

# HT SERIES

AC/AC Industrial UPS 1KVA to 6KVA



The HT UPS is a **durable, high operating temperature** UPS, ideal for **outdoor** applications. It is a combination of an inverter, battery charger and AC transfer switch in one complete system with a peak conversion **efficiency of 88%**. It has an overload capacity of 300% for 20sec to support tools and equipment longer.

The HT features **power factor corrected**, sophisticated multi-stage charging and **pure sine wave output** with a **high surge capacity**, meeting power needs of inductive loads without exceeding equipment limitations.

When AC utility power is lost the transfer relay is de-energised and the load is automatically transferred to the UPS output, conversely, once the utility power is restored and voltage is within the UPS range, the relay is re-energised and the load is automatically connect to utility power.

Another important feature is the customizable battery priority switch to extract maximum power from the battery/s.



## Some key features include:

- High ambient operating temperature
- Dry contact relay alarms, RS232 and SNMP optional
- High overload capacity 300% rated
- Low quiescent current, power saving mode
- 4-step intelligent battery charging, power factor correction
- 8 pre-set battery type selector & de-sulphation for flat batteries
- Powerful charge rate – up to 110A selectable 0 – 100%
- 4-10ms transfer time
- 15s delay before transfer when utility power is restored
- Allows start-up and through power when batteries depleted
- Cooling fan
- 13V<sub>DC</sub> battery recovery point, dedicated for renewable energy systems

Model	Capacity
HTU-1k	1kW
HTU-1.5k	1.5kW
HTU-2k	2kW
HTU-3k	3kW
HTU-4k	4kW
HTU-5k	5kW
HTU-6k	6kW

### Product Specifications

Model	HTU1k	HTU1.5k	HTU2k	HTU3k	HTU4k	HTU5k	HTU6k	
<b>Continuous Output Power</b>	1000W	1500W	2000W	3000W	4000W	5000W	6000W	
<b>Starts Motor</b>	1HP	1.5HP	2HP	3HP	4HP	5HP	6HP	
<b>Surge Rating (20s)</b>	3000W	4500W	6000W	9000W	12000W	15000W	18000W	
<b>Nominal Voltage</b>	12V <sub>DC</sub> (x2 for 24V <sub>DC</sub> , x4 for 48V <sub>DC</sub> )							
<b>Minimum Start Voltage</b>	10V <sub>DC</sub>							
<b>DC Input</b>	<b>Low Battery Alarm</b>	10.5V <sub>DC</sub> / 11.0V <sub>DC</sub> 21V <sub>DC</sub> / 22V <sub>DC</sub> 42V <sub>DC</sub> / 44V <sub>DC</sub>						
	<b>Low Battery Trip</b>	10V <sub>DC</sub> / 10.5V <sub>DC</sub>						
	<b>High Voltage Alarm &amp; Fault</b>	16.0V <sub>DC</sub> 32.0V <sub>DC</sub> 64.0V <sub>DC</sub>						
	<b>High DC Input Recovery</b>	15.5V <sub>DC</sub> 31.0V <sub>DC</sub> 62.0V <sub>DC</sub>						
	<b>Low Battery Voltage Recover</b>	13.0V <sub>DC</sub> 26.0V <sub>DC</sub> 52.0V <sub>DC</sub>						
	<b>Idle Consumption – Search Mode</b>	< 25W When power saver on						
	<b>Waveform</b>	Pure Sine wave / Identical to input in bypass mode						
	<b>Frequency</b>	50/60Hz ± 0.3Hz						
	<b>Nominal Efficiency</b>	> 88%						
	<b>Line Mode Efficiency</b>	> 95%						
<b>UPS Output</b>	<b>Power Factor</b>	0.9 – 1.0						
	<b>Nominal Voltage (RMS)</b>	100V <sub>AC</sub> /110V <sub>AC</sub> /120V <sub>AC</sub> OR 220V <sub>AC</sub> /230V <sub>AC</sub> /240V <sub>AC</sub>						
	<b>Voltage Regulation</b>	± 10% RMS						
	<b>Short Circuit Protection</b>	YES, Current limiting function (fault after 1s)						

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<b>Output</b>	<b>Transfer Time</b>	4-10ms max.		
	<b>THD</b>	< 10%		
<b>Battery &amp; Charger</b>	<b>Input Voltage Range</b>	Narrow: 100 – 135V <sub>AC</sub> / 194 – 243V <sub>AC</sub> Wide: 90 – 135V <sub>AC</sub> / 164 – 243V <sub>AC</sub>		
	<b>Input Frequency Range</b>	Narrow 47 – 55Hz ± 0.3Hz @ 50 Hz OR 57 – 65Hz ± 0.3Hz @ 60Hz Wide: 43Hz ± 0.3Hz plus @50/60Hz		
	<b>Output Voltage</b>	Depends on battery type		
	<b>Charger Breaker Rating</b>	10A	20A	30A
	<b>Maximum Charge Rate</b>	15 – 85A ± 5A (depending on model)		
	<b>Overcharge Protection Shutdown</b>	15.7V <sub>DC</sub> for 12V (x2 for 24V <sub>DC</sub> , x4 for 48V <sub>DC</sub> )		
	<b>Battery Type</b>	Fast (V <sub>DC</sub> )	Float (V <sub>DC</sub> )	
	<b>Gel U.S.A</b>	14.0	13.7	
	<b>A.G.M 1</b>	14.1	13.4	
	<b>A.G.M 2</b>	14.6	13.7	
<b>Sealed Lead Acid</b>	14.4	13.6		
<b>Gel Euro</b>	14.4	13.8		
<b>Open Lead Acid</b>	14.8	13.3		
<b>Calcium</b>	15.1	13.6		
<b>De-sulphation</b>	15.5 for 4 hours			
<b>Remote Control</b>	Yes (Optional)			
<b>Bypass &amp; Protection</b>	<b>Input Voltage Waveform</b>	Sine wave (Grid or Generator)		
	<b>Nominal Voltage</b>	120V <sub>AC</sub>	230V <sub>AC</sub>	
	<b>Low Voltage Trip</b>	80V / 90V ± 4%	184V / 154V ± 4%	
	<b>Low Voltage Re-engage</b>	90V / 100V ± 4%	194V / 164V ± 4%	
	<b>High Voltage Trip</b>	140V ± 4%	253V ± 4%	
	<b>High Voltage Re-engage</b>	135V ± 4%	243V ± 4%	
	<b>Max. Input AC Voltage</b>	150V <sub>AC</sub>	270V <sub>AC</sub>	
	<b>Nominal Input Frequency</b>	50/60Hz (Auto sensing)		
	<b>Low Frequency Trip</b>	Narrow: 47Hz ± 0.3Hz @ 50Hz OR 57Hz ± 0.3Hz @ 60Hz Wide: 40Hz ± 0.3Hz @50/60Hz		

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<b>Bypass &amp; Protection</b>	<b>Low Frequency Re-engage</b>	Narrow: 48Hz ± 0.3Hz @ 50Hz OR 58Hz ± 0.3Hz @ 60Hz Wide: 45Hz ± 0.3Hz @50/60Hz				
	<b>High Frequency Trip</b>	Narrow: 55Hz ± 0.3Hz @ 50Hz OR 65Hz ± 0.3Hz @ 60Hz Wide: No upper limit for 50/60Hz				
	<b>High Frequency Re-engage</b>	Narrow: 54Hz ± 0.3Hz @ 50Hz OR 64Hz ± 0.3Hz @ 60Hz Wide: No upper limit for 50/60Hz				
	<b>Output Short Circuit Protection</b>	Circuit breaker				
	<b>Bypass Breaker Rating</b>	10A	15A	20A	30A	40A
	<b>Transfer Switch Rating</b>	30A for UL & TUV			40A for UL	
	<b>Max. Bypass Current</b>	30A			40A	
<b>AVR Function</b>	<b>Input AC Voltage Range</b>	90 – 140C ± 4%			154 – 253 ± 4%	
	<b>Stabilised Output Voltage</b>	120V <sub>AC</sub> ± 10% (rms)			230V <sub>AC</sub> ± 10% (rms)	
	<b>Nominal Voltage</b>	110V <sub>AC</sub>	120V <sub>AC</sub>	220V <sub>AC</sub>	230V <sub>AC</sub>	240V <sub>AC</sub>
	<b>A – Line Low Loss N/W (Battery)</b>	84/72	92/78	168/143	176/150	183/156
	<b>B – Line Low Comeback (Boost)</b>	89/77	97/83	178/153	186/160	193/166
	<b>C – Line 2<sup>nd</sup> Boost Threshold (Boost)</b>	**	**	**	**	**
	<b>D – Line 2<sup>nd</sup> Boost Comeback (Boost)</b>	**	**	**	**	**
	<b>E – Line 1<sup>st</sup> Boost Threshold (Boost)</b>	99	108	198	207	216
	<b>F – Line 1<sup>st</sup> Boost Comeback (Normal)</b>	103	112	205	215	225
	<b>G – Line Buck Comeback (Normal)</b>	1189	128	235	246	256
	<b>H – Line Buck Threshold (Buck)</b>	121	132	242	253	264
	<b>I – Line High Comeback (Buck)</b>	127	139	253	266	278
	<b>J – Line High Loss (Battery)</b>	132	144	263	276	288

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Physical	Mount Type	Wall Mount					
	<b>Dimensions</b>	382 x 218 x 179		442 x 218 x 179		598 x 218 x 179	
	<b>W x D x H</b>	15" x 5.6" x 7"		17.4" x 5.6" x 7"		23.5" x 5.6" x 7"	
	<b>Shipping Dimensions</b>	520 x 315 x 300		580 x 315 x 300		740 x 315 x 300	
	<b>W x D x H</b>	20.5" x 12.4" x 11.8"		22.8" x 12.4" x 11.8"		29.1" x 12.4" x 11.8"	
	<b>Weight Kg (lb)</b>	16 (35)	17 (37)	20 (44)	24 (53)	35 (77)	45 (99)
	<b>Shipping Weight Kg (lb)</b>	18 (40)	19 (42)	22 (49)	26 (57)	37 (82)	47 (104)
	<b>Display</b>	Status LEDs / Status LEDs & LCD					
	<b>Warranty</b>	1 Year					