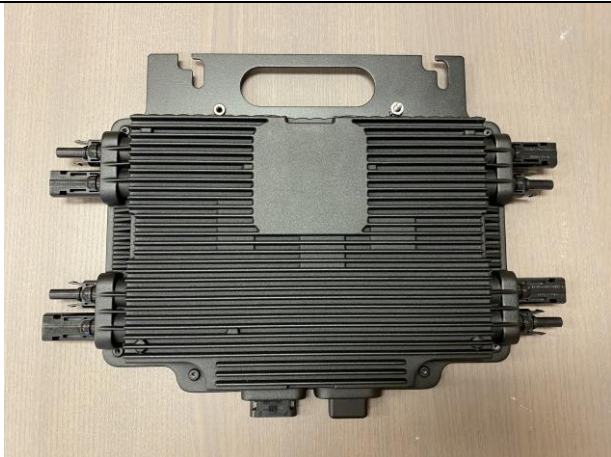




<b>Test report no.:</b> <i>Prüfbericht Nr.:</i>	<b>32295992.003</b>	<b>Order No.:</b> <i>Auftrags-Nr.:</i>	<b>234208309</b>	Page 1 of 4 <i>Seite 1 von 4</i>
<b>Client Reference No.:</b> <i>Kunden-Referenz-Nr.:</i>	<b>2228455</b>	<b>Order date:</b> <i>Auftragsdatum:</i>	2023-10-11	
<b>Client:</b> <i>Auftraggeber:</i>	Sparq			
<b>Test item:</b> <i>Prüfgegenstand:</i>	Grid Support Utility Interactive PV micro-inverter			
<b>Identification/ Type No.:</b> <i>Bezeichnung / Typ-Nr.</i>	Q2000-4102			
<b>Order content:</b> <i>Auftrags-Inhalt:</i>	Update nameplate			
<b>Test specification:</b> <i>Prüfgrundlage:</i>	IEC 62109-1:2010 (First Edition)  IEC 62109-2:2011			
<b>Date of sample receipt:</b> <i>Wareneingangsdatum:</i>	N/A			
<b>Test sample No:</b> <i>Prüfmuster-Nr.:</i>	N/A			
<b>Testing period:</b> <i>Prüfzeitraum:</i>	N/A			
<b>Place of testing:</b> <i>Ort der Prüfung:</i>	See next page			
<b>Testing laboratory:</b> <i>Prüflaboratorium:</i>	See next page			
<b>Test result*:</b> <i>Prüfergebnis*:</i>	N/A			
<b>tested by: Zhiyong Hu</b> <i>geprüft von:</i>	<b>authorized by: Howard Liu</b> <i>genehmigt von:</i>			
<b>Date:</b> 2023-10-13 <i>Datum:</i>	<b>Issue Date:</b> 2023-10-13 <i>Ausstellungsdatum:</i>			
<b>Position / Stellung:</b> Expert	<b>Position / Stellung:</b> Manager			
<b>Other /</b> <i>Sonstiges:</i>	Update nameplate without any ratings change. No new certificate issued.			
<b>Condition of the test item at delivery:</b> <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>	Test item complete and undamaged			
<p>* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested</p> <p>* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet</p> <p><b>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</b></p> <p><i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i></p>				

<b>TEST REPORT</b> <b>IEC 62109-1</b> <b>Safety of Power Converter for use in Photovoltaic Power Systems</b> <b>Part 1: General requirements</b> <b>IEC 62109-2</b> <b>Safety of Power Converter for use in Photovoltaic Power Systems</b> <b>Part 2: Particular requirements for inverters</b>	
<b>Report Number..... :</b>	32295992.003
<b>Date of issue..... :</b>	2023-10-12
<b>Total number of pages .....</b>	4
<b>Name of Testing Laboratory .....</b>	TÜV Rheinland of North America, Inc.
<b>Address..... :</b>	295 Foster Street, Suite 100, Littleton, MA 01460
<b>Applicant's name .....</b>	Sparq
<b>Address..... :</b>	945 Princess St, Box 212, Kingston ON K7L 0E9, Canada
<b>Test specification:</b>	
<b>Standard .....</b>	IEC 62109-1:2010 (First Edition), IEC 62109-2:2011
<b>Test procedure .....</b>	T mark
<b>Non-standard test method .....</b>	N/A
<b>Test Report Form No. .... :</b>	IEC62109_1B
<b>Test Report Form(s) Originator .... :</b>	VDE Testing and Certification Institute
<b>Master TRF .....</b>	Dated 2016-04
<b>Copyright © 2016 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved.</b> This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.	
<b>General disclaimer:</b>	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	
Others: See cover page	

<b>Test item description</b> ..... :	Grid support Utility Interactive PV micro-inverter
<b>Trade Mark</b> ..... :	SPARQ
<b>Manufacturer</b> .....	Sparq, 945 Princess Street, Kingston ON K7L 0E9, Canada
<b>Model/Type reference</b> .....	Q2000-4102
<b>Ratings</b> .....	See copy of marking plate


**Copy of marking plate:**




**SPARQ**

**QUAD Microinverter**  
(Grid Support Utility Interactive Inverter)

Conforms to UL Std  
1741, 1741SA, Rule21,  
Rule14H, Cert. to CSA  
Std. C22.2 #107.1





IEC 62109-1  
IEC 62109-2

www.tuv.com  
ID 0007000000

**DC Input (4 PV Panels\*):**

Voltage Range **20-60V**

Max Current **16A**


P/N **Q2000-4102**


S/N XXXXXXXXXX

Mfg. Date XXXXXX


Config. Option XXXXXX

\*Compatible with up to 680W+ modules.



 Hot Surface

Protection: IP67

 Complies with CAN ICES-3  
Contains FCC ID: QOQGM210P IC ID: 5123A-GM210P

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**AC Output:**

Nominal Voltage **208V/230V/240V**

Nominal Current **8.2A/7.4A/7.1A**

Nominal Frequency **60Hz/50Hz**

Nominal Power **1720W**

Power Factor **0 to +/- 0.999**

Temperature **-40 to +65°C**

**WARNING:** Dual supply. Isolate both AC & DC before carrying out work. Hot surfaces. To reduce the risk of burns, do not touch. Environmental enclosure Type 6.

**ATTENTION:** Contient courants CA et CC. Déconnecter les circuits individuellement avant l'entretien. Surfaces chaudes. Ne pas touchez afin de réduire les risques de brûlures. Boîtier environnemental normalisée Type 6.

**Report History**

- 32295992.001 Original report, a new certificate T72228212 issued.
- 32295992.002 Deleted one factory and added a new factory. A new certificate page issued.
- 32295992.003
  - Updated nameplate by changing from "Compatible with up to 550W modules" to "Compatible with up to 680W+ modules".
  - No ratings changed.
  - No new certificate issued.

-----End of Report-----