



**BUREAU
VERITAS**

Certificate of compliance

Applicant: KACO new energy GmbH
Carl-Zeiss-Str. 1
74172 Neckarsulm
Germany

Product: Grid-tied photovoltaic inverter

Model: Powador 39.0 TL3 - M - INT
Powador 39.0 TL3 - M1
Powador 39.0 TL3 - XL - INT
Powador 39.0 TL3 - XL - INT - SPD 1+2
Powador 39.0 TL3 - XL - F - INT
Powador 39.0 TL3 - XL - F - SPD 1+2

Use in accordance with regulations:

Automatic disconnection device with three -phase mains surveillance in accordance with IEC 61727:2004 and IEC62116:2014 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 62116:2014

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 4777.32005 (grid protection requirements)

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

The following deviations for Thailand were applied:

Grid-Connected Inverter Regulation of Metropolitan Electricity Authority (MEA 2013):

*under voltage limit (level 1): 199,0V
under voltage limit (level 2): 114,0V
over voltage limit (level 1): 241,0V
overvoltage limit (level 2): 286,0V
lower frequency limit: 48,9Hz
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.

Report number: 10TH0307-IEC61727_0
Certificate number: U16-0521
Date of issue: 2016-09-19

Certification body



Dieter Zitzmann



Certification body of Bureau Veritas Consumer Products Services Germany GmbH
Accredited according to DIN EN ISO/IEC 17065