

## PDS1-45M MPPT Test Report

SHENZHEN SINEXCEL ELECTRIC CO., LTD.

Bldg/ 6, Baiwangxin Hitech Park, 1002 Songbai Rd., Shenzhen China 518000

**Name/Trademark** Sinexcel

**Model** **PDS1-45M**

During the photovoltaic operation test, the photovoltaic analog source is connected to the input of three large branches respectively, and the bus side is connected to the DC source. During the test, the different voltage difference and different power difference of each branch are simulated. The power value under the machine is released during the test, and the actual input power is from the photovoltaic analog source limit.

CH1:Branch 1 Input voltage

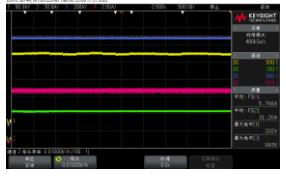
CH2:Total input current

CH3:Bus voltage

CH4:Bus current

Test procedure	Waveform and anomaly recording
Bus side voltage 600V, PV side branch 1 open voltage is set to 538V, MPPT point voltage is set to 430V, maximum power point power is set to 15k, PV side branch 2 open voltage is set to 538V, MPPT point voltage is set to 430V, The maximum power point power is 4.5k, the open circuit voltage of PV branch 3 is set to 538V, the MPPT point voltage is set to 430V, and the maximum power point power is set to 4.5k. The machine runs steady-state, and the actual power point is at the maximum efficiency point of MPPT during operation. The input and output voltage and current waveforms are normal, and no abnormal phenomenon occurs during the test.s67	 s67
Bus side voltage 1000V, PV side branch 1 open voltage is set to 538V, MPPT point voltage is set to 430V, maximum power point power is set to 4.5k, PV side branch 2 open voltage is set to 538V, MPPT point voltage is set to 430V, The maximum power point power is 4.5k, the open circuit voltage of PV branch 3 is set to 538V, the MPPT point voltage is set to 430V, and the maximum	 s72

<p>power point power is set to 15k. The machine is in steady state operation, and the actual power point is at the maximum efficiency point of MPPT during operation. The input and output voltage and current waveforms are normal, and no abnormal phenomenon occurs during the test.s72</p>	
<p>Bus side voltage 1000V, PV side branch 1 open voltage is set to 750V, MPPT point voltage is set to 600V, maximum power point power is set to 15k, PV side branch 2 open voltage is set to 538V, MPPT point voltage is set to 430V, The maximum power point power is 15k, the open circuit voltage of PV branch 3 is set to 538V, the MPPT point voltage is set to 430V, and the maximum power point power is set to 15k. The machine runs steady-state, and the actual power points during operation are all at the maximum efficiency point of MPPT. The input and output voltage and current waveforms are normal, and no abnormal phenomena occur during the test.s75</p>	<p>s75</p> 
<p>Bus side voltage 1000V, PV side branch 1 open voltage is set to 750V, MPPT point voltage is set to 600V, maximum power point power is set to 4.5k, PV side branch 2 open voltage is set to 538V, MPPT point voltage is set to 430V, The maximum power point power is 15k, the open circuit voltage of PV branch 3 is set to 538V, the MPPT point voltage is set to 430V, and the maximum power point power is set to 15k. The machine runs steady-state, and the actual power points during operation are all at the maximum efficiency point of MPPT. The input and output voltage and current waveforms are normal, and no abnormal phenomena occur during the test.s76</p>	<p>s76</p> 
<p>Bus side voltage 1000V, PV side branch 1 open voltage is set to 1000V, MPPT point voltage is set to 830V, maximum power point power is set to 15k, PV side branch 2 open voltage is set to 538V, MPPT point voltage is set to 430V, The maximum power point power is 4.5k, the open circuit voltage of PV branch 3 is set to 538V, the MPPT point voltage is set to 430V, and the maximum power point power is set to 4.5k. The machine runs steady-state, and the actual power point is at the maximum efficiency point of MPPT during operation. The input and output voltage and current waveforms are normal, and no abnormal phenomenon occurs during the test.s82</p>	<p>s82</p> 
<p>Bus side voltage 1000V, PV side branch 1 open voltage is set to 1000V, MPPT point voltage is set to 830V, maximum power point power is set to 15k, PV side branch 2 open voltage is set to 1000V, MPPT point voltage is set to 830V, The maximum power point power is 15k, the open circuit voltage of PV branch 3 is set to 1000V, the MPPT point voltage is set to 830V, and the maximum</p>	<p>s88</p> 

<p>power point power is set to 15k. The machine runs steady-state, and the actual power point is at the maximum efficiency point of MPPT during operation. The input and output voltage and current waveforms are normal, and no abnormal phenomenon occurs during the test.s88</p>	
<p>Bus side voltage 1000V, PV side branch 1 open voltage is set to 250V, MPPT point voltage is set to 200V, maximum power point power is set to 2k, PV side branch 2 open voltage is set to 1000V, MPPT point voltage is set to 830V, The maximum power point power is 15k, the open circuit voltage of PV branch 3 is set to 1000V, the MPPT point voltage is set to 830V, and the maximum power point power is set to 15k. The machine runs steady-state, and the actual power point is at the maximum efficiency point of MPPT during operation. The input and output voltage and current waveforms are normal, and no abnormal phenomenon occurs during the test.s101</p>	<p>s101</p> 
<p>Bus side voltage 1000V, PV side branch 1 open voltage is set to 250V, MPPT point voltage is set to 200V, Max power point power is set to 2k, PV side branch 2 open voltage is set to 250V, MPPT point voltage is set to 200V, Max power point power is set to 2k, PV side branch 3 open voltage is set to 250V, The MPPT point voltage is set to 200V, the maximum power point is 2k, the machine is running steady-state, the actual power point during operation is at the maximum efficiency point of MPPT, the input and output voltage and current waveforms are normal, and no abnormal phenomenon occurs during the test.s116</p>	<p>s116</p> 
<p>Bus side voltage 700V, PV side branch 1 open voltage is set to 770V, MPPT point voltage is set to 616V, maximum power point power is set to 15k, PV side branch 2 open voltage is set to 770V, MPPT point voltage is set to 616V, maximum power point power is set to 15k, PV side branch 3 open voltage is set to 770V, The MPPT point voltage is set to 616V, the maximum power point is 15k, and the machine runs steady-state. The actual power point during operation is at the maximum efficiency point of MPPT. The input and output voltage and current waveforms are normal, and no abnormal phenomenon occurs during the test.s131</p>	<p>s131</p> 
Test problem	No
Test conclusion	Pass