

# CHAMP SERIES



PF0.9 Online UPS

1KVA-10KVA

## Applications:



ECO mode



Pure sinewave



Generator compatible



Computer

## Compact & Small-Scale Online UPS Solutions

Champ Series is the high power density double-conversion online UPS with a output power factor 0.9. It's designed in small cabinet with microprocessor controller.

Champ Series also have USB and RS-232 communication ports as standard, with a built-in intelligent slot for additional adapters, protocol converters and relate contact cards.

## GENERAL FEATURES

True double-conversion

Microprocessor control optimizes reliability

Input power factor correction  $\geq 0.99$

Output power factor 0.9

Wide input voltage (130 V – 280 V)

Converter mode available

ECO mode for energy saving only available for 1-3 K models

Generator compatible

Smart SNMP works well with either USB or RS-232

together display allows easy monitoring and access of UPS status

Adjustable battery numbers only available for 6 K/10 K models

## TECHNICAL SPECIFICATIONS

MODEL	CH-1101TS	CH-1102TS	CH-1103TS	CH-1106TS	CH-1110TS
PHASE	Single phase with ground				
CAPACITY	1000 VA / 900W	2000 VA / 1800W	3000 VA / 2700 W	6000 VA / 5400 W	10000 VA / 9000 W
INPUT					
Nominal Voltage	200/208/220/230/240 VAC			208/220/230/240 VAC	
Voltage Range	120-300 VAC (Based on load at 50%) 180-280 VAC (Based on load at 100%)			110-300 VAC (Based on load at 50%) 176-300 VAC (Based on load at 100%)	
Frequency Range	40Hz ~ 70 Hz			46~54 Hz or 56~64 Hz	
Power Factor	≥ 0.99 @ Nominal Voltage (100% Last)				
OUTPUT					
Nominal Voltage	208/220/230/240 VAC			208/220/230/240 VAC	
AC Voltage Regulation	± 1%			± 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 60 Hz ± 0.5%			50 Hz or 60Hz ± 0.1 Hz	
Current Crest Ratio	3:1			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			Zero
	Inverter to Bypass	4 ms (Typical)			Zero
Waveform (Batt. Mode)	Pure Sinewave				
EFFICIENCY					
Line Mode	88%	89%	90%	92%	93%
Battery Mode	83%	85%	88%	90%	91%
BATTERY					
Battery Type	12V / 9 Ah	12V / 9 Ah	12 V / 9 AH		
Numbers	2	4	6		
Typical Recharge Time	4 hours recover to 90% capacity				
Charging Current (max.)	1.0 A	1.0 A	1.0 A		
Charging Voltage	27.4 VDC ± 1%	54.7 VDC ± 1%	82.1 VDC ± 1%		
INDICATORS	LCD Display Last 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	3 x CEE 7/4 (Schuko)	3 x CEE 7/4 (Schuko)	4 x CEE 7/4 (Schuko)		
	Terminal block				
STANDARDS	Safety / EMC IEC 62040-1 (safety) / IEC-62040-2 (EMC) / CE				
PHYSICAL					
Dimension, D x W x H(mm)	282 x 145 x 220	397 x 145 x 220	421 x 190 x 318	UPS Unit: 369 x 190 x 688 Battery Pack: 369 x 190 x 318	UPS Unit: 442 x 190 x 688 Battery Pack: 442 x 190 x 318
Net Weight (kgs)	9.8	17.0	27.6	UPS Unit: 61 Battery Pack:49	UPS Unit: 66 Battery Pack:49.5
ENVIRONMENT					
Operation 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 50 dBA @ 1 Meter			Less than 50 dBA @ 1 Meter	Less than 58 dBA @ 1 Meter
MANAGEMENT					
Smart RS-232 / USB	Supports Windows 2000/2003/XP/Vista/2008/7, Linux 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.  
Product specifications are subject to change without further notice.



### Backup Time Table for Champ Series

	Battery Bank	Backup Time with Load (Min)			
		25%	50%	75%	100 %
CH 1101TS	Internal battery only (24V:12V-9Ah x 2)	20	9.0	5.0	3.0
CH 1102TS	Internal battery only (48V:12V-9Ah x 4)	25	10	6.0	3.0
CH 1103TS	Internal battery only (72V:12V-9Ah x 6)	26	10	6.0	3.0
CH 1106TS	Internal battery (192V:12V-9Ah x 16)	42	17.8	10	6.8
	+1 external battery (384V:12V-9Ah x 32)	78	32	18.6	12.6
CH 1110TS	Internal battery (192V:12V-9Ah x 16)	22.3	8.7	4.8	2.3
	+1 external battery (384V:12V-9Ah x 32)	53	22	13	8.7

## TECHNICAL SPECIFICATIONS

MODEL	CH-1101RS	CH-1102RS	CH-1103RS	CH-1106RL	CH-1110RL
PHASE	Single phase with ground				
CAPACITY	1000 VA / 900W	2000 VA / 1800W	3000 VA / 2700 W	6000 VA / 5400 W	10000 VA / 9000 W
INPUT					
Nominal Voltage	200/208/220/230/240VAC		208/220/230/240VAC		
Voltage Range	120-300 VAC at 50% load 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		46~54 Hz or 56~64 Hz		
Power Factor	≥ 0.99 @ Nominal Voltage (100% Last)				
OUTPUT					
Nominal Voltage	200/208/220/230/240VAC		208/220/230/240 VAC		
AC Voltage Regulation	± 1%		± 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 ± 0.25 Hz or 60Hz ± 0.3 Hz		50 Hz or 60Hz ± 0.1 Hz		
Current Crest Ratio	3:1		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		Zero	
	Inverter to Bypass	4 ms (Typical)		Zero	
Waveform (Batt. Mode)	Pure Sinewave				
EFFICIENCY					
Line Mode	88%	89%	90%	92%	93%
Battery Mode	83%	87%	88%	90%	91%
BATTERY					
Standard Model	Battery Type	12V / 9 Ah	12V / 9 Ah	12 V / 9 AH	
	Numbers	2	4	6	
	Typical Recharge Time	4 hours recover to 90% capacity			N/A
	Charging Current (max.)	1.0 A	1.0 A	1.0 A	
Long-run Model	Charging Voltage	27.4 VDC ± 1%	54.7 VDC ± 1%	82.1 VDC ± 1%	
	Battery Type				Depending on the capacity of external batteries
	Numbers in string				16-20pcs (Adjustable)
	Charging Current (max.)	N/A			1A/2A/4A/6A (Adjustable, 6A is only available for 16pcs batteries)
Charging Voltage					218.4 VDC ± 1% (Based on 16pcs batteries)
INDICATORS					
LCD Display	Last 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	Terminal block	
AC Output Connector	3 x CEE 7/4 (Schuko)	3 x CEE 7/4 (Schuko)	4 x CEE 7/4 (Schuko)	Terminal block	
STANDARDS					
Safety / EMC	IEC 62040-1 (safety) / IEC-62040-2 (EMC) / CE				
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	N/A
	Net Weight (kgs)	12	19	29.3	N/A
Long-run Model	Dimension, D x W x H(mm)	N/A		UPS Unit: 530x438x88 [2U] Battery Pack: 668x438x88 [2U]	580 x 438 x 133[3U]
	Net Weight (kgs)	N/A		UPS Unit: 15 Battery Pack:48	18
ENVIRONMENT					
Operation Humidity	20-90% RH @ 0-40°C (non-condensing)		0-95% RH @ 0-40°C (non-condensing)		
Noise Level	Less than 50 dBA @ 1 Meter		Less than 50 dBA @ 1 Meter    Less than 58 dBA @ 1 Meter		
MANAGEMENT					
Smart RS-232 / USB	Supports Windows 2000/2003/XP/Vista/2008/7, Linux and MAC				
Optional SNMP	Power management from SNMP manager and web browser				

\*1K-3K: Derate to 80% of capacity in Frequency converter mode or when the output voltage is adjusted to 208VAC.  
6K/10K: Derate to 60% of capacity in Frequency converter mode and to 80% when the output voltage is adjusted to 208VAC.  
Product specifications are subject to change without further notice



### Backup Time Table for Champ Series

Model	Battery Bank	Backup Time with Load (Min)			
		25%	50%	75%	100%
CH 1106RS	Internal battery (192V:12V-9Ah x 16)	42	17.8	10	6.8
	+1 external battery (192V: 12V-9AH x 32)	78	32	18.6	12.6
CH 1110RS	Internal battery (192V:12V-9Ah x 16)	22.3	8.7	4.8	2.3
	+1 external battery (192V: 12V-9AH x 32)	53	22	13	8.7