



# Model Numbers

## STR2-MX10000-48

### 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

MODEL	10KW
<b>Input Voltage Waveform</b>	Sinusoidal (utility or generator)
<b>Nominal Input Voltage</b>	230Vac
<b>Low Loss Voltage</b>	170Vac±7V (UPS) 90Vac±7V (Appliances)
<b>Low Loss Return Voltage</b>	180Vac±7V (UPS); 100Vac±7V (Appliances)
<b>High Loss Voltage</b>	280Vac±7V
<b>High Loss Return Voltage</b>	270Vac±7V
<b>Max AC Input Voltage</b>	300Vac
<b>Max AC Input Current</b>	60A
<b>Nominal Input Frequency</b>	50Hz / 60Hz (Auto detection)
<b>Low Loss Frequency</b>	40±1Hz
<b>Low Loss Return Frequency</b>	42±1Hz
<b>High Loss Frequency</b>	65±1Hz
<b>High Loss Return Frequency</b>	63±1Hz
<b>Output Short Circuit Protection</b>	Line mode: Circuit Breaker (70A) Battery mode: Electronic Circuits
<b>Efficiency (Line Mode)</b>	>95% ( Rated R load, battery full charged )
<b>Transfer Time</b>	10ms typical (UPS); 20ms typical (Appliances)
<p><b>Output power de-rating:</b> When AC input voltage under 170V the output power will be de-rated.</p>	<p>The graph illustrates the output power de-rating characteristics. The vertical axis represents Output Power, and the horizontal axis represents Input Voltage. Key points on the graph include:         <ul style="list-style-type: none"> <li>At 90V input, the output power is 50% of the rated power.</li> <li>Between 90V and 170V, the output power increases linearly from 50% to the full rated power.</li> <li>From 170V to 280V, the output power remains constant at the rated power level.</li> <li>At 280V, the output power drops to zero.</li> </ul> </p>

Table 2 Inverter Mode Specifications

<b>MODEL</b>	<b>10KW</b>
<b>Rated Output Power</b>	10000W
<b>Output Voltage Waveform</b>	Pure Sine Wave
<b>Output Voltage Regulation</b>	230Vac±5%
<b>Output Frequency</b>	60Hz or 50Hz
<b>Peak Efficiency</b>	93%
<b>Overload Protection</b>	100ms@≥205% load;5s@≥150% load; 10s@110%~150% load
<b>Surge Capacity</b>	2* rated power for 5 seconds
<b>Low DC Warning Voltage</b> @ load < 20% @ 20% ≤ load < 50% @ load ≥ 50%	46.0Vdc 42.8Vdc 40.4Vdc
<b>Low DC Warning Return Voltage</b> @ load < 20% @ 20% ≤ load < 50% @ load ≥ 50%	48.0Vdc 44.8Vdc 42.4Vdc
<b>Low DC Cut-off Voltage</b> @ load < 20% @ 20% ≤ load < 50% @ load ≥ 50%	44.0Vdc 40.8Vdc 38.4Vdc
<b>High DC Recovery Voltage</b>	61Vdc
<b>High DC Cut-off Voltage</b>	63Vdc
<b>DC Voltage Accuracy</b>	+/-0.3V@ no load
<b>THDV</b>	<5% for linear load,<10% for non-linear load @ nominal voltage
<b>DC Offset</b>	≅ 100mV
<b>No Load Power Consumption</b>	<75W

Table 3 Charge Mode Specifications

Utility Charging Mode		
<b>MODEL</b>	<b>10KW</b>	
<b>Charging Current (UPS)</b> @ Nominal Input Voltage	150A (@ $V_{IP}=230V_{ac}$ )	
<b>Bulk Charging Voltage</b>	<b>Flooded Battery</b>	58.4Vdc
	<b>AGM / Gel Battery</b>	56.4Vdc
<b>Floating Charging Voltage</b>	54Vdc	
<b>Overcharge Protection</b>	63Vdc	
<b>Charging Algorithm</b>	3-Step	
<b>Charging Curve</b>	<p>The graph plots Battery Voltage (V) on the left y-axis and Charging Current (%) on the right y-axis against Time. The voltage curve (black) starts at 2.25Vdc, rises linearly to 2.43Vdc (2.35Vdc) during the Bulk phase (T0), remains constant during the Absorption phase (T1), and then slightly drops to a floating voltage. The current curve (red) starts at 100%, remains constant during Bulk, then decreases during Absorption, and continues to decrease during the Maintenance phase. T1 is labeled as 'minimum 10mins, maximum 8hrs'. The x-axis is divided into three shaded regions: Bulk (T0), Absorption (T1), and Maintenance (Floating).</p>	
Solar Input		
<b>MODEL</b>	<b>10KW</b>	
<b>Rated Power</b>	10000W	
<b>Max. PV Array Open Circuit Voltage</b>	500Vdc	
<b>PV Array MPPT Voltage Range</b>	90Vdc~450Vdc	
<b>Max. Input Current</b>	18A x 2	
<b>Start-up Voltage</b>	80V +/- 5Vdc	
<b>Power Limitation</b>	<p>The graph plots PV Current (A) on the y-axis against MPPT temperature (°C) on the x-axis. The current is constant at 18A from 0°C to 75°C. At 75°C, the current drops to 9A and remains constant until 85°C. Above 85°C, the current is zero. The 18A level is labeled '18A' and the 9A level is labeled '9A'. The x-axis is labeled 'MPPT temperature' with markers at 75° and 85°.</p>	

Table 4 General Specifications

<b>MODEL</b>	<b>10KW</b>
<b>Safety Compliance</b>	CE
<b>Operating Temperature Range</b>	-10°C to 50°C
<b>Storage temperature</b>	-15°C~ 60°C
<b>Humidity</b>	5% to 95% Relative Humidity (Non-condensing)
<b>Dimension (D*W*H), mm</b>	158.4x 503.6 x 530.8
<b>Net Weight, kg</b>	20

Table 5 Parallel Specifications

<b>Max parallel numbers</b>	6
<b>Circulation Current under No Load Condition</b>	Max 2A
<b>Power Unbalance Ratio</b>	<5% @ 100% Load
<b>Parallel communication</b>	CAN
<b>Transfer time in parallel mode</b>	Max 50ms
<b>Parallel Kit</b>	YES

Note: Parallel feature will be disabled when only PV power is available.