

HPSBOC series power supply unit

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



CODE: **HPSBOC 20A12E** v.1.0/III
TYPE: **HPSBOC 13,8V/20A/65Ah/OC** Buffer switch mode power supply unit with technical outputs.

EN**



Features:

- DC 13,8V/20A uninterruptible power supply*
- fitting battery: 65Ah/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 2A/4A/8A
- 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 **12V DC (+/-15%)**. The PSU provides voltage of **U=13,8V DC**. Current efficiency:

1. Output current **18A + 2A battery charge***
 2. Output current **16A +4A battery charge***
 3. Output current **12A + 8A battery charge***
- Total device current + battery: **20A 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 65Ah/12V battery.

The power supply is equipped with relay and the OC type technical outputs indicating power failure, the failure of the power supply and low battery voltage.

A micro switch indicates door opening (front cover).

The power supply housing has space for additional modules (fuse blocks, voltage regulators and DC-DC converters). Optional power supply configurations are available at the website: www.pulsar.pl

* See chart 1

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SPECIFICATIONS	
PSU type	A (EPS - External Power Source)
Mains supply	176÷264V AC 50Hz
Current up to	1,5A@230V AC
Supply power	276W max.
Efficiency	85%
Power factor PF	>0,95 @230V AC
Output voltage	11V± 13,8V DC – buffer operation 9,5V±13,8V DC – battery-assisted operation
Output current $t_{AMB}<30^{\circ}\text{C}$	18A + 2A battery charge - see chart 1 16A + 4A battery charge - see chart 1 12A + 8A battery charge - see chart 1
Output current $t_{AMB}=40^{\circ}\text{C}$	12A + 2A battery charge - see chart 1 10A + 4A battery charge - see chart 1 6A + 8A battery charge - see chart 1
Voltage adjustment range	12÷14V DC
Ripple	120mV p-p max.
Current consumption by PSU systems	230 mA
Battery charge current	2A / 4A or 8A– 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 30A
Surge protection	varistors
Overvoltage protection OVP	>16V (activation requires disconnecting the load or supply for about 20 s.)
Excessive discharge protection UVP:	U<9,5V (± 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 - OC type, 50mA max., - relay type: 1A@ 30V DC/50V AC - OC type, 50mA max., - relay type: 1A@ 30V DC/50VAC - OC type, 50mA max., 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 1,0mm colour: RAL 9003
Dimensions	W=400, H=350, D+D ₁ =173+8 [+/- 2mm] W ₁ =405, H ₁ =355 [+/- 2mm]
The dimensions of the battery compartment	360x175x165mm (WxHxD) max
Net/gross weight	6,8kg / 7,2kg
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. Forced cooling - built-in fan.

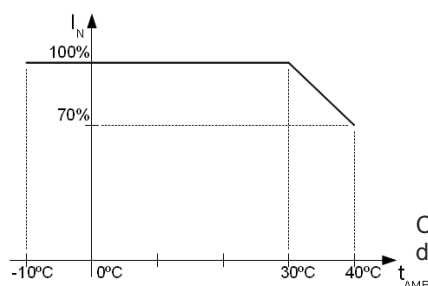


Chart 1. Acceptable output current from the PSU depending on ambient temperature.