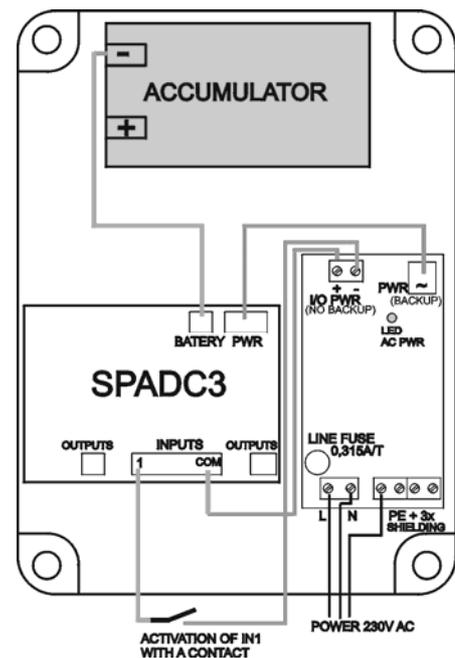


BOXPWR

Power supply in SPADC3-BOX

- BOPWR board contains two mutually insulated power supplies working with common transformer from 230V AC power input. *External power supply* 12V DC is only the rectifier + capacitor and produces voltage for external circuits of input optocouplers, the connector is blue screw terminals **I/O PWR**. This power supply is there to be connected with external wires with input or output SPADC3 signals. *Main power supply* for SPADC3 is 12V AC – connector PWR~. Backup battery 12V/1.2Ah is connected to SPADC3 and it provides power on after mains fails- connector BATTERY. **THIS IS INTERNAL POWER SUPPLY FOR SPADC3 ONLY AND NO CONNECTION WITH EXTERNAL CABLES IS ALLOWED (NOISE SEPARATION REASONS) !!!**
- *Yellow LED* signalizes, that power 230V AC is present, that switch SPADC3 EVER to ON state, even if it was switched off due to battery undervoltage.
- If 230V AC power is not present, but the battery has enough power and SPADC3 is OFF it can be switched ON with pushbutton besides BATTERY connector. To switch OFF SPADC3 running on battery press GSM OFF at the panel.



- If the battery is discharged, SPADC3 will go automatically OFF. There is possibility to send SMS before this happen to inform user, that the battery has no more power and device has to be switched OFF.
- Connect 230V AC power to gray screw terminals, it may be L and N wire in 230/400V system or L1, L2 wires in 120/230V AC systems. Connect also ground – protection earth to any of 4 green screws terminals. The other green ground terminals might be used for shielding connection, if shielded wires are used for signals to and from SPADC3.
- If you need to activate inputs from dry contacts, connect COM pin of SPADC3 inputs with positive terminal I/O PWR and the contact connect between corresponding input terminal and negative terminal of I/O PWR. Note, that optocouplers in SPADC3 are single polarity type and so you cannot reverse the polarity, if needed. Small / reed/ relays can be used, if the polarity of inputs is no correct for the application. *You MUST use I/O PWR power supply ONLY for optocouplers external circuits.*
- 4 Outputs are divided into 2 connectors with 2 outputs each. One pair of inputs is SINK type with NPN transistor at the output, the other pair is source type giving +12V in active state. The outputs are NOT insulated from CPU ground and they can control output relays / mechanical or semiconductor type/ installed into the BOX. Do not connect long wires going out of the box, **OTHERWISE NOISE PROBLEMS MAY OCCUR !**. Power supply for the coils is internal one with battery backup, use middle pin of OUTPUT connector for common wire of each pair of the coils, DO NOT CONNECT I/O PWR power supply to the relays circuit.
- If you need to use for input optocouplers the power supply with backup, that powers SPADC3 electronics, you must install additional DC/DC converter into SPADC3 BOX to get separated power. **DO NOT USE DIRECT CONNECTION WITH THE BATTERY, OTHERWISE NOISE PROBLEMS MAY OCCUR !**