



**BUREAU
VERITAS**

Certificate of compliance

Applicant: Kaco new energy GmbH
Carl-Zeiss-Straße 1
74172 Neckarsulm
Germany

Product: Grid-tied photovoltaic inverter

Model: Powador 20.0TL3 INT

Use in accordance with regulations:

Automatic disconnection device with three-phase mains surveillance in accordance with IEC 61727:2004 and IEC62116:2008 for photovoltaic systems with a three-phase parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the aforementioned inverters.

Applied rules and standards:

IEC 61727:2004

Photovoltaic (PV) systems – Characteristics of the utility interface

IEC 62116:2008

Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters

IEEE 1547:2003, IEEE 1547.1:2005 (harmonics, d.c.-injection, voltage and frequency disconnection, reconnection)

IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

AS 4777.3:2005 (grid protection requirements)

Grid connection of energy systems via inverters – inverter requirements and grid protection requirements

The following deviations for Thailand were applied:

Electricity Grid System Connection Requirements B.E. 2551 of Provincial Electricity Authority (PEA 2013) with attachment for Proclamation No. 6.2 for plants till and above 500kW:

under voltage limit (level 1): 198,0V

under voltage limit (level 2): 110,0V

over voltage limit (level 1): 242,0V

overvoltage limit (level 2): 264,0V

lower frequency limit: 47,9Hz

upper frequency limit: 51,1Hz

loss of main detection limit: 2s

At the time of issue of this certificate the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

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Certification body

Dieter Zitzmann



Deutsche
Akkreditierungsstelle
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Certification body of Bureau Veritas Consumer Products Services Germany GmbH
Accredited according to EN 45011 - ISO / IEC Guide 65