

# HPSBOC series power supply unit

Buffer, switch mode power supply unit 13,8V DC with technical outputs.



EN

CODE: **HPSBOC 2512B** v.1.1/VIII  
TYPE: **HPSBOC 13,8V/2A/7Ah/OC** Buffer, switch mode power supply unit with technical outputs.



## Features:

- DC 13,8V/2A uninterruptible power supply\*
- fitting battery: 7Ah/12V
- wide range of mains supply: 176÷264V
- high efficiency 74%
- battery charging and maintenance control
- excessive discharging (UVP) protection
- battery charge current 0,5A
- battery output full protection against short-circuit and reverse polarity connection
- LED indication
- EPS technical output indicating AC power loss – OC and relay type
- PSU technical output indicating PSU failure – OC and relay type
- LoB technical output indicating battery low voltage – OC and relay type
- protections:
  - SCP short-circuit protection
  - OVP overvoltage protection
  - overvoltage protection
  - against sabotage
  - overload protection (OLP)
- warranty – 2 year from the production date

## DESCRIPTION

A buffer PSU intended for uninterrupted supply to devices that require stabilized voltage of **12V DC (+/-15%)**. The PSU provides voltage of **U=13,8V DC** with output current of **I=2A + 0,5A for battery charging\***. In case of power decay, a battery back-up is activated immediately. The PSU is constructed based on the switch mode PSU, with high energy efficiency. The PSU is housed in a metal enclosure (colour RAL 9003) which can accommodate a 7Ah/12V battery. A micro switch indicates door opening (front cover).

**During normal operation, the total current drawn by the equipment may not exceed I = 2 A\*.**  
**Maximum battery charging current: 0.5 A\*. Total device current + battery: 2.5 A max\*.**

\* See chart 1

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SPECIFICATIONS	
PSU type	A (EPS - External Power Source)
Mains supply	176÷264V AC
Current up to	0,45A@230V AC
Supply power	35W max.
Efficiency	74%
Output voltage	11V÷ 13,8V DC – buffer operation 9,5V÷13,8V DC – battery-assisted operation
<b>Output current <math>t_{AMB}&lt;30^{\circ}\text{C}</math></b>	<b>2A + 0,5A battery charge - see chart 1</b>
<b>Output current <math>t_{AMB}=40^{\circ}\text{C}</math></b>	<b>1,4A + 0,5A battery charge - see chart 1</b>
Voltage adjustment range	12÷14V DC
Ripple	120mV p-p max.
Battery charge current	0,5A max. @ 7Ah ( $\pm 5\%$ )
Short-circuit protection SCP	electronic, automatic recovery
Overload protection OLP	105-150% of power supply, automatic recovery
Battery circuit protection SCP and reverse polarity connection	polymer fuse
Surge protection	varistors
Overvoltage protection OVP	>16V (automatic recovery )
Excessive discharge protection UVP	$U<9,5\text{V} (\pm 5\%)$ – disconnection of battery terminal
Tampering protection system: - TAMPER – indicating unwanted opening of the PSU's enclosure	- a microswitch, NC contacts (enclosure closed) 0,5A@50V DC (max.)
Technical outputs: - EPS; output indicating AC power failure  - PSU; output indicating DC absence/PSU failure  - LoB output indicating battery low voltage	- relay type: 1A@ 30V DC/50V AC, time lag: approx. 10s. - OC type, 50mA max., normal status: L (0V) level, failure: hi-Z level, time lag: 10s.  - relay type: 1A@ 30V DC/50V AC - OC type, 50mA max., normal status: L (0V) level, failure: hi-Z level  - relay type: 1A@ 30V DC/50V AC - OC type, 50mA max., normal status: ( $U_{BAT} >11,5\text{V}$ ): L (0V) level, failure: ( $U_{BAT} <11,5\text{V}$ ): hi-Z level The power supply unit does not feature a battery detection function.
LED indication	Yes
Operating conditions	2nd environmental class, $-10^{\circ}\text{C} \div +40^{\circ}\text{C}$
Enclosure	Steel plate, DC01 0,7mm colour: RAL 9003
Dimensions	$W=250, H=250, D+D_1=82+8$ [± 2mm] $W_1=255, H_1=255$ [± 2mm]
The dimensions of the battery compartment	160x100x75mm (WxHxD) max
Net/gross weight	1,8kg / 2,0kg
Closing	Cheese head screw x 1 (at the front), (lock assembly possible)
Deklarations, warranty	CE, RoHS, 2 year from the production date
Notes	The enclosure does not touch the assembly surface so that cables can be led. PSU cooling: convection. Power-supply: $\Phi 0,63-2,50$ (AWG 22-10) Outputs: $\Phi 0,63-2,50$ (AWG 22-10) Battery output BAT: 6,3F-2,5

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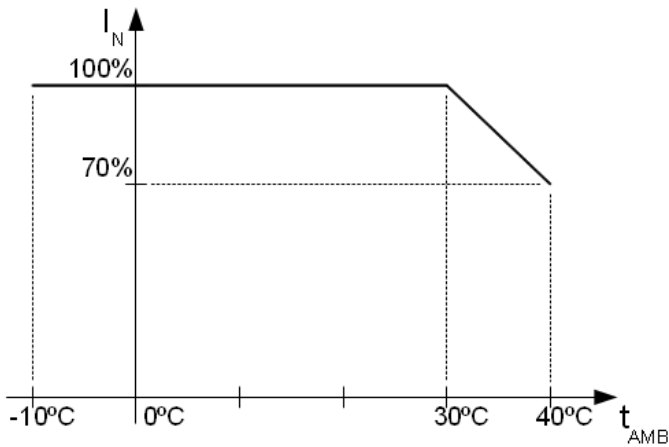
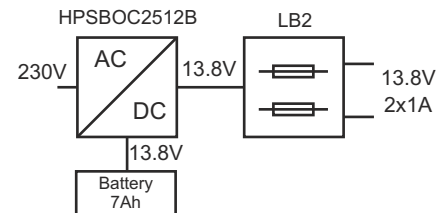
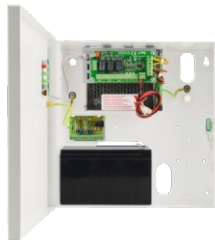


CHART 1. Acceptable output current from the PSU depending on ambient temperature.

## Optional configurations:

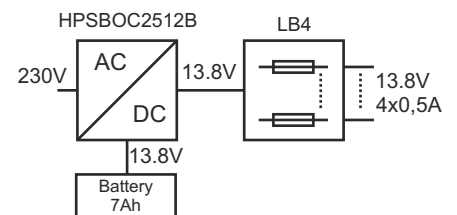
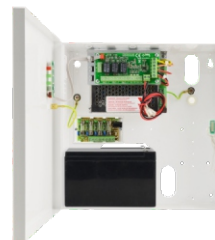
### Buffer power supply unit HPSBOC 13,8V/2x1A/7Ah.

- HPSBOC2512B + LB2 2x1A (AWZ585, AWZ586) + 7Ah



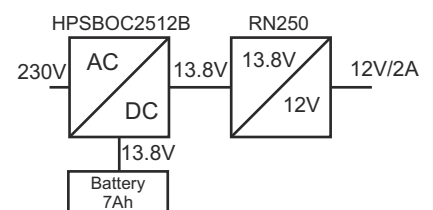
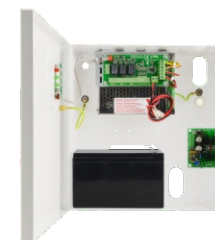
### Buffer power supply unit HPSBOC 13,8V/4x0,5A/7Ah.

- HPSBOC2512B + LB4 4x0,5A (AWZ574, AWZ576) + 7Ah



### Buffer power supply unit HPSBOC 13,8V/12V/2A/7Ah.

- HPSBOC2512B + RN250 (13,8V/12V) + 7Ah



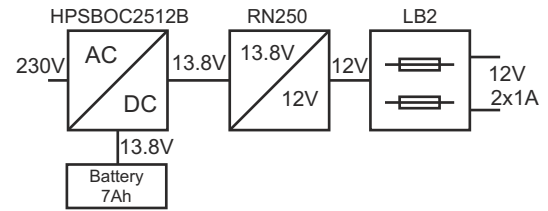
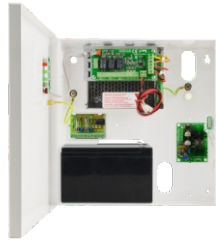
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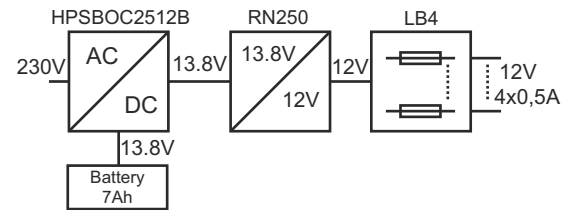
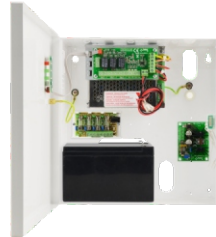
## Buffer power supply unit HPSBOC 13,8V/12V/2x1A/7Ah.

- HPSBOC2512B + RN250 (13,8V/12V) + LB2 2x1A (AWZ585, AWZ586) + 7Ah



## Buffer power supply unit HPSBOC 13,8V/12V/4x0,5A/7Ah.

- HPSBOC2512B + RN250 (13,8V/12V) + LB4 4x0,5A (AWZ574, AWZ576) + 7Ah



## Buffer power supply unit HPSBOC 13,8V/2x5V÷7,4V/2x2A/7Ah.

- HPSBOC2512B + DCDC20 x 2 pcs (2x5V÷7,4V/2x2A) + 7Ah

