

Knight Pro+ RM 1-10K

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.9
- Wide input voltage range
- Converter mode available
- ECO mode for energy saving only available for 1-3KVA models
- Generator compatible
- Adjustable charging current via LCD or software (1A~6A)
- Emergency power off function (EPO) only available for 6K/10K models
- Comprehensive display allows easy monitoring and access of UPS status



PHASE		Single phase with ground														
CAPACITY		1000 VA / 900 W		2000 VA / 1800 W		3000 VA / 2700 W		6000 VA / 5400 W		10000 VA / 9000 W						
INPUT																
Nominal Voltage		100/110/115/120/127VAC or 200/208/220/230/240VAC						208/220/230/240VAC								
Input Voltage Range		60-145 VAC or 120-300 VAC at 50% load 90-145 VAC or 180-300 VAC at 100% load						110-300 VAC ± 3% at 50% Load 176-300 VAC ± 3% at 100% Load								
Frequency Range		40Hz ~ 70 Hz						46Hz ~ 54 Hz or 56Hz ~ 64 Hz								
Power Factor		≥ 0.99 @ Nominal Voltage (100% load)														
OUTPUT																
Output Voltage		100/110/115/120/127VAC or 200/208/220/230/240VAC						208/220/230/240VAC								
Voltage Regulation		± 1%						± 1%								
Frequency Range (Synchronized Range)		47~ 53 Hz or 57 ~ 63 Hz						46Hz ~ 54 Hz or 56Hz ~ 64 Hz								
Frequency Range (Batt. Mode)		50 Hz ± 0.25 Hz or 60Hz ± 0.3 Hz						50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz								
Current Crest Ratio		3:1														
Harmonic Distortion		≤ 3 % THD (Linear Load), ≤ 6 % THD (Non-linear Load)						≤ 3 % THD (Linear Load), ≤ 5 % THD (Non-linear Load)								
Transfer Time	AC Mode to Battery Mode	Zero						0ms								
	Inverter to Bypass	4 ms (Typical)						0ms								
Waveform (Batt. Mode)		Pure Sinewave														
EFFICIENCY																
AC Mode		88%		89%		90%		92%		93%						
Battery Mode		83%		87%		88%		90%		91%						
BATTERY																
Standard Model	Battery Type	12 V / 9 AH		12 V / 9 AH		12 V / 9 AH		12 V / 9 AH								
	Numbers	2		4		6		16 pcs		20 pcs		16 pcs		20 pcs		
	Typical Recharge Time	4 hours recover to 90% capacity						9 hours recover to 90% capacity								
	Charging Current	1.0 A						1A/2A (Adjustable)								
Long-run Model	Charging Voltage	27.4VDC ± 1%		54.7 VDC ±1%		82.1 VDC ±1%		218.4VDC ± 1%		273 VDC ± 1%		218.4VDC ± 1%		273 VDC ± 1%		
	Battery Type	Depending on the capacity of external batteries						Depending on applications								
	Numbers	2		3		4		6		8		6		8		
	Charging Current (max.)	1.0A/2.0A/4.0A/6.0 A						1A/2A/4A/6A (Adjustable, 6A is only available for 16pcs batteries)								
Charging Voltage	27.4VDC ± 1%		41.0VDC ± 1%		54.7 VDC ±1%		82.1 VDC ±1%		109.4VDC ±1%		82.1 VDC ±1%		109.4VDC ±1%		218.4 VDC ± 1% (Based on 16pcs batteries)	
INDICATORS																
LCD Panel		UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions														
ALARM																
Battery Mode		Sounding every 4 seconds														
Low Battery		Sounding every second														
Overload		Sounding twice every second														
Fault		Continuously sounding														
PHYSICAL																
Standard Model	Dimension, D x W x H(mm)	310 x 438 x 88		410 x 438 x 88		630 x 438 x 88		UPS Unit: 500x438x88 [2U] Battery Pack: 606x438x88 [2U]		UPS Unit: 500x438x88 [2U] Battery Pack: 580x438x133 [3U]		UPS Unit: 580x438x133 [3U] Battery Pack: 580x438x133 [3U]				
	Net Weight (kgs)	12		19		29.3		UPS Unit: 15 Battery Pack: 48		UPS Unit: 15 Battery Pack: 61		UPS Unit: 18 Battery Pack: 51		UPS Unit: 18 Battery Pack: 61		
Long-run Model*	Dimension, D x W x H(mm)	310 x 438 x 88		410 x 438 x 88		630 x 438 x 88		500 x 438 x 88 [2U]		580 x 438 x 133 [3U]		580 x 438 x 133 [3U]		580 x 438 x 133 [3U]		
	Net Weight (kgs)	9		12		14.2		15		15		18		18		
ENVIRONMENT																
Humidity		20-90 % RH @ 0- 40°C (non-condensing)						0-95 % RH @ 0- 40°C (non-condensing)								
Noise Level		Less than 50dBA @ 1 Meter						Less than 55dBA @ 1 Meter		Less than 58dBA @ 1 Meter		Less than 58dBA @ 1 Meter				
MANAGEMENT																
Smart RS-232 / USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux, Unix and MAC														
Optional SNMP		Power management from SNMP manager and web browser														

*Long-run model is only available in 200/208/220/230/240VAC systems.

**Derate to 80% of capacity in Frequency converter mode and to 80% when the output voltage is adjusted to 100/200/208VAC

Product specifications are subject to change without further notice

Knight Pro+ TW 1-10K(L)

Features

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.9
- Wide input voltage (120 V – 300 V)
- Converter mode available
- ECO mode for energy saving
- Generator compatible
- Smart SNMP works well with either USB or RS-232 together
- Comprehensive display allows easy monitoring and access of UPS status



PHASE		Single phase with ground				
CAPACITY		1000 VA / 900 W	2000 VA / 1800 W	3000 VA / 2700 W	6000 VA / 5400 W	10000 VA / 9000 W
INPUT						
Nominal Voltage		100/110/115/120/127VAC or 200/208/220/230/240VAC			208/220/230/240VAC	
Input Voltage Range		60-150 VAC or 120-300 VAC at 50% load 90-140 VAC or 180-280 VAC at 100% load			110-300 VAC (Based on load at 50%) 176-300 VAC (Based on load at 100%)	
Frequency Range		40 Hz ~ 70 Hz			46~54 Hz or 56~64 Hz	
Power Factor		≥0.99 @ Nominall Voltage (100% load)				
OUTPUT						
Output Voltage		100/110/115/120/127VAC or 200/208/220/230/240VAC			208/220/230/240VAC	
Voltage Regulation		± 1 %				
Frequency Range (Synchronized Range)		47~ 53 Hz or 57 ~ 63 Hz			46~54 Hz or 56~64 Hz	
Frequency Range (Batt. Mode)		50 Hz or 60Hz ± 0.5%			50 Hz or 60Hz ± 0.1 Hz	
Current Crest Ratio		3:1				
Harmonic Distortion		≤ 3 % THD (Linear Load) ≤ 6 % THD (Non-linear Load)			≤ 3 % THD (Linear Load) ≤ 5 % THD (Non-linear Load)	
Transfer Time	AC to DC	Zero				
	Inverter to Bypass	4 ms (Typical)			Zero	
Waveform (Batt. Mode)		Pure Sinewave				
EFFICIENCY						
To AC Mode		88%	89%	90%	94%	94%
To Battery Mode		83%	85%	88%	90%	91%
BATTERY						
Standard Model	Battery Type	12 V / 9 Ah	12 V / 9 Ah	12 V / 9 Ah	12 V / 9 Ah	
	Numbers	2	4	6	16	20
	Typical Recharge Time	4 hours recover to 90% capacity			9 hours recover to 90% capacity	
	Charging Current (Max.)	1.0 A			1A, 2A (Adjustable)	
	Charging Voltage	27.4VDC ± 1%	54.7 VDC ±1%	82.1 VDC ±1%	218.4 VDC ±1%	273 VDC ±1%
Long-run Model	Battery Type	Depending on the capacity of external batteries				
	Numbers	2	4	6	16	20
	Charging Current (Max.)	1A/2A/4A/6A			1A, 2A, 4A (Adjustable)	
	Charging Voltage	27.4VDC ± 1%	54.7 VDC ±1%	82.1 VDC ±1%	218.4 VDC ±1%	273 VDC ±1%
INDICATORS						
LCD Display		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				
PHYSICAL						
Standard Model	Dimension, DxWxH (mm)	282 x 145 x 220	397 x 145 x 220	421 x 190 x 318	369 x 190 x 688	442 x 190 x 688
	Net Weight (kgs)	9.8	17	27.6	61	76
Long-run Model	Dimension, DxWxH (mm)	282 x 145 x 220	397 x 145 x 220		369 x 190 x 318	442 x 190 x 318
	Net Weight (kgs)	4.1	6.8	7.4	12	16
ENVIRONMENT						
Humidity		20-90 % RH @ 0- 40°C (Non-condensing)			0-95% RH @ 0-50°C (non-condensing)	0-95% RH @ 0-40°C (non-condensing)
Noise Level		Less than 50dBA @ 1 Meter			Less than 55dBA @ 1 Meter	Less than 58dBA @ 1 Meter
MANAGEMENT						
Smart RS-232/USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux, Unix, and MAC				
Optional SNMP		Power management from SNMP manager and web browser				

*1-3KVA: Derate to 80% of capacity in Frequency converter mode and to 80% when the output voltage is adjusted to 100/200/208VAC
6-10KVA: Derate to 60% of capacity in Frequency converter mode and to 90% when the output voltage is adjusted to 208VAC

**Long-run model is only available in 200/208/220/230/240VAC systems (200VAC system only available for 1-3KVA).

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