

# HPSBOC series power supply unit



Buffer, switch mode power supply unit 27,6V DC with technical outputs.

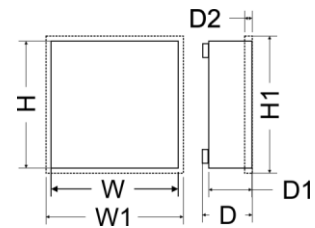
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CODE: HPSBOC 1824B v.1.1/VII

TYPE: HPSBOC 27,6V/1,5A/2x7Ah/OC Buffer, switch mode power supply unit with technical outputs.



GREEN POWER plus



## Features:

- DC 27,6V/1,5A uninterruptible power supply\*
- fitting battery: 2x7Ah/12V
- wide range of mains supply: 176÷264V
- high efficiency 77%
- battery charging and maintenance control
- excessive discharging (UVP) protection
- battery charge current 0,3A
- 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 is intended for uninterrupted supply to devices that require stabilised voltage of **24V DC (+/-15%)**. The PSU provides voltage of **U=27,6V DC** with output current of **I=1,5A + 0,3A for battery charge\***. 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 two 7Ah/12V batteries. A micro switch indicates door opening (front cover).

**During normal operation, the total current drawn by the equipment may not exceed I = 1,5A\*.**

**Maximum battery charge current: 0,3A\*.**

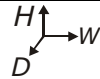
**Total device current + battery: 1,8A max\*.**

\* See chart 1

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SPECIFICATIONS	
PSU type	A (EPS - External Power Source)
Mains supply	176÷264V AC
Current up to	0,6A@230VAC
Supply power	50W max.
Efficiency	77%
Output voltage	22V÷ 27,6V DC – buffer operation 19V÷27,6V DC – battery-assisted operation
<b>Output current <math>t_{AMB}&lt;30^{\circ}\text{C}</math></b>	<b>1,5A + 0,3A battery charge - see chart 1</b>
<b>Output current <math>t_{AMB}=40^{\circ}\text{C}</math></b>	<b>1A + 0,3A battery charge - see chart 1</b>
Voltage adjustment range	24÷28V DC
Ripple	150mV p-p max.
Battery charge current	0,3A max. @ 2x7Ah ( $\pm 5\%$ )
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	>32V (automatic recovery)
Excessive discharge protection UVP:	$U<19\text{V} (\pm 5\%)$ – 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@ 30VDC/50VAC, time lag: approx. 10s. - OC type, 50mA max., normal status: L (0V) level, failure: hi-Z level, time lag: 10s.  - relay type: 1A@ 30VDC/50VAC - OC type, 50mA max., normal status: L (0V) level, failure: hi-Z level  - relay type: 1A@ 30VDC/50VAC - OC type, 50mA max., normal status: ( $U_{BAT} >23\text{V}$ ): L (0V) level, failure: ( $U_{BAT} <23\text{V}$ ): hi-Z level
LED indication	Yes
Operating conditions	2nd environmental class, $-10^{\circ}\text{C}+40^{\circ}\text{C}$
Enclosure	Steel plate, DC01 0,7mm colour: RAL 9003
Enclosure dimensions	285 x 297 x 80+8 [mm] (WxHxD)
Net/gross weight	2,20kg / 2,40kg
Fitting battery	2x7Ah/12V (SLA) max. 180x155x75mm (WxHxD) max 
Closing	Cheese head screw x 2 (at the front), (lock assembly possible)
Deklarations, warranty	CE, RoHS, 2 year from the production date
Notes	The enclosure does not adjoin the assembly surface so that cables can be led. Convectional cooling. 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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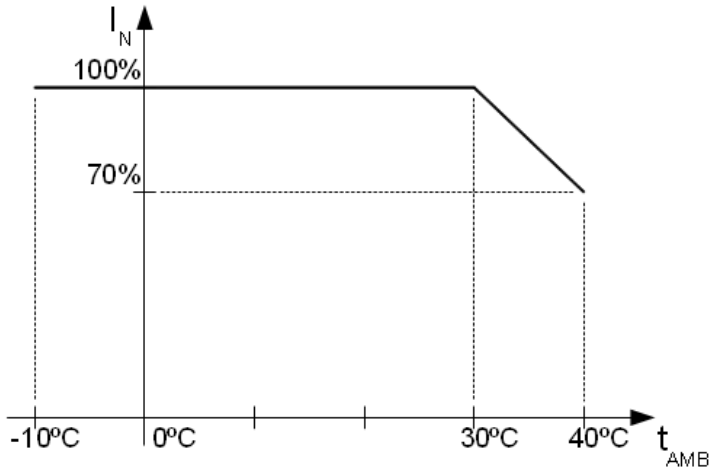
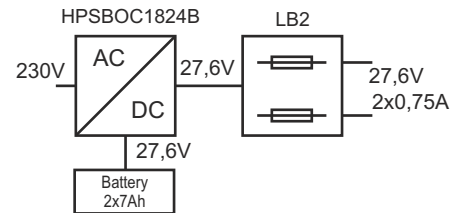


CHART 1. Acceptable output current from the PSU depending on ambient temperature.

## Optional configurations:

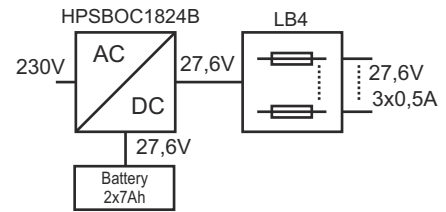
### Buffer power supply unit HPSBOC 27,6V/2x0,75A/2x7Ah.

- HPSBOC1824B + LB2 2x0,75A (AWZ586) + 2x7Ah



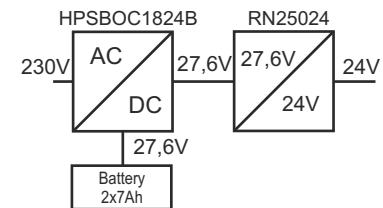
### Buffer power supply unit HPSBOC 27,6V/3x0,5A/2x7Ah.

- HPSBOC1824B + LB4 3x0,5A (AWZ574 or AWZ576) + 2x7Ah



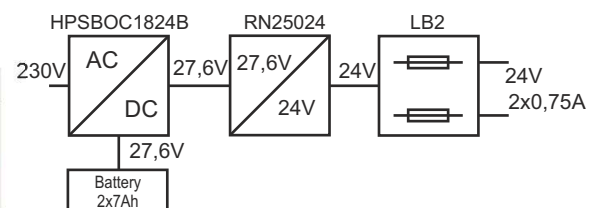
### Buffer power supply unit HPSBOC 27,6V/24V/1,5A/2x7Ah.

- HPSBOC1824B + RN25024 (27,6V/24V) + 2x7Ah



### Buffer power supply unit HPSBOC 27,6V/24V/2x0,75A/2x7Ah.

- HPSBOC1824B + RN25024 (27,6V/24V) + LB2 2x0,75A (AWZ586) + 2x7Ah



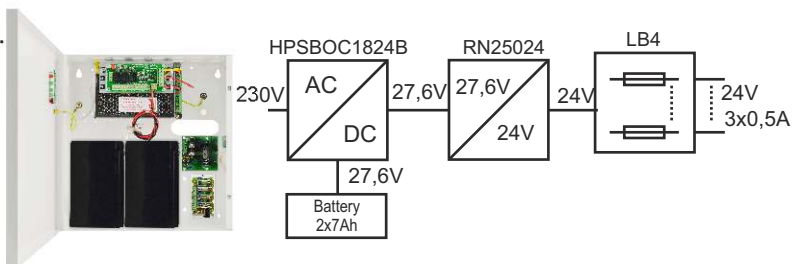
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## Buffer power supply unit HPSBOC 27,6V/24V/3x0,5A/2x7Ah.

- HPSBOC1824B + RN25024 (27,6V/24V) + LB4 3x0,5A (AWZ574 or AWZ576) + 2x7Ah



## Buffer power supply unit HPSBOC 27,6V/5V÷18V /2A÷1,3A/2x7Ah.

- HPSBOC1824B + DCDC20 (5V÷18V/2A÷1,3A) + 2x7Ah

