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Certification body of BV CPS GmbH  
Accredited according to EN 45011 -  
ISO / IEC Guide 65

## Certificate of compliance

**Applicant:** ABB Oy Power Conversion  
Hiomotie 13  
FI-00380 Helsinki  
**FINLAND**

**Product:** Grid-tied photovoltaic inverter

**Model:** PRO-33.0-TL-OUTD-400  
PRO-33.0-TL-OUTD-S-400  
PRO-33.0-TL-OUTD-SX-400

### 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: 48,0Hz  
upper frequency limit: 51,0Hz  
loss of main detection limit: 300ms

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:** 13TH0463-IEC61727\_PEA

**Certificate number:** U14-0349

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**Certification body**



QUALITY



HEALTH SAFETY

Dieter Zitzmann



ENVIRONME...



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ACCOUNTABILITY