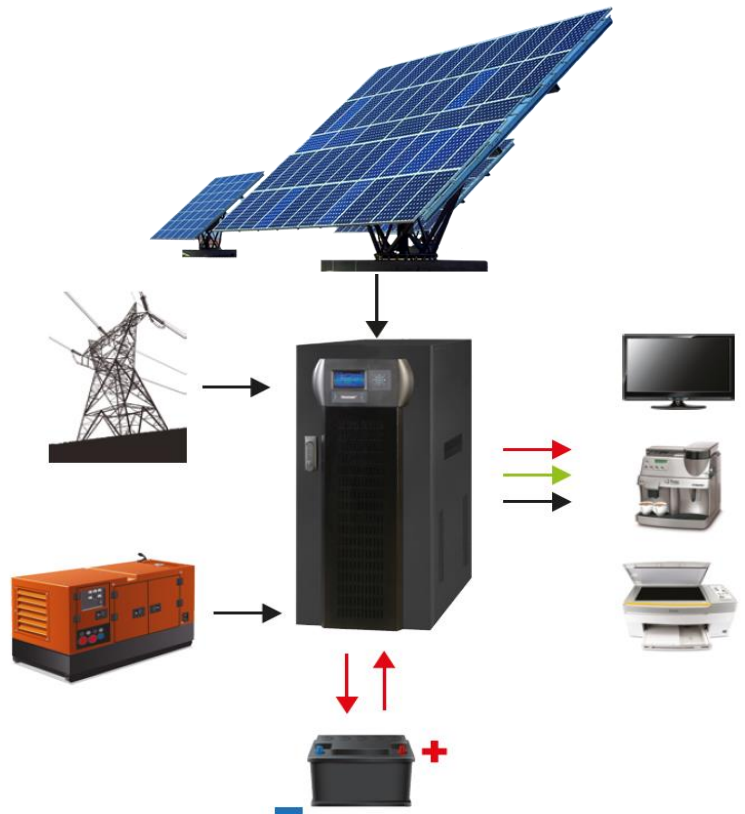




*Tailors of the Industry*

# PLH SERIES



Hybrid ups senses the availability of solar power, grid power and the battery power for supplying the connected loads using the most economical and ecological combination of these energy sources.



# HYBRID UPS (10-160kVA)

## HYBRID UPS Technical Specifications

MODEL	H310	H315	H320	H330	H340	H360	H380	H3100	H3120	H3160	
<b>POWER (kVA)</b>	10	15	20	30	40	60	80	100	120	160	
<b>INPUT</b>											
Voltage	380/400 VAC 3phase + N + G $\pm$ 20% (415VAC ( +15% , -25% optional)										
Frequency	50Hz/ 60Hz Selectable, $\pm$ 5%										
Power Factor	$\geq$ 0.99 (at 100% load)										
THDI	$\leq$ 3% ( Depending on input line condition and power)										
By – Pass Voltage	380/400 VAC 3phase + N, 4 wires $\pm$ 10%										
Voltage Distortion	> 10%										
Protection	Fuses, Voltage and Frequency tolerance, Input power limit, Phase Sequence indicator										
<b>OUTPUT</b>											
Power (kw)	9	13.5	18	27	36	54	72	90	108	144	
Power Factor	0.9										
Voltage	380/400 VAC 3phase + N , 1% (415VAC ( +15% optional)										
Frequency	50Hz/ 60Hz Selectable										
Frequency Tolerance	Line synchronized: $\pm$ 2% / Free running: $\pm$ 0,1% (adjustable)										
Efficiency	Up to 94% (at 100% load)										
Crest Factor	3:1										
Over Load Protection	100% - 125% load: 10 min, 125% - 150% load: 1 min, - >150% load: by pass										
Other Protections	Advanced short circuit, Voltage tolerance, DC balance, Regenerative load, Current limiting										
THD	> 3% (at 100 % linear load)										
<b>BATTERIES</b>											
Type	VRLA AGM/ GEL NiCd										
Nominal Voltage	$\pm$ 360 VDC										
Float / EOD Voltage	$\pm$ 405 VDC / $\pm$ 300 VDC										
Battery Cabinet	Internal					External					
Battery Temp.	25 °C										
Protection	3 level alarms, Battery fuses, Charging current limit, Temperature compensation (optional)										
Automatic Testing	Automatic testing Standard every 72 hours (adjustable)										
<b>GENERAL</b>											
Standards	EN62040-1, EN62040-2, EN62040--3										
User Interface	4 lines LCD panel, Mimic leds, 5 vector buttons, Buzzer, Optional TFT panel										
Indicator	P-N voltage, P-P voltage, Current, Power, Crest Factor, Frequency, PF, Service Time										
Advanced	Self diagnostics, 3 maintenance time indicators, Calibration over RS232, operating hour meter										
Communication	2xRS232 serial ports, 4 standard and 8 optional DRY contact alarm relays										
Inputs	EPO input, Interactive battery panel input, Genset input										
Genset Kit	Standards (Programmable)										
Software	Standard T-Mon UPS Management Software (3 clients + 1 server management)										
Alarm Logging	Standard: with time & date 512 event										
Protections	Power module over-temperature, Over current, Temperature high alarm										
Temperature Range	0°C - 40 °C										
Protection degree	IP20										
Relative Humidity	90% max. (non-condensing)										
Working Altitude	< 1000 m above sea level										
Acoustic level	< 57dBA			< 62 dBA			< 64 dBA			< 68 dBA	

Product properties may change without a notice\*

# HYBRID UPS (200-600kVA)

## HYBRID UPS Technical Specifications

MODEL	PLH3200	PLH3250	PLH3300	PLH3400	PLH3500	PLH3600
POWER (kVA)	200	250	300	400	500	600
<b>INPUT</b>						
Voltage	380/400 VAC 3phase + N + G $\pm 20\%$ (415VAC ( +15% , -25% optional)					
Frequency	50Hz/ 60Hz Selectable, $\pm 5\%$					
Power Factor	$\geq 0.99$ (at 100% load)					
THDI	$\leq 3\%$ ( Depending on input line condition and power)					
By – Pass Voltage	380/400 VAC 3phase + N, 4 wires $\pm 10\%$					
Voltage Distortion	$> 10\%$					
Protection	Fuses, Voltage and Frequency tolerance, Input power limit, Phase Sequence indicator					
<b>OUTPUT</b>						
Power (kw)	180	225	270	400	500	600
Power Factor	0.9			1.0		
Voltage	380/400 VAC 3phase + N , 1% (415VAC ( +15% optional)					
Frequency	50Hz/ 60Hz Selectable					
Frequency Tolerance	Line synchronized: $\pm 2\%$ / Free running: $\pm 0,1\%$ (adjustable)					
Efficiency	Up to 94% (at 100% load)					
Crest Factor	3:1					
Over Load Protection	100% - 125% load: 10 min, 125% - 150% load: 1 min, - >150% load: by pass					
Other Protections	Advanced short circuit, Voltage tolerance, DC balance, Regenerative load, Current limiting					
THD	$> 3\%$ (at 100 % linear load)					
<b>BATTERIES</b>						
Type	VRLA AGM/ GEL / NiCd					
Number of Batteries	2x30 ( $\pm 30$ ): 60 pieces					
Charge Voltage	2x405 VDC					
End of Discharge Voltage	2x300 VDC					
Battery Cabinet	External					
Battery Ambient Temp.	25 °C					
Protection	3 level alarms, Battery fuses, Charging current limit, Temperature compensation (optional)					
Automatic Testing	Automatic testing Standard every 72 hours (adjustable)					
<b>GENERAL</b>						
Standards	EN62040-1, EN62040-2, EN62040-3					
User Interface	4 lines LCD panel, Mimic leds, 5 vector buttons, Buzzer, Optional TFT panel					
Indicator	P-N voltage, P-P voltage, Current, Power, Crest Factor, Frequency, PF, Service Time					
Advanced	Self diagnostics, 3 maintenance time indicators, Calibration over RS232, operating hour meter					
Communication	2xRS232 serial ports, 4 standard and 8 optional DRY contact alarm relays					
Inputs	EPO input, Interactive battery panel input, Genset input					
Genset Kit	Standards (Programmable)					
Software	Standard T-Mon UPS Management Software (3 clients + 1 server management)					
Alarm Logging	Standard: with time & date 512 event					
Protections	Power module over-temperature, Over current, Temperature high alarm					
Temperature Range	0°C - 40 °C					
Protection degree	IP20					
Relative Humidity	90% max. (non-condensing)					
Working Altitude	$< 1000$ m above sea level					
Acoustic level	$< 68$ dBA			$< 72$ dBA		

Product properties may change without a notice\*

# HYBRID UPS SYSTEM(10 – 160 KVA)

## Dimensions and Options Tables

### 10 to 160kVA

PRODUCT CODE	POWER	DIMENSIONS (mm)			WEIGHT (kg)
		H	W	D	
PLH310	10	1040	400	815	87
PLH315	15				87
PLH320	20				91
PLH330	30				100
PLH340	40	1440	515	855	173
PLH360	60				197
PLH380	80				209
PLH3100	100				220
PLH3120	120				232
PLH3160	160				265

### 200 to 600kVA

PRODUCT CODE	POWER	DIMENSIONS (mm)			WEIGHT (kg)
		H	W	D	
PLH3200	200	1900	880	775	470
PLH3250	250				525
PLH3300	300	1900	1250	775	635
PLH3400	400	2040	1250	840	780
PLH3500	500	1940	1610	1050	1452
PLH3600	600				1452

### OPTIONS

Different Output Voltage	Please advise
Transformer	Galvanic Isolation Transformer at the input & output
Software	Multi UPS monitoring 10-50-100-200 clients, T-Mon Server 50-100-200 clients
Converters	SNMP, RS485, Remote Panel, MODBUS (RS485 or TCP/IP), GSM/GPRS Modem
Parallel Operation	Up to 8 units

