



Test Certificate No.: 9812308843
In accordance with Clause 12 of the Standards Law – 1953

Details of order:

Name of customer	: Bureau Veritas Consumer Product Services Germany GmbH
Address	: Businesspark A96, 86842 Türkheim, Germany
Date of order	: 22/03/2018

Description of sample:

Grid-tied photovoltaic inverter Models	: Powador 39.0 TL3-M1 Powador 39.0 TL3 – M- INT Powador 39.0 TL3 - XL - F - SPD 1+2 Powador 39.0 TL3 - XL INT Powador 48.0 TL3 - M - INT - Park Powador 48.0 TL3 - XL - F - SPD 1+2 – Park Powador 60.0 TL3 - M - INT Powador 60.0 TL3 – XL - INT Powador 60.0 TL3 – XL – F - SPD 1+2 Powador 72.0 TL3 – M – INT - Park Powador 72.0 TL3 – XL – INT - Park Powador 72.0 TL3 – XL – F – SPD 1+2 - Park
Manufacturer	: Kaco new energy GmbH
Country of origin	: Germany
(see additional product information on pages 3-33)	

Sampling details:

No sample required.

Nature of test:

Review of test reports Ref. No.: 12TH0351-IEC62109-1_6, 12TH0351-IEC62109-2_5 dated 13/10/17, and 12TH0351-SI/NZS4777_1 dated 15/02/2018, issued by Bureau Veritas Consumer Products Services, Germany GmbH for the above-specified solar inverter models according to the following standards: IEC/EN 62109-1: 2010 – Safety of power converters for use in photovoltaic power system – Part 1: General requirements IEC/EN 62109-2: 2011 – Safety of power converters for use in photovoltaic power system – Part 2: Particular requirements for inverters AS/NZS 4777.2: 2005 - Grid connection of energy systems via inverters: Inverter requirements; AS/NZS 4777.3: 2005 - Grid connection of energy systems via inverters: Grid protection requirements, with Deviations for Israel according to the Guidelines for Importers, Installers and Owners of Electricity Generating Systems Using Photo-Voltaic Technology, regarding Adjustment of Photo-Voltaic Inverters: 2013

This document contains 33 pages and may be used only in full.	The test results in this report refer only to the item tested.	This document alone is not sufficient for the release of goods from customs.
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Test Conclusions:

Based on the information provided in the above mentioned test reports, the above-specified solar inverter models comply with the Israeli requirements for grid-tied photovoltaic inverters.
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ADDITIONAL PRODUCT INFORMATION

Ratings..... :	Powador 39.0 TL3 - M 1		
Hardware version	SN: 60.0TL01578740 HW: LP339G, LP296E, LP297E, LP298C, LP264I, LP340D		
Firmware version (tested)	PKT: V4.12; ARM: V5.10; CFG: V6.0692; DSP-AC: V4.11, DSP-DC: V4.02		
MPP DC voltage range [V]	340 – 800		
Input DC voltage range [V]	200 – 950		
Input DC current [A]	102		
Output AC voltage [V].....	400 / 230 (3 / N / PE)		
Output AC current [A]	3 x 51,1		
Output power [VA]	33300 nom. / 34600 max.		
Ratings..... :	Powador 39.0 TL3 - M - INT	Powador 39.0 TL3 - XL - F - SPD 1+2	Powador 39.0 TL3 - XL INT
Hardware version	SN: 60.0TL01578740 HW: LP339G, LP296E, LP297E, LP298C, LP264I, LP340D		
Firmware version (tested)	PKT: V4.12; ARM: V5.10; CFG: V6.0692; DSP-AC: V4.11, DSP-DC: V4.02		
MPP DC voltage range [V]	340- 800		
Input DC voltage range [V]	200 - 950		
Input DC current [A]	3 x 34,0		
Output AC voltage [V].....	400 / 230 (3 / N / PE);48-62Hz		
Output AC current [A]	3 x 51,1		
Output power [VA]	33300 nom. / 34600 max.		
Ratings..... :	Powador 48.0 TL3 - M - INT - Park	Powador 48.0 TL3 - XL - F - SPD 1+2 - Park	
Hardware version	SN: 60.0TL01578740 HW: LP339G, LP296E, LP297E, LP298C, LP264I, LP340D		
Firmware version (tested)	PKT: V4.12; ARM: V5.10; CFG: V6.0692; DSP-AC: V4.11, DSP-DC: V4.02		
MPP DC voltage range [V]	340- 800		
Input DC voltage range [V]	200 - 950		
Input DC current [A]	3 x 34		
Output AC voltage [V].....	480 / 277 (3 / N / PE);48-62Hz		
Output AC current [A]	3 x 51,1		
Output power [VA]	40000 nom. / 41600 max.		

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Ratings..... :	Powador 60.0 TL3 - M - INT	Powador 60.0 TL3 - XL - INT	Powador 60.0 TL3 - XL - F - SPD 1+2
Hardware version	SN: 60.0TL01578740 HW: LP339G, LP296E, LP297E, LP298C, LP264I, LP340D		
Firmware version (tested)	PKT: V4.12; ARM: V5.10; CFG: V6.0692; DSP-AC: V4.11, DSP-DC: V4.02		
MPP DC voltage range [V]	480- 850		
Input DC voltage range [V]	200 - 950		
Input DC current [A]	3 x 36		
Output AC voltage [V].....	480 / 230 (3 / N / PE)		
Output AC current [A]	3 x 76,5		
Output power [VA]	50000 nom. / 52000 max.		
Ratings..... :	Powador 72.0 TL3 - M - INT - Park	Powador 72.0 TL3 - XL - INT - Park	Powador 72.0 TL3 - XL - F - SPD 1+2 - Park
Hardware version	SN: 60.0TL01578740 HW: LP339G, LP296E, LP297E, LP298C, LP264I, LP340D		
Firmware version (tested)	PKT: V4.12; ARM: V5.10; CFG: V6.0692; DSP-AC: V4.11, DSP-DC: V4.02		
MPP DC voltage range [V]	580- 850		
Input DC voltage range [V]	200 - 950		
Input DC current [A]	3 x 36		
Output AC voltage [V].....	480 / 277 (3 / N / PE)		
Output AC current [A]	3 x 76,5		
Output power [VA]	60000 nom. / 62400 max.		

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APPENDIX
List of Critical Components
(28 pages attached)

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