

## **UPS range Powerwat+11TS/L**

## power range from 6 up to 20 kVA parallel operation up to 3 pcs new-fashioned design

UPS range Powerwat+11TS/L are true modular on-line with double conversion technology, i.e. with permanent working rectifier and inverter. Output inverter is DSP controlled - in this way is achieved max. quality of output voltage independently on input voltage and output load. There is IGBT rectifier also DSP controlled and contains PFC circuit which ensures input low level power factor and low ripple input current. UPS can work in ECO MODE system – UPS supplies load through bypass line and the load is switched on invertor only during AC fail. Very high efficiency (up to 98%) is ensured this way. UPS can work in parallel redundand operation up to 3 pcs. Batteries are internal for basic autonomy. For longer back-up time are installed in external battery cubicles.



Power   Powerwat+110FTS   Powerwat+1110TTS   Powerwat+1115TL/20TL	Technical description				
Dower (kW)   S,4   9   13,5/18   Output provided   1,5/18   Output provid	UPS type	Powerwat+1106TS	Powerwat+1110TS	Powerwat+1115TL/20TL	
output         0,9           input         220,230,240 VAC           input voltage         50 / 60 Hz           input frequency         50 / 60 Hz           input voltage range         176-275VAC           input frequency range         40 - 70 Hz           input ff p         0,99           input THDi         < 3%           batteries         battery voltage           battery voltage         192 VDC           output         50 / 60 Hz           output frequency         50 / 60 Hz           output voltage precision         ±1%(0-100% linear load)           transient response         <5% for step load (20% - 80% - 20%)           output frequency regulation         50/60Hz ± 0.1%           synchronized range         settable ± 0.5Hz ~ ± 5Hz, default ± 3Hz           output THDu         <1% linear load; <5 % non-linear load according IEC/EN62040-3           110%, 10min;         130%, 1min;           shutdown after 1 min.(Line mode)           efficiency         > 93 %, 98% Eco mode           general         acoustic noise level (at 1m)         48dB @ 70% load         53dB @ 70% load           operating temperature         0 - 40°C           relative humidity         0 - 95%           dimension (w x		_	10	15/20	
Input voltage	power (kW)	5,4	9	13,5/18	
Input voltage   220,230,240 VAC	output pf	0,9			
Input frequency         50 / 60 Hz           input voltage range         176-275VAC           input frequency range         40 − 70 Hz           input pf         0,99           input THDi         < 3%	input				
Input voltage range   176-275VAC	input voltage				
Input frequency range   40 − 70 Hz	input frequency	50 / 60 Hz			
Input pf	input voltage range				
Input THDi	input frequency range				
batteries         battery voltage         192 VDC           output         rated output voltage           cutput frequency         50 / 60 Hz           output frequency         50 / 60 Hz           output voltage precision         ±1%(0-100% linear load)           transient response         <5% for step load (20% - 80% - 20%)           output frequency regulation         50/60Hz ±0.1%           synchronized range         settable ±0.5Hz ~ ±5Hz, default ±3Hz           output THDu         <1% linear load,; <5 % non-linear load according IEC/EN62040-3           110%, 10min;         130%, 1min;           150%,0,5min;         shutdown after 1 min.(Line mode)           efficiency         >93 %, 98% Eco mode           general         acoustic noise level (at 1m)         48dB @ 70% load         53dB @ 70% load           operating temperature         0 - 40°C         relative humidity         0 - 95%           dimension (w x d x h, mm)         250*526*640         250*544*750           weight (kg)         57         33           colour         black,RAL 7021					
battery voltage         192 VDC           output         220,230,240 VAC           output frequency         50 / 60 Hz           output voltage precision         ±1%(0-100% linear load)           transient response         <5% for step load (20% - 80% -20%)           output frequency regulation         50/60Hz ±0.1%           synchronized range         settable ±0.5Hz ~ ±5Hz, default ±3Hz           output THDu         <1% linear load,; <5 % non-linear load according IEC/EN62040-3           130%, 1min;         130%, 1min;           output overload         130%, 0,5min;           shutdown after 1 min.(Line mode)           efficiency         > 93 %, 98% Eco mode           general         48dB @ 70% load         53dB @ 70% load           operating temperature         0 - 40°C         640°C           relative humidity         0 - 95%         0 - 95%           dimension (w x d x h, mm)         250*526*640         250*544*750           weight (kg)         57         33           colour         black,RAL 7021	input THDi	< 3%			
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output frequency regulation         50/60Hz ±0.1%           synchronized range         settable ±0.5Hz ~ ±5Hz, default ±3Hz           output THDu         <1% linear load,; <5 % non-linear load according IEC/EN62040-3					
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$\begin{array}{c c} \text{output overload} & \begin{array}{c} 130\%, 1 \text{min;} \\ 150\%, 0, 5 \text{min;} \\ \text{shutdown after 1 min.} (\text{Line mode}) \\ \hline \text{efficiency} & > 93\%, 98\% \text{ Eco mode} \\ \hline \textbf{general} \\ \text{acoustic noise level (at 1m)} & 48dB @ 70\% \text{ load} & 53dB @ 70\% \text{ load} \\ \text{operating temperature} & 0 - 40\% \\ \hline \text{relative humidity} & 0 - 95\% \\ \hline \textbf{dimension (w x d x h, mm)} & 250*526*640 & 250*544*750 \\ \hline \textbf{weight (kg)} & 57 & 33 \\ \hline \textbf{colour} & \text{black,RAL 7021} \\ \hline \end{array}$	output THDu				
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colour black,RAL 7021		57		33	
protection level IP20		black,RAL 7021			
	protection level	IP20			