

**C E R T I F I C A T E**  
of Conformity



**Registration No.:** AK 60122388 0001

**Report No.:** 28110633 014

**Holder:** Power - One Italy S.p.A.  
Via San Giorgio 642  
52028 Terranuova Bracciolini AR  
Italia

**Product:** Electrical Equipment  
Solar Grid Tied Inverter

**Identification:** Trademark: ABB  
Model: TRIO-TM-50.0-400  
TRIO-TM-60.0-480

**Tested acc. to:** IEC 61683:1999  
EN 61683:2000  
CEI EN 61683:2010

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Date 03.08.2017

Certification Body

  
Marco Piva



**TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg**

<b>TABLE 4.a Efficiency measurement conditions</b>				
<b>Test</b>	<b>Vac [V]</b>	<b>Freq [Hz]</b>	<b>Tamb [°C]</b>	<b>Vdc [V]</b>
A1	230.0	50.00	25.0	420.0
A2	230.0	50.00	25.0	480.0
A3	230.0	50.00	25.0	620.0
A4	230.0	50.00	25.0	800.0
A5	230.0	50.00	25.0	900.0

<b>TABLE 4.b test results for TRIO-TM-50.0-400(*)</b>					
<b>Test</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>
Max Efficiency (Eff_peak)	<b>97.46</b>	<b>97.61</b>	<b>98.42</b>	<b>97.97</b>	<b>97.75</b>

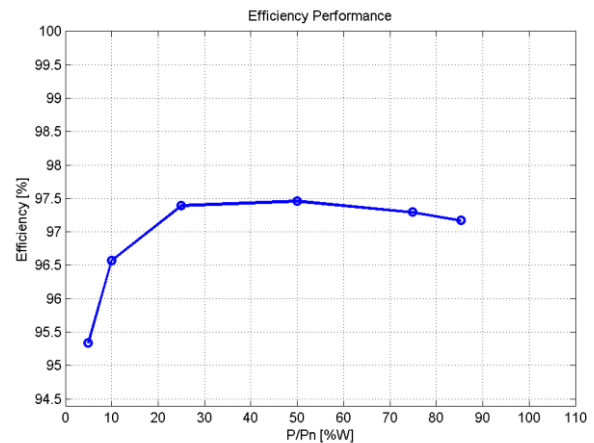
<b>TABLE 4.c test results for TRIO-TM-60.0-480(*)</b>					
<b>Test</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>
Max Efficiency (Eff_peak)	<b>97.66</b>	<b>97.80</b>	<b>98.61</b>	<b>98.49</b>	<b>98.24</b>

NOTE (\*): Test performed on the most complex version

**TABLE 5A: TEST RESULTS FOR TRIO-TM-50.0-400**

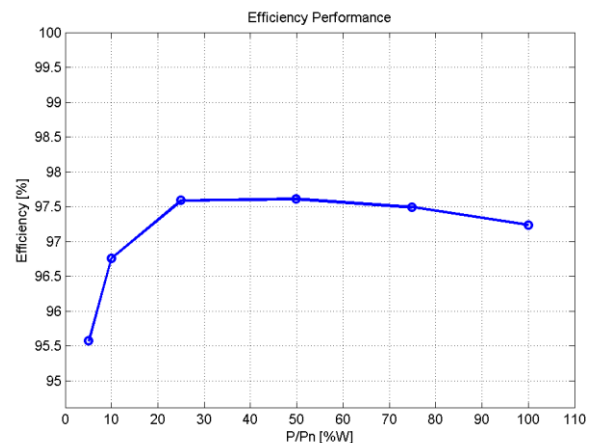
**Test A1**

P/Pn [%W]	Pin_Tot	Efficiency [%]
85.3	43880.0	97.171
74.9	38504.3	97.294
50.0	25629.6	97.462
25.0	12823.2	97.396
9.9	5129.1	96.573
4.9	2569.4	95.339



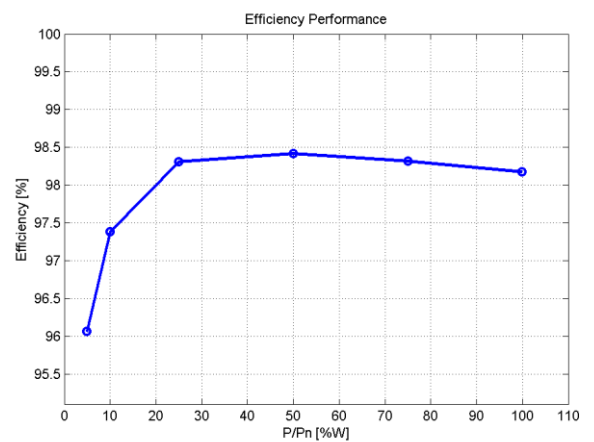
**Test A2**

P/Pn [%W]	Pin_Tot	Efficiency [%]
100.0	51410.0	97.238
74.9	38421.0	97.496
49.9	25569.9	97.612
25.0	12794.3	97.590
9.9	5123.3	96.759
5.0	2595.2	95.572

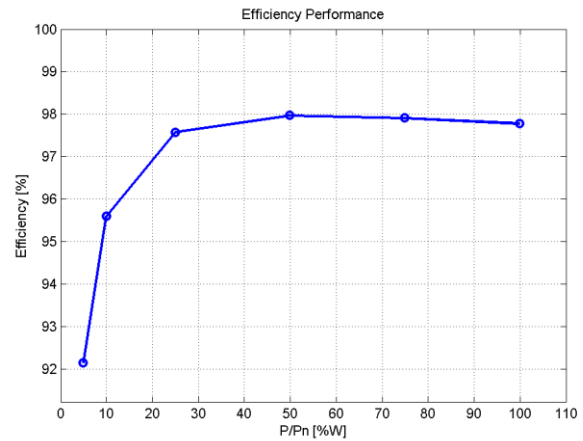


**Test A3**

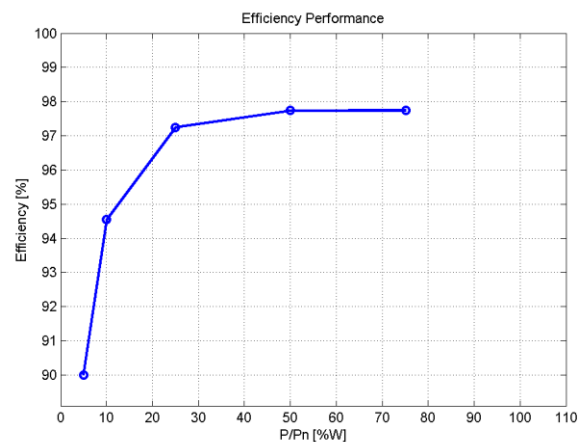
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	50886.9	98.179
75.0	38130.0	98.320
50.0	25410.0	98.423
25.0	12725.4	98.313
10.0	5141.1	97.388
4.9	2575.9	96.065



Test A4		
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	51096.6	97.786
74.9	38270.1	97.916
49.9	25489.4	97.975
24.9	12773.1	97.580
9.9	5196.1	95.604
4.9	2678.8	92.157

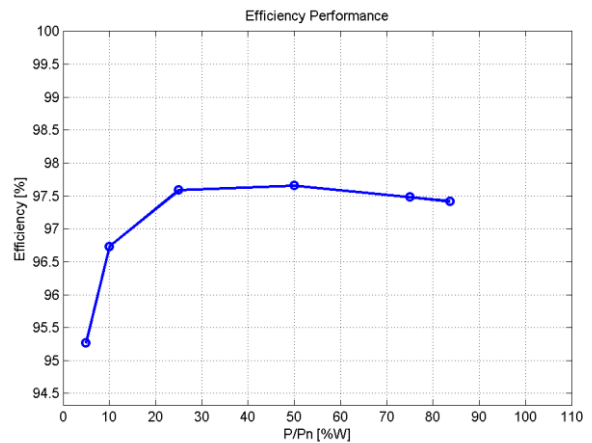


Test A5		
P/Pn [%W]	Pin_Tot	Efficiency [%]
75.1	38428.6	97.748
75.1	38428.6	97.748
50.0	25578.8	97.742
25.0	12865.2	97.243
10.0	5289.8	94.543
5.0	2771.6	89.997

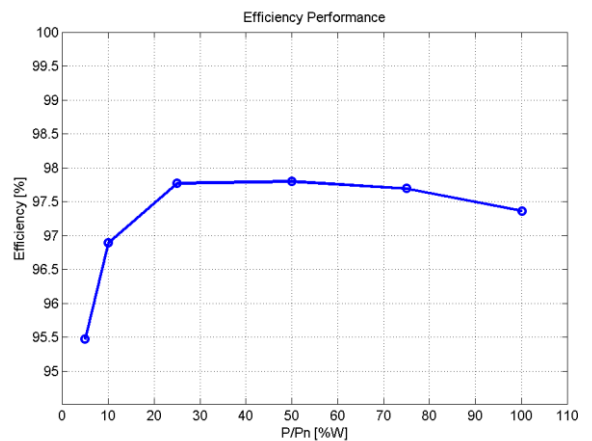


**TABLE 5B: TEST RESULTS FOR TRIO-TM-60.0-480**

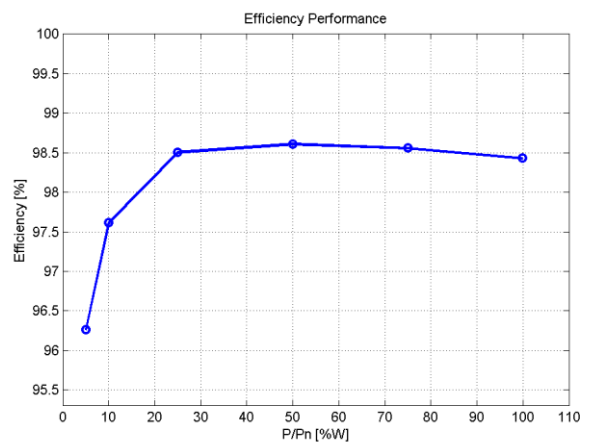
Test A1		
P/Pn [%W]	Pin_Tot	Efficiency [%]
83.7	51555.6	97.420
75.0	46151.6	97.485
50.0	30703.8	97.657
25.0	15386.6	97.592
10.0	6189.0	96.732
4.9	3107.5	95.268

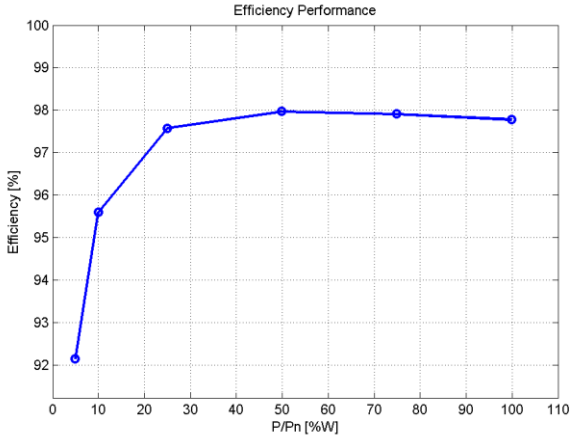
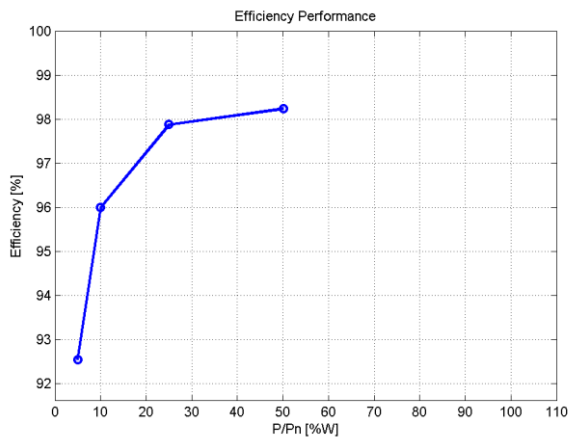


Test A2		
P/Pn [%W]	Pin_Tot	Efficiency [%]
100.1	61677.3	97.367
75.0	46063.2	97.697
50.0	30659.4	97.803
25.0	15338.4	97.777
10.0	6171.7	96.897
4.9	3108.9	95.474



Test A3		
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	60918.0	98.432
75.0	45640.9	98.559
50.0	30436.5	98.614
25.0	15239.1	98.508
10.0	6144.1	97.621
5.0	3137.6	96.261



Test A4			
P/Pn [%W]	Pin_Tot	Efficiency [%]	
100.0	61006.2	98.303	
75.0	45704.5	98.426	
50.0	30484.0	98.491	
24.9	15220.6	98.273	
10.0	6182.7	97.023	
5.0	3134.2	94.764	
Test A5			
P/Pn [%W]	Pin_Tot	Efficiency [%]	
50.1	30613.1	98.242	
50.1	30613.1	98.242	
50.1	30613.1	98.242	
25.0	15339.1	97.876	
10.0	6271.4	95.998	
5.0	3236.3	92.549	

Devices above listed are also compliant to the IEC 61683:1999 and CEI EN 61683:2010 requirements. These standards are completely the same of EN 61683:2000 without any additional requirements.