

PSBS series power supply unit



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

EN**

CODE: **PSBS 5012D** v.1.1/V
TYPE: **PSBS 13,8V/5A/40Ah/OC** Buffer switch mode power supply unit with technical outputs.



PSU features:

- uninterruptible power supply DC 13,8V/5A
- battery housing: 40Ah/12V
- supply voltage AC 230V
- high efficiency 76%
- low voltage ripple
- battery charging and maintenance control
- deep discharge battery protection (UVP)
- battery charging current 0,5A/1A/2A/3A, jumper selectable
- START button to start the battery
- battery output protection against short-circuit and reverse connection
- LED indication
- EPS technical output of 230V power failure – OC type
- PSU technical output indicating PSU failure – OC type
- LoB technical output indicating low battery voltage – OC type
- Optional installation of the MPSBS relay module changing technical outputs of the OC type to relay type
- adjustable times of 230V AC failure indication
- Protection type:
 - SCP short-circuit protection
 - Overheat protection OHP
 - surge protection
 - Tamper protection: enclosure opening and detachment from the wall
 - overload protection OLP
- warranty - 5 years from the production date

DESCRIPTION

A buffer PSU is designed for uninterrupted supply of devices requiring stabilized voltage of **12V DC (+/-15%)**. The PSU supplies voltage of **U=13,8V DC** and total current capacity of:

1. Output current 5A + 0,5A battery charging
2. Output current 4,5A + 1A battery charging
3. Output current 3,5A + 2A battery charging
4. Output current 2,5A + 3A battery charging

Total current + battery is max. 5,5A

In case of mains power loss, the unit will instantly switch to battery operation. The PSU is enclosed in a metal casing (color RAL 9003) with battery housing for 40Ah/12V batteries. The enclosure is fitted with a micro switch indicating door opening (front cover) and the detachment from the wall.

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SPECIFICATIONS	
PSU type	A (EPS - External Power Source)
Mains supply	230V AC (-15% /10%) 50Hz
Current consumption	0,57A@230VAC
PSU's power	76W
Efficiency	76%
Output voltage	11V± 13,8V DC – buffer operation 10V± 13,8V DC – battery operation
Output current	5A + 0,5A battery charging 4,5A + 1A battery charging 3,5A + 2A battery charging 2,5A + 3A battery charging
Voltage adjustment range	12÷14,5VDC
Ripple voltage	60mV p-p max.
Battery charging current	0,5A / 1A / 2A / 3A – jumper selectable
Short-circuit protection SCP	Electronic - automatic return
Overload protection OLP	110-150% of the PSU power, manual restart
Battery circuit protection SCP and reverse polarity connection	T6,3A- current limitation, the F _{BAT} melting fuse
Surge protection	varistors
Deep discharge battery protection UVP	U<10V (± 0,5V) – disconnection of battery terminal
Tamper protection: - TAMPER output indicating enclosure opening or detachment from the wall	- micro switch, NC contacts (enclosure closed and mounted to the mounting base), 0,5A@50V DC (max.)
Technical outputs: - EPS; output indicating AC power failure - PSU; output indicating no DC power/PSU failure - LoB output indicating low battery voltage	- OC type: 50mA max. Normal operation: L state (0V), failure: hi-Z state, - delay time 10s/60s (+/-20%) – jumper selectable T _{Ac} - OC type: 50mA max. Normal operation: L state (0V), failure: hi-Z state, - OC type, 50mA max. Normal operation (UBAT >11,5V): L state (0V), failure (UBAT <11,5V): hi-Z state
LED indication	Yes – LEDs
Operating conditions	2nd environmental class, -10 °C÷40 °C
Enclosure	Steel plate, DC01 0,7mm color RAL 9003
Enclosure dimensions	330 x 350 x 170+8 (WxHxD) [mm] (+/- 2)
Net/gross weight	7,72kg / 8,81kg
Battery housing	40Ah/12V (SLA) max. 185x170x90mm (WxHxD) max
Closing	Cylindrical screw (at the front) (lock assembly possible)
Deklarations, warranty	CE, RoHS, 5 years from the production date
Notes	The enclosure does not adjoin the mounting surface so that cables can be led. Convection cooling.



OPTIONAL POWER SUPPLY CONFIGURATIONS:

PSBS 5012D Battery 40Ah

1. Buffer power supply PSBS 13,8V/relay module MPSBS/40Ah

- PSBS 5012D + MPSBS + 40Ah

2. Buffer power supply PSBS 13,8V/4x1A/MPSBS/40Ah

- PSBS 5012D + LB4 4x1A (AWZ575 or AWZ576) + MPSBS + 40Ah

3. Buffer power supply PSBS 13,8V/8x0,5A/MPSBS/40Ah

- PSBS 5012D + LB8 8x0,5A (AWZ578 or AWZ580) + MPSBS + 40Ah

4. Buffer power supply PSBS 13,8V/16x0,3A/MPSBS/40Ah

- PSBS 5012D + LB8 16x0,3A (AWZ577 or AWZ580) + MPSBS + 40Ah

5. Buffer power supply PSBS 13,8V/12V/5A/MPSBS/40Ah

- PSBS 5012D + RN500 (13,8V/12V) + MPSBS + 40Ah

6. Buffer power supply PSBS 13,8V/2x12V/2x2,5A/40Ah

- PSBS 5012D + 2xRN250 (13,8V/12V) + 40Ah

7. Buffer power supply PSBS 13,8V/12V/16x0,3A/40Ah

- PSBS 5012D + RN500 (13,8V/12V) + 2xLB8 16x0,3A (AWZ577 or AWZ580) + 40Ah

8. Buffer power supply PSBS 13,8V/12V/8x0,5A/MPSBS/40Ah

- PSBS 5012D + RN500 (13,8V/12V) + LB8 8x0,5A (AWZ578 or AWZ580) + MPSBS + 40Ah

9. Buffer power supply PSBS 13,8V/12V/4x1A/MPSBS/40Ah

- PSBS 5012D + RN500 (13,8V/12V) + LB4 4x1A (AWZ575 or AWZ576) + MPSBS + 40Ah

10. Buffer power supply PSBS 13,8V/2x5V÷7,4V/2x2A/40Ah

- PSBS 5012D + 2xDCDC20(2x5V÷7,4V/2x2A) + 40Ah