

ZDROJ

Thank you for purchasing ZDROJ. ZDROJ is High End linear low noise power supply for synthesizers.

!!! DANGER !!!

High voltage inside power supply unit. Do not open metal cover under voltage. Risk of electric shock and serious injury. High Voltage on input wires and connector. Be careful!

Potentially hot cover surface during operation. Be careful!

Inside of rigid metal enclosure is PCB with electrical components, toroidal transformer, heatsink etc. On covered side is input connector for main voltage. There are two type of output interfaces on ZDROJ. First is two common used 16 pin headers for quick busboards connections. Second connection type are shock proof spring terminals. They are no-screw, easy to use terminals, just push lever and insert blanked wire. Please check label on terminals for right polarity. In normal operation mode when the power switch is ON, LEDs are light on green. LEDs go out when some rail is overload or short.

Primary side of PSU contains LC filter, which removes interference from AC mains. Toroidal transformer with metal cover is the key element to minimize electromagnetic interference. ZDROJ is made on quality PCB with copper thickness of 70 µm, which ensures reliability of ZDROJ and minimal losses on PCB routes.

There are connector XP1 / GND LIFT on PCB. This connector is shorted from factory by jumper – Output GND is connect to enclosure and PE contact on input. You can connect external switch on XP1 connector. This switch can be used for disconnection (LIFT position) secondary ground potential from primary / enclosure ground potential. This feature can help to solve problems with ground loops when more devices are patched between them and supplied from one or more wall socket (synth, mixer, PC...). In normal conditions without ground loop problems is good to keep switch in GND position or shorted XP1 connector.

Do not cover ventilation holes on enclosure. It is necessary to ensure conditions for air flow around heatsink and ventilation holes on ZDROJ enclosure. Please switch off ZDROJ when you do not use it



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Mounting to case:

1. Find ideal place for ZDROJ and power inlet in your case. It is good to put ZDROJ near power inlet.
2. Make cutout for power inlet on ergonomic place in case (on side).
3. Screw power inlet on his place from outside of the case with screws.
4. Screw ZDROJ on his place with screws.
5. Adjust and blank power inlet wires if necessary. (Blank cca 7mm)
6. Insert AC input connector (green) to ZDROJ AC input socket.
7. If your case is made from metal or if has metal parts, connect metal parts which are able to touching with wire to empty contact PE on AC input connector.
8. Connect power distribution board via wires and spring terminals or via 16 pin headers for 16-16 ribbon cables (terminals are better).
9. If you use terminals, push lever on terminal with small screwdriver, insert blanked wire to terminal and release lever. Second end of wire connect to distribution board. Always check terminal description on ZDROJ and on distribution board as well (+12V, -12V, GND, +5V). Be careful, don't switch polarity!
10. Finally, connect power cord into power inlet and switch power on. All three LEDs on BoardPWR should light with same (very similar) intensity. Switch power off and connect modules.

!!! Always if you connect new module or rearrange power connection in your synth please SWITCH POWER OFF to avoid modules or PSU faults!!!

Specs

Power	40W
Mains input	230V / 50Hz
Outputs	+12V / 1.5A -12V / 1.5A +5V / 0.7A
Output stability	±1% for 0-100% load
Output noise	max 4.8mVpp on 100% load (20MHz BW)
Output Connectors	2x 16 pin headers for ribbon cables Shock proof, push to connect WAGO terminals
Protections	Input filter Output overvoltage Output short circuit – automatic recovery Output over current – automatic recovery All output protections are independent for each rail
Other	70µm cooper thickness on PCB LEDs indicate present and drop of output voltage.
Dimensions	270mm x 86mm x 50mm
Weight	1.5kg