

DATA SHEET

DUO AVR / DUO AVR USB  
350/550/850 VA



INCREASING  
&  
DECREASING



POWER SWITCH  
WITH  
SIGNALING MODE



USB HID  
COMMUNICATION  
INTERFACE



(DUO AVR USB)



IEC 320  
OUTPUT OUTLETS



**DUO AVR / DUO AVR USB** series comprise economical UPS units for protecting home and office computer equipment. They provide protection against power drops and losses in the grid, consequently increasing the life and reliability of the connected equipment. DUO AVR / DUO AVR USB UPS units were designed to protect **PCs, DTP stations** and **work stations, cash registers, CCTV** and **ICT equipment** from random, uncontrolled power losses.

This series of UPS units features a USB communication interface and automatic mains voltage regulation (AVR). Thanks to the cold start function the UPS can be started even if not connected to the mains.

FEATURES

- Automatic mains voltage regulation (AVR), increasing and decreasing the voltage
- Short circuit and overload protection
- Two French outputs (Polish standard) and one IEC320 C13 socket - DUO 350 AVR
- Four (DUO 550 AVR USB) or six (DUO 850 AVR USB) IEC320 C13 output sockets
- Automatic fuse
- "Cold start" – option of starting the UPS without connection to the mains
- USB HID communication interface - DUO AVR USB
- Free PowerSoft monitoring and management software (for download from [www.ever.eu/powersoft](http://www.ever.eu/powersoft)) - DUO AVR USB

SERVICE

- Door-to-door support
- 2-year warranty for the UPS
- Year warranty for batteries
- Execution in 14 working days



# DUO AVR / DUO AVR USB

## 350/550/850 VA



### TECHNICAL DATA

PARAMETERS \ TYPE	DUO 350 AVR	DUO 550 AVR USB	DUO 850 AVR USB
Part number	T/DAVRTO-000K35/00	T/DAVRTO-000K55/00	T/DAVRTO-000K85/00
Output Power (Apparent / Active) <sup>1)</sup>	350 VA / 245 W	550 VA / 330 W	850 VA / 550 W
<b>GENERAL DATA AND ENVIRONMENTAL</b>			
Topology	VI (line interactive)		
Number of phases (in/out)	1 / 1		
Housing Type	Tower		
Operating temperature <sup>2)</sup>	0 ÷ +40 °C		
Storage temperature	0 ÷ +40 °C		
Relative humidity during operation	20 ÷ 80 % (non-condensing)		
Relative humidity during storage	20 ÷ 95 % (non-condensing)		
Operating elevation <sup>3)</sup>	< 1000 m		
Protection level	IP20		
Environment of installation	Office / industrial rooms with low level of pollution		
Cooling	Gravity		
<b>INPUT</b>			
Rated input voltage	230 V AC		
Input voltage range and tolerance	~162 ÷ 290 V ± 7 V		
Input voltage rated frequency	50 / 60 Hz (autodetection)		
Input voltage frequency range and tolerance	40 ÷ 70 Hz ± 1 Hz		
Transfer thresholds: Mains – UPS	~162 ÷ 290 V ± 7 V		
<b>OUTPUT</b>			
Rated output voltage	230 V AC		
Output voltage range and tolerance - normal mode	~191 ÷ 253 V ± 7 V		
Output voltage range and tolerance - battery mode	~230 V ± 10 %		
Automatic Voltage Regulation (AVR)	± 15 %		
Shape of output voltage (battery mode / normal mode)	Stepped approximation of sine wave / Same as input		
Output voltage rated frequency	50 / 60 Hz		
Output frequency range and tolerance – mains operation mode	Synchronously		
Output frequency range and tolerance – battery mode	50 / 60 Hz ± 1 %		
Output voltage filtering	RC		
Transfer thresholds: UPS– Mains	~172 ÷ 280 V ± 7 V		
Transfer time to battery mode	< 6 ms		
Transfer time to normal mode	0 ms		
Overload capability	> 110% - 1 min (UPS off – normal mode and battery mode) > 120% UPS off – normal mode and battery mode		
<b>BATTERIES AND TYPICAL RUNTIME</b>			
Internal Batteries	12 V / 5 Ah VRLA		
Number of internal batteries	1		2
Maximum overall internal batteries capacity	5 Ah		
Backup time – internal batteries (80 % / 50 % Pmax)	3 / 9 min	1 / 4 min	3 / 8 min
Nominal voltage DC circuit	12 V DC		
Internal batteries maximum charging time – after discharging at 80 % Pmax *	8 h		

Note: The manufacturer reserves the right to modify the above parameters without prior notification.

\* Charging time to 90% battery capacity.

#### Notes:

- 1) For standard operation, the load applied to the output must not exceed 80% of the value in the table. The power margin is necessary to ensure continuous work of the connected devices in the case of instantaneous surges of the load
- 2) Constant exposure of the battery to temperatures of +25°C reduces the battery life.
- 3) The permitted maximum load of the power supply unit decreases with the height above the sea level above the limit specified above.a.

# DUO AVR / DUO AVR USB

## 350/550/850 VA



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Output Power (Apparent / Active) <sup>1)</sup>	350 VA / 245 W	550 VA / 330 W	850 VA / 550 W
<b>MECHANICAL SPECIFICATIONS</b>			
Dimensions (H x W x D)	158 x 84 x 252 mm		189 x 100 x 325 mm
Net Weight	3,8 kg	3,8 kg	6,9 kg
Gross Weight	4,1 kg	4,4 kg	7,6 kg
Transport Dimensions (H x W x D)	225 x 122 x 286 mm		256 x 141 x 362 mm
Position in which devices transported	Vertical		
Output cables maximum length	< 10 m		
<b>PROTECT</b>			
Input over current protection	Short-circuit protection – Circuit breaker 5A / 250 V AC		Short-circuit protection – Circuit breaker 10A / 250 V AC
Output over current protection	Surge Protection Electronic short-circuit and overload protection		
<b>ACCESSORY AND EXTRA FUNCTIONS</b>			
Power supply connection	Power cord ended with plug with ground terminal 16A (PN-E-93201:1997) + uni-schuko		
Output connection (number and type of sockets)	1 x IEC 320 C13 (10 A) 2 x PL	4 x IEC 320 C13 (10 A)	6 x IEC 320 C13 (10 A)
Signalling	Acoustic and optical		
Communications interfaces	USB HID (only DUO AVR USB)		
Software DUO AVR / DUO AVR USB	No / PowerSoft Professional		
<b>CERTIFICATION</b>			
Declarations	CE		
Standards	PN-EN 62040-1:2009, PN-EN 62040-2:2008		

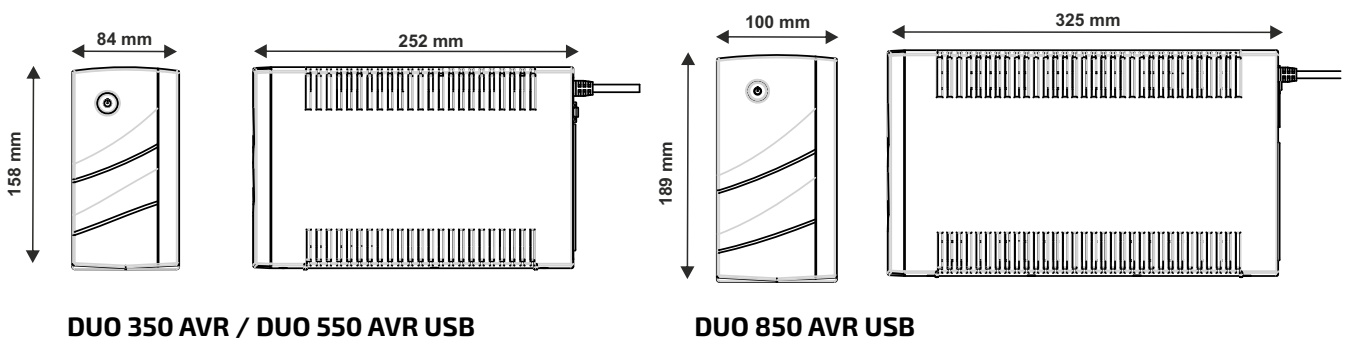
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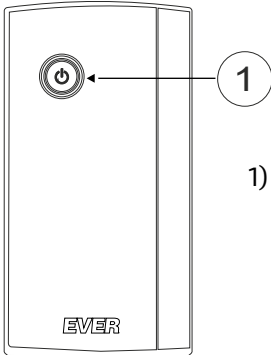
## DIMENSIONS



# DUO AVR / DUO AVR USB 350/550/850 VA

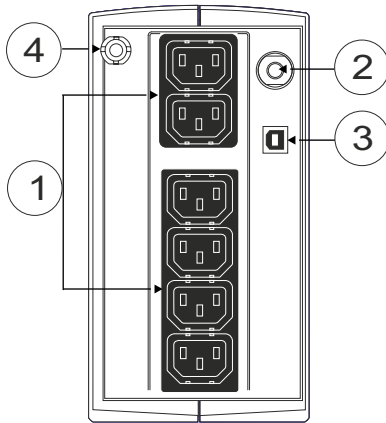


## FRONT PANEL

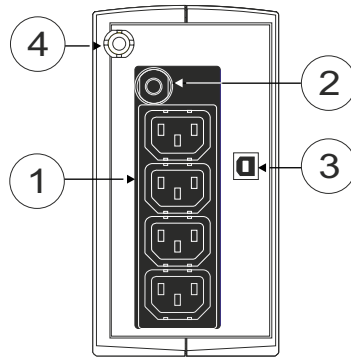


1) Power switch with signaling mode

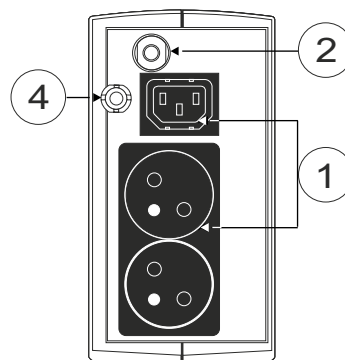
## REAR PANEL



**DUO 850 AVR USB**



**DUO 550 AVR USB**



**DUO 350 AVR**

1) Output sockets:

6x IEC 320 C13 (10 A) - **DUO 850 AVR USB**,

4x IEC 320 C13 (10 A) - **DUO 550 AVR USB**,

2x PN-E-93201 (10 A)+ 1x IEC 320 C13 (10 A) - **DUO 350 AVR**

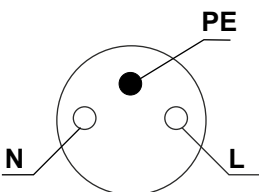
2) Automatic fuse

3) USB communication port

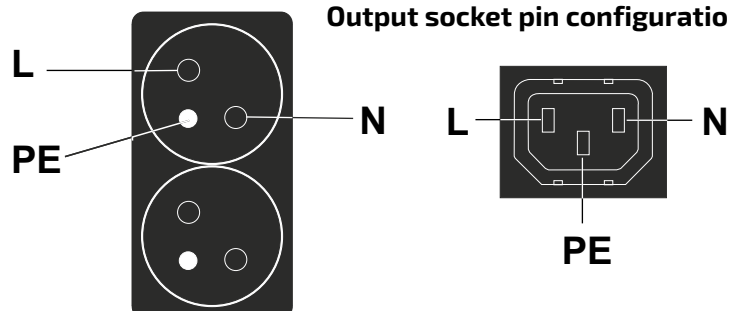
4) Power cord

## UPS INSTALLATION

### Power socket pin configuration



### Output socket pin configuration





**SOUND AND VISUAL SIGNALING**

**Power switch with signaling mode**



Event	Sound signaling	Visual signaling
MAINS (normal) mode	No sound signal.	Green LED on.
BACK-UP (battery) mode	Short sound every 30 seconds. Frequency increases proportionally to the level of discharging of the batteries. The audible alarm can be turned OFF or ON by quickly pressing the POWER switch twice.	Yellow LED blinking 1 time every 30 seconds
Low battery	Short sound every 2 seconds. The audible alarm can be turned OFF or ON by quickly pressing the POWER switch twice.	Yellow LED blinking every 2 second.
Overload	Short sound every 0,5 seconds.	RED LED blinking every 0,5 seconds
Fault mode	Continuous signal.	Red LED on.