

# HPSBOC series power supply unit

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



CODE: **HPSBOC 10A24C** v.1.0/III  
TYPE: **HPSBOC 27,6V/10A/2x17Ah/OC** Buffer, switch mode power supply unit with technical outputs.

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**GREEN POWER plus**



## Features:

- DC 27,6V/10A uninterruptible power supply\*
- fitting battery: 2x17Ah/12V
- wide range of mains supply: 176÷264V
- built-in power factor correction system (PFC)
- high efficiency 85%
- battery charging and maintenance control
- excessive discharging (UVP) protection
- jumper selectable battery charge current 1A/2A/4A
- 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)
  - overheat protection OHP
- forced cooling - built-in fan
- warranty – 2 year from the production date

## DESCRIPTION

A buffer PSU is intended for an uninterrupted supply to devices requiring stabilized voltage of **24V DC (+/-15%)**. The PSU provides voltage of **U=27,6V DC**. Current efficiency:

1. Output current **9A + 1A battery charge\***
2. Output current **8A + 2A battery charge\***
3. Output current **6A + 4A battery charge\***

**Total device current + battery: 10A max\*.**

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 2x17Ah/12V battery. A micro switch indicates door opening (front cover).

\* See chart 1

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SPECIFICATIONS	
PSU type	A (EPS - External Power Source)
Mains supply	176÷264V AC
Current up to	1,5A@230V AC
Supply power	276W max.
Efficiency	85%
Power factor PF	>0,95 @230V AC
Output voltage	22V÷27,6V DC – buffer operation 19V÷27,6V DC – battery-assisted operation
Output current $t_{AMB}<30^{\circ}C$	<b>9A + 1A battery charge - see chart 1</b> <b>8A + 2A battery charge - see chart 1</b> <b>6A + 4A battery charge - see chart 1</b>
Output current $t_{AMB}=40^{\circ}C$	<b>6A + 1A battery charge - see chart 1</b> <b>5A + 2A battery charge - see chart 1</b> <b>3A + 4A battery charge - see chart 1</b>
Voltage adjustment range	24÷28V DC
Ripple	150mV p-p max.
Current consumption by PSU systems	180 mA
Battery charge current	1A, 2A or 4A max. @ 2x17Ah ( $\pm 5\%$ ) – jumper selectable
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	melting fuse
Surge protection	varistors
Overvoltage protection OVP	>32V (automatic recovery)
Excessive discharge protection UVP:	$U < 19V (\pm 5\%)$ – 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. - OC type, 50mA max., normal status: L (0V) level, failure: hi-Z level - 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: ( $U_{BAT} > 23V$ ): L (0V) level, failure: ( $U_{BAT} < 23V$ ): hi-Z level The power supply unit does not feature a battery detection function.
LED indication	Yes
Operating conditions	2nd environmental class, $-10^{\circ}C \div +40^{\circ}C$
Enclosure	Steel plate, DC01 0,7mm colour: RAL 9003
Dimensions	W=400, H=350, D+D <sub>1</sub> =92+8 [ $\pm 2$ mm] W <sub>1</sub> =405, H <sub>1</sub> =355 [ $\pm 2$ mm]
The dimensions of the battery compartment	370x170x80mm (WxHxD) max
Net/gross weight	4,2kg / 4,5kg
Closing	Cheese head screw x 2 (at the front), (lock assembly possible)
Deklarations, warranty	CE, 2 year from the production date
Notes	The enclosure does not adjoin the assembly surface so that cables can be led. Forced cooling - built-in fan.

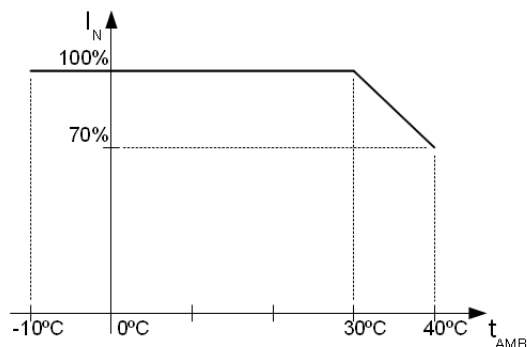


Chart 1. Acceptable output current from the PSU depending on ambient temperature.