STRAHL energy

Datasheet

Model Numbers

STR-ZTR3000-48

STR-ZTR5000-48

Inverter add-ons

Parallel connection kits

KMS-PARKITT-48

KMS-PARKIT-24

parallel kit is suitable for linking identical Strahl inverters in series or parallel.

Wi-Fi monitoring kit

IC-WIFI

Wi-Fi remote monitoring kit uses Wi-Fi connectivity to enable advanced remote monitoring of a Strahl hybrid inverter from any location in the world.

Wi-Fi mobile app module

IC-WIFI-2

Wi-Fi remote monitoring module uses Wi-Fi connectivity to enable advanced remote monitoring of an Strahl hybrid inverter from an Android or iOS mobile device.

RS-485 modbus card

IC-MODBUS

Modbus card enables communication between compatible Strahl inverters and the energy meter in a grid-tie system.

SPECIFICATIONS

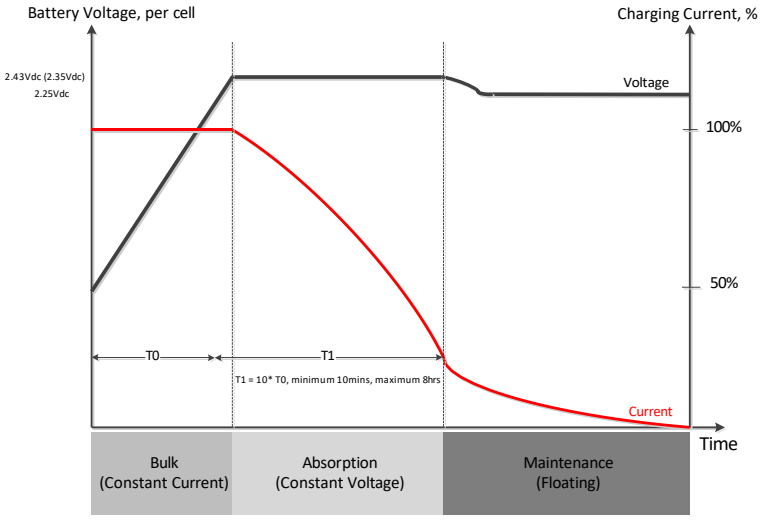
Table 1 Line Mode Specifications

INVERTER MODEL	3KW-24V	3KW-48V	5KW
Input Voltage Waveform	Sinusoidal		
Nominal Input Voltage	230Vac		
Low Loss Voltage	110Vac±7V		
Low Loss Return Voltage	120Vac±7V		
High Loss Voltage	280Vac±7V		
High Loss Return Voltage	270Vac±7V		
Max AC Input Voltage	300Vac		
Nominal Input Frequency	50Hz / 60Hz (Auto detection)		
Low Loss Frequency	46(56)±1Hz		
Low Loss Return Frequency	46.5(57)±1Hz		
High Loss Frequency	54(64)±1Hz		
High Loss Return Frequency	53(63)±1Hz		
Power Factor	>0.98		
Output Short Circuit Protection	Line mode: Circuit Breaker Battery mode: Electronic Circuits		
Efficiency (Line Mode)	93% (Peak Efficiency)		
Transfer Time	Line mode←→Battery mode 0ms Inverter←→Bypass 4ms		

Table 2 Battery Mode Specifications

INVERTER MODEL	3KW-24V	3KW-48V	5KW
Rated Output Power	3KVA/3KW	3KVA/3KW	5KVA/5KW
Output Voltage Waveform	Pure Sine Wave		
Output Voltage Regulation	230Vac±5%		
Output Frequency	50Hz or 60Hz		
Peak Efficiency	90%		
Overload Protection	5s@≥150% load; 10s@105%~150% load		
Surge Capacity	2* rated power for 5 seconds		
Nominal DC Input Voltage	24Vdc	48Vdc	
Operating Range	20Vdc -34Vdc	40Vdc -66Vdc	
Cold Start Voltage	23Vdc	46Vdc	
Low DC Warning Voltage @ load < 50% @ load ≥ 50%	 22.5Vdc 22.0Vdc	 45.0Vdc 44.0Vdc	
Low DC Warning Return Voltage @ load < 50% @ load ≥ 50%	 23.5Vdc 23.0Vdc	 47.0Vdc 46.0Vdc	
Low DC Cut-off Voltage @ load < 50% @ load ≥ 50%	 21.5Vdc 21.0Vdc	 43.0Vdc 42.0Vdc	
High DC Recovery Voltage	32Vdc	64Vdc	
High DC Cut-off Voltage	34Vdc	66Vdc	
No Load Power Consumption	<75W	<75W	

Table 3 Charge Mode Specifications

Utility Charging Mode				
INVERTER MODEL		**3KW-24V**	**3KW-48V**	**5KW**
Charging Current @ Nominal Input Voltage		Default: 30A, max: 60A		
Bulk Charging Voltage	**Flooded Battery**	29.2Vdc	58.4Vdc	
	AGM / Gel Battery	28.2Vdc	56.4Vdc	
Floating Charging Voltage		27Vdc	54Vdc	
Overcharge Protection		34Vdc	66Vdc	
Charging Algorithm		3-Step		
Charging Curve				

Solar Charging Mode (MPPT type)			
INVERTER MODEL	**3KW-24V**	**3KW-48V**	**5KW**
Rated Power	1500W	4000W	4000W
Maximum charging current	60A	80A	80A
Efficiency	98.0% max.		
Max. PV Array Open Circuit Voltage	145Vdc		
PV Array MPPT Voltage Range	30~115Vdc	60~115Vdc	60~115Vdc
Battery Voltage Accuracy	+/-0.3%		
PV Voltage Accuracy	+/-2V		
Charging Algorithm	3-Step		
Joint Utility and Solar Charging			

Max Charging Current	120A	140A	140A
Default Charging Current	60A		

Table 4 ECO/Bypass Mode Specifications

Bypass Mode			
INVERTER MODEL	**3KW-24V**	**3KW-48V**	**5KW**
Input Voltage Waveform	Sinusoidal		
Low Loss Voltage	176Vac±7V		
Low Loss Return Voltage	186Vac±7V		
High Loss Voltage	280Vac±7V		
High Loss Return Voltage	270Vac±7V		
Nominal Input Frequency	50Hz / 60Hz (Auto detection)		
Low Loss Frequency	46(56)±1Hz		
Low Loss Return Frequency	46.5(57)±1Hz		
High Loss Frequency	54(64)±1Hz		
High Loss Return Frequency	53(63)±1Hz		

Table 5 General Specifications

INVERTER MODEL	**3KW-24V**	**3KW-48V**	**5KW**
SCC type	**MPPT**		
Parallel-able	YES		
Communication	RS232 and WiFi		
Safety Certification	CE		
Operating Temperature Range	0°C to 55°C		
Storage temperature	-15°C~ 60°C		
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Dimension (D*W*H), mm	466.3 x 438 x 130.8		
Net Weight, kg	14.5	14.5	15