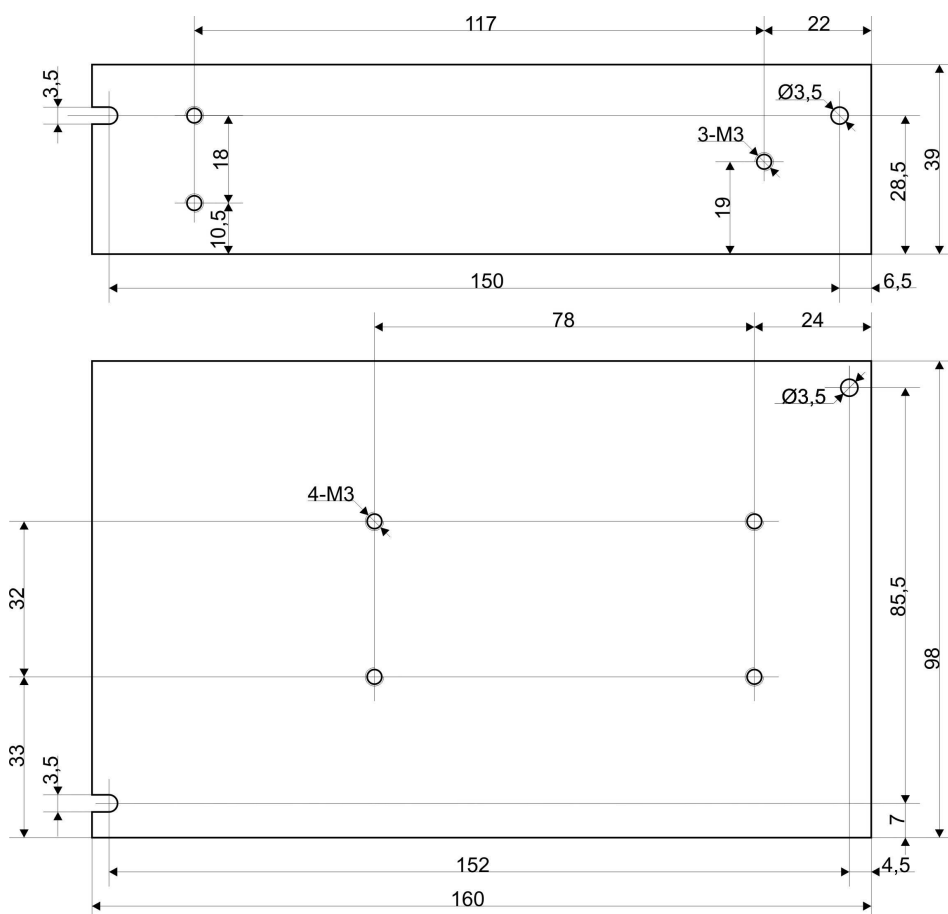


Fig. 2 Layout of assembly openings for the PSB552402 power supply unit.

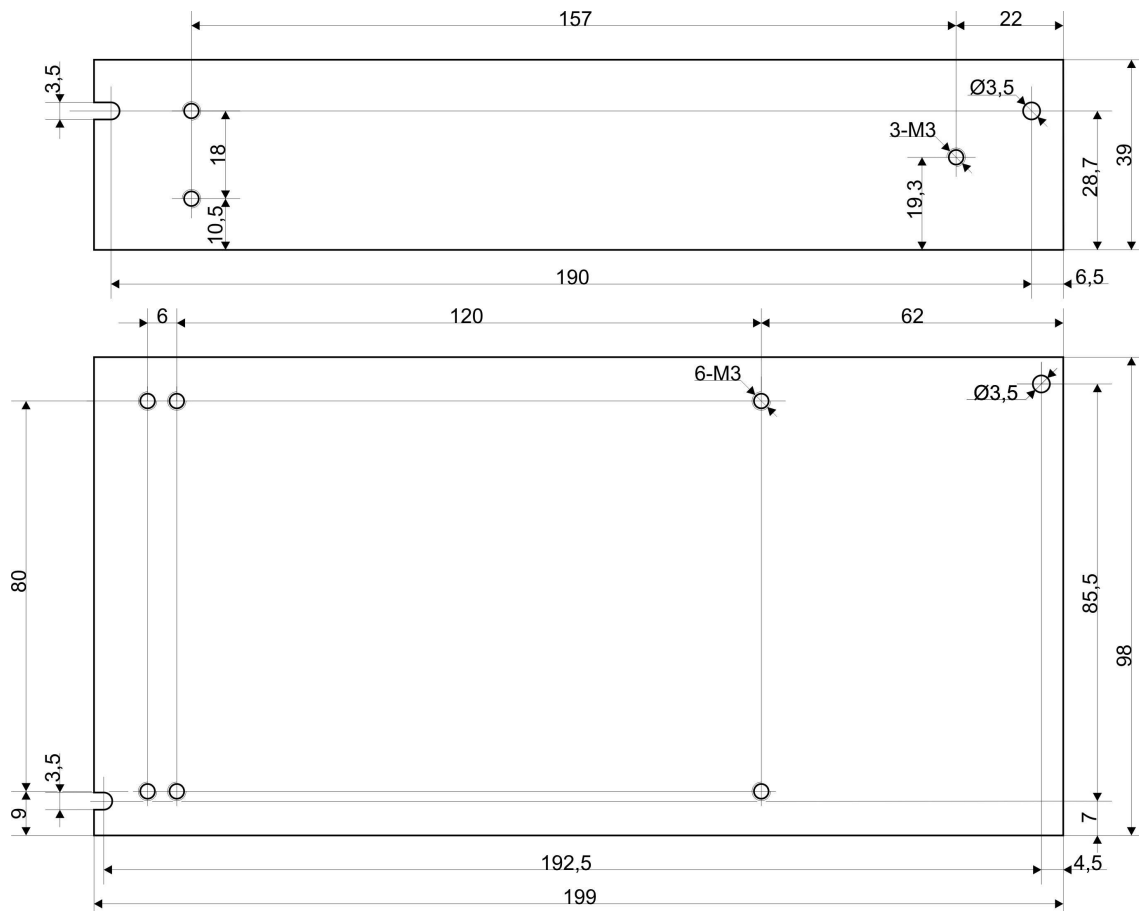


Fig. 3 Layout of assembly openings for the PSB1002403 power supply unit.

3. Maintenance.

All maintenance operations can be carried out only if the unit has been disconnected from the power network. The unit does not require any particular maintenance. However, clean with compressed air, if heavily dusted.

When battery-operated, the reliable operation of the power supply unit depends on the technical condition of the battery. It should be periodically inspected and replaced, if any abnormalities have been discovered.

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.

THE GENERAL WARRANTY CONDITIONS

1. Pulsar K. Bogusz, Particular Partnership (the manufacturer) provides a one-year quality warranty for devices, as from the purchase date placed on a purchase proof.
2. The warranty includes free repair or replace for a functional equivalent (the selection is performed by the manufacturer) of a non-operational device due to reasons dependent on the manufacturer, including production and material defects, as far as defects are notified within the warranty period (item 1 and 2).
3. The equipment subject to warranty shall be provided to the point, where it has been purchased or directly to the place of business.
4. The complete devices are subject to warranty, and the sort of defect shall be described in written in a correctly fulfilled claim notification.
5. If a claim is accepted, the manufacturer is obliged to perform warranty repairs as soon as possible, but no later than 14 working days since the device is provided to the service of the manufacturer.
6. The repair period specified in item 5 can be extended, if there are no technical opportunities to perform the repair or the equipment is conditionally accepted by the service due to non-compliance of the warranty conditions by the person lodging a claim.
7. All service actions related to warranty are performed exclusively at the service of the manufacturer.
8. The warranty does not include the following defects of the device due to:
 - manufacturer-independent reasons,
 - mechanical defects,
 - improper storage and transport,
 - operation contrary to the instruction manual or purpose of the device,
 - emergencies, including atmospheric discharges, failures of the power network, fire, flood, effect of high temperature and chemical agents,
 - improper installation and configuration (contrary to the instruction manual)
9. The loss of rights resulting from the warranty always occurs, if it is confirmed that construction changes have been performed or repairs have not been performed at the service of the manufacturer, or if serial numbers or warranty labels of the device are somehow replaced or damaged.
10. The responsibility of the manufacturer towards the purchaser is limited to the value of the device determined according to the wholesale price from the purchase day suggested by the manufacturer.
11. The manufacturer does not bear any responsibility for damages resulting from failure, faulty operation or inability to use the device, particularly if it results from non-compliance with advices and requirements included in the instruction manual or contrary to purpose of the device.

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