

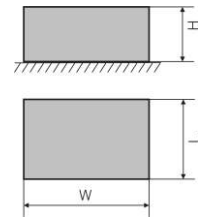
PSBOC series power supply unit

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



CODE: **PSBOC 30012200** v.1.0/II
TYPE: **PSBOC 13,8V/20A/OC** Enclosed buffer switch mode power supply unit with technical outputs.

EN**



Features:

- 13,8VDC/20A uninterrupted supply*
- wide range of supply voltage 176÷264VAC
- built-in power factor correction system (PFC)
- high efficiency 85%
- battery charge and maintenance control
- deep discharge battery protection (UVP)
- battery charging current 2A/4A/8A jumper selectable
- battery output 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 over voltage protection
 - surge protection
 - OLP overload protection
 - 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** with current capacity:

1. Output current **18A + 2A battery charging***
2. Output current **16A + 4A battery charging***
3. Output current **12A + 8A battery charging***

Total device current + battery: 20A max*.

In the case of power failure from prime supply, the unit is instantly switched to battery assisted operation. The power supply unit features: short circuit, overload, surge and over voltage protections.

* 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@230VAC |
| Supply power | 300W 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÷14VDC |
| 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: | $U < 9,5\text{V} (\pm 5\%)$ – disconnection of battery terminal |
| 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, - 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: ($U_{BAT} > 11,5\text{V}$): 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 |
| Enclosure dimensions | 275 x 115 x 50+23 [mm] (LxWxH) ($\pm 2\%$) |
| Net/gross weight | 1,4kg / 1,5kg |
| Deklarations, warranty | CE, RoHS, 2 year from the production date |
| Notes | Forced cooling - built-in fan. |

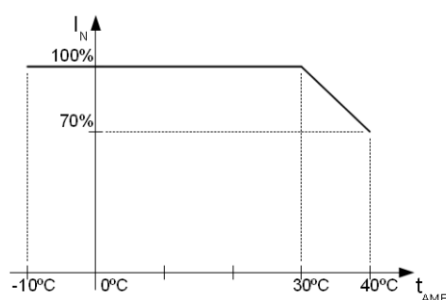


Chart 1. Acceptable output current from the PSU depending on ambient temperature.