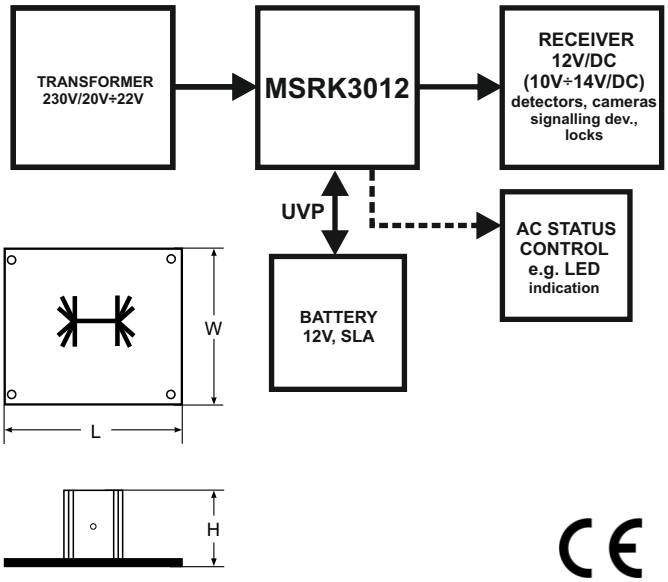
MSRK series power supply module
Buffer switch mode power supply module 13,8V DC with technical outputs

EN**

CODE: **MSRK 3012** v.1.0/IV
TYPE: **MSRK 13,8V/3A/OC Buffer, switch mode power supply module with technical outputs.**



CE

Features:

- DC 13,8V/3A uninterruptible power supply
- high efficiency 81%
- low voltage ripple
- battery charging and maintenance control
- excessive discharging (UVP) protection
- battery output full protection against short-circuit and reverse polarity connection
- jumper selectable battery charge current 0,5A/1A
- START facility for manual battery connection
- LED indication
- EPS technical output indicating AC power loss – OC type
- PSU technical output indicating PSU failure – OC type
- LoB technical output indicating battery low voltage – OC type
- adjustable times indicating AC power failure
- protections:
  - SCP short-circuit protection
  - OLP overload protection
  - OHP overheat protection
  - overvoltage protection
- warranty – 5 year from the production date

DESCRIPTION

A buffer PSU module is intended for an uninterrupted supply to devices requiring stabilised voltage of **12V DC (+/-15%)**. The PSU module provides voltage of **13,8V DC** with current capacity:

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

Total device current + battery: 3,5A max.

In case of power failure, a battery back-up is activated immediately.

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SPECIFICATIONS	
Mains supply	20V÷22V AC 80VA min.(e.g. AWT8161820, AWT039, AWT800)
Current up to	4,6A max
Power	49W
Efficiency	81%
Output voltage	11V÷ 13,8V DC – buffer operation 10V÷ 13,8V DC – battery-assisted operation
Output current	**3A + 0,5A battery charge** **2,5A + 1A battery charge**
Voltage adjustment range	12V÷ 14,5V DC
Ripple	40 mV p-p max.
Battery charging current	0,5A / 1A - I_{BAT} jumper selectable
Short-circuit protection SCP	Electronic - current limitation and/or activation of the F_{BAT} melting fuse in the battery circuit (failure requires fuse replacement). Automatic return.
Overload protection OLP	110% ÷ 150% (@25ºC) of power supply, manual restart (the fault requires disconnection of the DC output circuit)
Battery circuit SCP and reverse polarity protections	F 5A - current limitation, F_{BAT} fuse (in case of a failure, fuse-element replacement required)
Surge protection	varistors
Excessive discharge protection UVP	U<10V (± 5%) – disconnect of connection battery, configuration by the P_{BAT} jumper
Technical outputs: - EPS; output indicating AC power failure	- OC type: 50mA max. Normal operation: L state (0V), failure: hi-Z state, - delay time 10s/60s (+/-20%) – jumper selectable $\mathbf{T_{AC}}$
- PSU; output indicating DC absence / PSU module failure	- OC type: 50mA max. Normal operation: L state (0V), failure: hi-Z state,
- LoB output indicating battery low voltage	- OC type, 50mA max. Normal operation (U_{BAT} >11,5V): L state (0V), failure (U_{BAT} <11,5V): hi-Z state The power supply module unit does not feature a battery detection function.
LED indication	Yes - LEDs
Operating conditions	2nd environmental class, -10°C ÷ +40 °C
Dimensions	L=88, W=93, H=55 [+/- 2mm]
Net/gross weight	0,14kg / 0,24kg
Fixation	Dowel pins x4 (PCB fi=4,2 mm)
Declarations, warranty	CE, 5 year from the production date
Connectors	Outputs: Φ0,41÷1,63 (AWG 26-14) Battery output BAT: 6,3F-2,5, 30cm