



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 UPS Systems

1kVA/2kVA/3kVA with Battery Bank Solution – 1-P Input / 1-P Output

Knight Series is 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.

Features & Advantages

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.8
- 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



Knight 1.0 kVA



Knight 1kVA rear view



Knight 2kVA rear view



Knight 3kVA rear view



Knight 2.0 / 3.0 kVA

Battery Bank for Knight Series 1.0/2.0/3.0 kVA UPS



Battery bank	Battery Type	Batteries	Bank Capacity	Dimension
BB-36/14T	12V/7Ah	6 pcs	36V / 14Ah	397 x 145 x 220 mm

BB-36/14T: Suitable for Knight series 1.0kVA UPS, Battery Bank Voltage: 36V
Backup Time: Please see the following Backup Time Table



Battery bank	Battery Type	Batteries	Bank Capacity	Dimension
BB-72/14T	12V/7Ah	12 pcs	72V / 14Ah	421 x 190 x 318 mm
BB-72/18T	12V/9Ah	12 pcs	72V / 18Ah	421 x 190 x 318 mm

BB-72/14T: Suitable for Knight series 2.0kVA UPS, Battery Bank Voltage: 72V
BB-72/18T: Suitable for Knight series 3.0kVA UPS, Battery Bank Voltage: 72V
Backup Time: Please see the following Backup Time Table

Backup Time Table for Knight Series 1.0/2.0/3.0 kVA UPS

UPS	Battery Bank - Capacity	Backup Time (min)		
		100%	75%	50%
Knight KN-1101TS Tower	Internal Battery 36V / 7Ah	5:51	8:28	15:33
	+ 1 BB-36/14T - 36V / 14 Ah	18:12	27:50	49:48
	+ 2 BB-36/14T - 36V / 28 Ah	31:42	46:12	78:34
	+ 3 BB-36/14T - 36V / 42 Ah	45:22	63:24	125:10
Knight KN-1102TS Tower	Internal Battery 72V / 7Ah	6:46	12:05	18:11
	+ 1 BB-72/14T - 72V / 14 Ah	20:00	28:21	57:30
	+ 2 BB-72/14T - 72V / 28 Ah	34:13	66:21	95:32
	+ 3 BB-72/14T - 72V / 42 Ah	45:41	56:09	131:08
Knight KN-1103TS Tower	Internal Battery 72V / 9Ah	5:27	8:30	13:11
	+ 1 BB-72/18T - 72V / 18 Ah	17:20	28:16	43:50
	+ 2 BB-72/18T - 72V / 36 Ah	30:10	45:24	71:28
	+ 3 BB-72/18T - 72V / 54 Ah	44:46	59:10	101:18

P	Model	kVA	Form	Datasheet	Brochure	Manual	SNMP Card	Software	Price
1	KN-1101-TS	1.0 kVA	Tower						
2	KN-1102-TS	2.0 kVA	Tower	PDF	PDF	PDF	Go to SNMP	Go to Software	Pricelist
3	KN-1103-TS	3.0 kVA	Tower						

Specification			
Model	KN-1101-TS	KN-1102-TS	KN-1103-TS
Capacity	1.0 kVA / 800W	2.0 kVA / 1600W	3.0 kVA / 2400W

Input		
Voltage Range	Low Line Transfer	160 VAC / 140 VAC / 120 VAC / 110 VAC ± 5 % (based on load percentage 100% - 80 % / 80 % - 70 % / 70 - 60 % / 60 % - 0)
	Low Line Comeback	168 VAC / 148 VAC / 128VAC / 118 VAC ± 5 % (based on load percentage 100% - 80 % / 80 % - 70 % / 70 - 60 % / 60 % - 0)
	High Line Transfer	300 VAC ± 5 % or 150 VAC ± 5 %
	High Line Comeback	290 VAC ± 5 % or 145 VAC ± 5 %
Frequency Range	40Hz ~ 70 Hz	
Phase	Single phase with ground	
Power Factor	≥ 0.99 @ Nominal Voltage (100% load)	

Output	
Output Voltage	00/208/220/230/240VAC
Voltage Regulation	± 1%
Frequency range (Synchronized Range)	47~ 53 Hz or 57 ~ 63 Hz
Frequency Range (Batt. Mode)	50 Hz ± 0.25 Hz or 60Hz ± 0.3 Hz
Overload	N/A
Current Crest Ratio	3:1
Harmonic Distortion	≤ 2 % THD (Linear Load) ≤ 4 % THD (Non-linear Load)
Bypass to Inverter	4 ms (Typical)
Waveform (Batt. Mode)	Pure Sinewave

Efficiency			
AC Mode	87%	90%	90%
Battery Mode	83%	87%	89%

Battery				
Standard Backup	Battery Type	12V / 1 Ah	12V / 7Ah	12V / 9Ah
	Numbers	3	6	6
	Typical Recharge Time	4 hours recover to 90% capacity		
	Charging Current (max.)	1.0 A		
	Charging Voltage	41.0 VDC ± 1%	82.1 VDC ± 1%	82.1 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 Connector	1 x IEC 320 C14	1 x IEC 320 C14	1 x IEC 320 C20
AC Output Connector	4 x IEC 320 C13	8 x IEC 320 C13	6 x IEC 320 C13 / 1 x IEC C19

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

Physical dimensions				
Standard	Dimension (mm)	397 (D) x 145 (W) x 220 (H)	419 (D) x 119 (W) x 318 (H)	419 (D) x 119 (W) x 318 (H)
Model	Net Weight (kgs)	13	26	28

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