

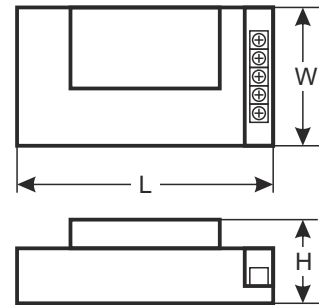
# PSBOC series power supply unit

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



CODE: **PSBOC 30012200** v.1.0/III  
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 $t_{AMB}<30^{\circ}\text{C}$	<b>18A + 2A battery charge - see chart 1</b> <b>16A + 4A battery charge - see chart 1</b> <b>12A + 8A battery charge - see chart 1</b>
Output current $t_{AMB}=40^{\circ}\text{C}$	<b>12A + 2A battery charge - see chart 1</b> <b>10A + 4A battery charge - see chart 1</b> <b>6A + 8A battery charge - see chart 1</b>
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
Dimensions	L=275, W=115, H=78 [+/- 2mm]
Net/gross weight	1,4kg / 1,5kg
Deklarations, warranty	CE, RoHS, 2 year from the production date
Notes	Forced cooling - built-in fan.

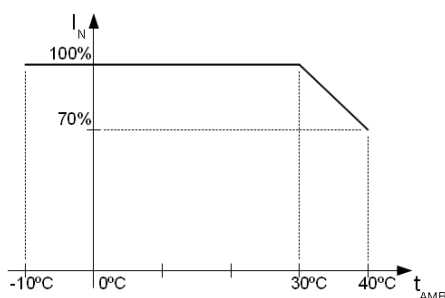


Chart 1. Acceptable output current from the PSU depending on ambient temperature.