



Professional On-Line & Line-Interactive UPS Solutions True Double Conversion 1.0kVA - 20kVA & 30kVA - 800kVA

Output Power Factor 0.9 - Rack/Tower 2 in 1 Design - LCD Display - Perfect Battery Pack

Knight Series Online Rack UPS System

3.0/6.0kVA LCD Display- 1-P In / 1-P Out with battery bank solution

Knight 3.0 kVA Rack specially designed to with stand high fluctuation power. Built-in input OVCD, it becomes a rugged UPS to protect your equipment against extreme high voltage.

Knight 6.0 kVA Rack is a high flexibility UPS with 2-in-1 design which integrates standard backup UPS and long-run UPS into one unit by simply adjusting charging current via LCD front panel. This high flexibility UPS offers easy-adjustable battery numbers design for diverse applications

Features & Advantages

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.8
- Adjustable charge current suitable for long backup time
- Wide input voltage (110 V – 300 V)
- Converter mode available
- ECO mode for energy saving
- Generator compatible
- Smart SNMP works well with either USB or RS-232 together display allows easy monitoring and access of UPS status
- UPS Warranty: 3 years – Battery Bank Warranty: 2 years



Knight 3kVA



Knight 3kVA rear view



Knight 6kVA



Knight 6kVA rear view

Battery Bank for Knight Rack Series 3.0 kVA UPS



Battery bank	Battery Type	Batteries	Bank Capacity	Dimension
BB-72/9RT	12V/9Ah	6 pcs	72V / 9Ah	600 x 438 x 88 mm
BB-72/18RT	12V/9Ah	12 pcs	72V / 18Ah	600 x 438 x 88 mm

Backup Time: Please see the following Backup Time Table

Battery Bank for Knight Rack Series 6.0 kVA UPS



Battery bank	Battery Type	Batteries	Bank Capacity	Dimension
BB-240/9RT	12V/9Ah	20 pcs	240V / 9Ah	580 x 438 x 133 mm

Backup Time: Please see the following Backup Time Table

Backup Time Table for Knight Series 3.0/6.0 kVA UPS

UPS	Battery Bank	Backup Time (min)		
		100%	75%	50%
Knight KN-1103RL Rack 3.0 kVA	without Internal Battery	0	0	0
	+ 1 BB-72/9RT - 72V / 9 Ah	5	8,3	12,5
	+ 1 BB-72/18RT - 72V / 18 Ah	10	18	27
	+ 2 BB-72/18RT - 72V / 36 Ah	23	38	56
	+ 3 BB-72/18RT - 72V / 54 Ah	35	57	85
Knight KN-1106RL Rack 6.0 kVA	+ 4 BB-72/18RT - 72V / 72 Ah	46	76	113
	without Internal Battery	0	0	-
	+ 1 BB-240/9RT - 240V / 9 Ah	8	19	-
	+ 2 BB-240/9RT - 240V / 18 Ah	37	46	-
	+ 3 BB-240/9RT - 240V / 27 Ah	49	56	-
	+ 4 BB-240/9RT - 240V / 36 Ah	79	84	-

P	Model	kVA	Form	Datasheet	Brochure	Manual	SNMP Card	Software	Price
1	KN-1103RL	3.0 kVA	Rack	PDF	PDF	PDF	Go to SNMP	Go to Software	Pricelist
2	KN-1106RL	6.0 kVA	Rack	PDF	PDF	PDF	Go to SNMP	Go to Software	Pricelist

Specification

Model	KN-1103RL	KN-1106RL
Input Capacity	3.0 kVA / 2,4 kW	6.0 kVA / 4,8 kW

Nominal Voltage	200/208/220/230/240 VAC	
Voltage Range	110-300 VAC ± 1%	110-300 VAC ± 1% @50% Load 176-300VAC ± 1% @100% Load
Frequency Range	40Hz ~ 70 Hz	46Hz ~ 54Hz or 56Hz ~ 64 Hz
Phase	Single phase with ground	
Power Factor	≥ 0.99 @ Nominal Voltage (Full load)	

Output		
Output Voltage	200/208/220/230/240VAC	
Voltage Regulation	± 3%	± 1%
Frequency range (Synchronized Range)	47~ 53Hz or 57 ~ 63Hz	46~ 54Hz or 56 ~ 64Hz
Frequency Range (Batt. Mode)	50Hz ± 0.25Hz or 60Hz ± 0. Hz	50Hz ± 0.1Hz or 60Hz ± 0.1Hz
Overload	100%~110%:audible warning 110%~130%: UPS shut down in 30 seconds at battery mode or transfer to bypass when the utility is normal >130%:UPS shuts down immediately at battery mode or transfer to bypass mode when the utility is normal 3:1 (Max)	-
Current Crest Ratio	3:1 (Max)	
Harmonic Distortion	≤ 3 % THD (Linear Load) ≤ 6 % THD (Non-linear Load)	≤ 3 % THD (Linear Load) ≤ 6 % THD (Non-linear Load)
Transfer Time	Bypass to Inverte Inverter to Bypass 4 ms (Typical)	Zero
Waveform (Batt. Mode)	Pure Sinewave	

Efficiency		
AC Mode	90%	89%
Battery Mode	89%	88%

Battery			
Standard Backup	Battery Type	Depending on the capacity of external battery bank	
	Numbers	72V (6x 12V)	240V (20x 12V)
	Typical Recharge Time	Depending on the capacity of external battery bank	
	Charging Current (max.)	1.0/2.0/4.0/6.0A ± 10%	4.0/6.0A ± 10%
	Charging Voltage	82.1 VDC ± 1%	8273.1 VDC ± 1%

Indicators	
LCD or LED	Load level, Battery level, AC mode, Battery mode, Bypass mode, and Fault indicators

Alarm	
Battery Mode	Sounding every 4 seconds
Low Battery	Sounding every second
Overload	Sounding twice every second
Fault	Continuously sounding

AC Input & Output Connectors		
AC Input Connerctos	1x IEC 320 C20	Terminal
AC Output Connerctos	4 x IEC 320 C13	Terminal

Standards	
IEC 62040-1 (safety)	Yes
IEC-62040-2 (EMC)	Yes
CE	Yes

Physical dimensions			
Standard Model	Dimension (mm)	480 (D) x 438 (W) x 88 (H) (2U)	580 (D) x 438 (W) x 88 (H) (2U)
	Net Weight (kgs)	10	15

Environment		
Humidity	20-90% RH @ 0-40°C (non-condensing)	
Noise Level	Less tahn 50dBa @ 1 Meter	Less tahn 55dBa @ 1 Meter

Management	
Smart RS-232 / USB	Supports Windows 2000/2003/XP/Vista/2008/7, Linux, Unix, and MAC
Optional SNMP	Power management from SNMP manager and web browser

*Derate to 80% of capacity in Frequency converter mode and to 80% when the output voltage is adjusted to 100/200/208VAC
 *When using internal batteries from 16-19, the unit will de-rate according to the below formula: $P = PRating \times N/20$.
 **Derate capacity to 60% of capacity in CVCF mode and to 90% when the output voltage is adjusted to 208VAC.
 ***If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m.
 Product specifications are subject to change without further notice