

# PSUPS series power supply unit

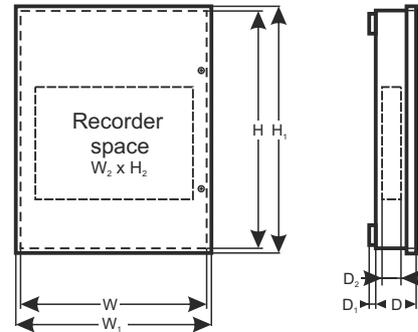
Buffer power supply for up to 16 HD cameras and DVR with recorder space



CODE: **PSUPS 20A12CR** v.1.3/VII

EN\*\*

TYPE: **PSUPS 13,8V/12V/20A/2x17Ah** Buffer power supply for up to 16 HD cameras and DVR with recorder space.



## Features:

- DC 13,8 V uninterruptible power supply of HD cameras
- DC 12 V uninterruptible power supply of the recorder
- fitting battery 2x17Ah/12 V
- recorder space
- wide range of mains supply ~200-240 V
- built-in power factor correction system (PFC)
- high efficiency 85%
- 16 outputs protected by 1 A glass fuses for powering cameras
- 12 V/5 A output dedicated to supply the recorder
- discharge battery protection (UVP)
- battery charging current 2 A/4 A/8 A jumper selectable (batteries 2x17Ah connect in parallel)
- approximate backup time: 2h
- battery output protection against short circuit and reverse polarity connection
- LED indication
- **the enclosure construction is compliant with the requirements of the General Data Protection Regulation GDPR (the possibility of installing two locks with different codes)**
- protections:
  - SCP short-circuit protection
  - OLP overload protection
  - OVP over voltage protection
  - OHP overheat protection
  - surge protection
  - against sabotage
- warranty – 2 years from the production date

## DESCRIPTION

A buffer PSU is intended for an uninterrupted supply to CCTV system devices requiring stabilized voltage of **12 V DC (+/-15%)**. The PSU has two circuits: first **1x5 A/12 V DC** for supplying the recorder and **16x0,8 A/13,8 V DC** for both cameras. Current efficiency of the PSU amounts to:

1. **Output current 16x0,8 A + 5 A recorder + 2 A battery charging \***
  2. **Output current 16x0,7 A + 5 A recorder + 4 A battery charging \***
  3. **Output current 16x0,4 A + 5 A recorder + 8 A battery charging \***
- Total current of the receivers + battery 20 A\* max.**

In case of a mains power loss 230V a battery back-up is activated immediately.

The approximate backup time is given assuming that all output ports are used (using typical devices and 34Ah batteries). The electricity consumption for own needs and the energy efficiency of the power intake track were taken into account. The exact description of how to perform the calculations can be found at: ["Approximate backup time - assumptions for calculations"](#).

The power supply unit is placed in a metal enclosure (color RAL 9003) with space for 2x17Ah / 12 V batteries and a recorder. **The enclosure construction is compliant with the requirements of the General Data Protection Regulation GDPR (the possibility of installing two locks with different codes)**. The enclosure is equipped with a micro-switch indicating unwanted opening of the door (faceplate).

\* See chart 1

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SPECIFICATIONS	
PSU type	A (EPS - External Power Source)
Mains supply	~200-240 V; 50Hz
Current consumption	1,5 A
PSU's power	264 W
Efficiency	85%
Power factor PF	>0,95 @230 V
Output voltage – strips fuse base 16x	<b>11 V ÷ 13,8 V DC – buffer operation</b> <b>9,5 V ÷ 13,8 V DC – battery-assisted operation</b>
Output voltage – recorder	<b>12 V DC</b> maintained regardless of the state of battery charge
Output current $t_{AMB}<30^{\circ}\text{C}$	<b>16x0,8 A + 5 A recorder + 2 A battery charging*</b> <b>16x0,7 A + 5 A recorder + 4 A battery charging*</b> <b>16x0,4 A + 5 A recorder + 8 A battery charging*</b> Total current of the receivers + battery 20 A* max. * see chart 1
Output current $t_{AMB}=40^{\circ}\text{C}$	<b>16x0,4 A + 5 A recorder + 2 A battery charging *</b> Total current of the receivers + battery 14 A*max. * see chart 1
Output voltage adjustment range	12-14 V DC
Ripple voltage	120mV p-p max.
PSU current consumption	0,3 A
Battery charging current (batteries 2x17Ah connect in parallel)	2 A, 4 A, 8 A jumper selectable
Approximate backup time	2h
Short-circuit protection SCP	2x STRIP LB8: 16x F 1 A glass fuse, Output filter 1x F 5 A
Overload protection OLP	105% ÷ 150% of the PSU power, automatic recovery
Battery circuit protection SCP and reverse polarity connection	glass fuse 30 A
Surge protection	varistors
Over voltage protection OVP	>16 V (activation requires disconnecting the load or supply for about 20 s.)
Deep discharge protection UVP	$U < 9,5 \text{ V } (\pm 5\%)$ – disconnection of battery terminal
Sabotage protection: - TAMPER output indicating enclosure opening	- micro-switches, NC contacts (enclosure closed), 0,5 A@50 V DC (max.)
Optical indication: front panel of the PSU - AC OK.; LED indicating the AC power status - DC OK.; LED indicating the DC supply at the PSU output	- red, normal status – on, failure: off - green, normal status – on, failure: off
Operating conditions	2nd environmental class, $-10^{\circ}\text{C} \div +40^{\circ}\text{C}$
Enclosure	Steel plate DC01 1,0mm, RAL 9003
Dimensions	$W=420, H=535, D+D_1=193+14$ [+/- 2mm] $W_1=425, H_1=540$ [+/- 2mm]
The dimensions of the recorder compartment	$W_2=380, H_2=320, D_2=65$ [+/- 2mm]
The dimensions of the battery compartment	380 x 340 x 175 mm (WxHxD) max
Net/gross weight	8,8/9,6 kg
Closing	Cheese head screw x 2 (at the front) <b>The possibility of installing two locks with different codes.</b>
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.

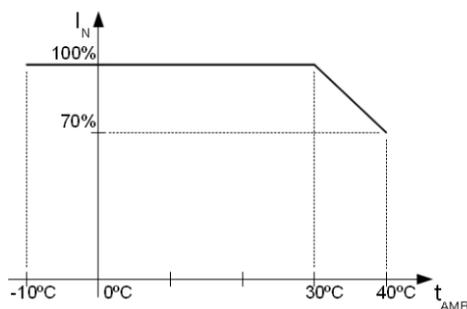


Chart 1. Acceptable output current from the PSU depending on ambient temperature.