

# Type Certificate

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

<b>Type of power generating unit:</b>	<b>Grid-tied photovoltaic inverter</b>	<b>PRO-33.0-TL-OUTD-400 PRO-33.0-TL-OUTD-S-400 PRO-33.0-TL-OUTD-SX-400</b>
<b>Technical data:</b>	Nominal apparent power:	33,0 kVA
	Nominal active power	33,0 kW
	Active power: ( $\cos\varphi = 0,95$ ; $U = 0,95 U_n$ )	31,3 kW
	Nominal voltage:	400 V, 3P+PE (N optional*)
	Nominal frequency:	50 Hz

**Firmware version:** **V1.61.0.1**

**Grid connection regulation:** **BDEW guideline „Generating Plants connected to the Medium-Voltage Network“**  
Guideline for generating plants' connection to and parallel operation with the medium-voltage network, 2008 and amendment up to 1/2013

**Pertinent standards / Guidelines:** DIN EN 61400-21:2008  
Technical guidelines:  
FGW TG 3 Rev. 23, FGW TG 4 Rev. 7, FGW TG 8 Rev. 6

The power generating unit, stated in the certificate, was tested and certified according to the technical guidelines referenced to in the grid connection regulation. The electrical characteristics fulfill the requirements of the grid connection regulation:

- Generation and control of active and reactive power
- Generating unit's reaction to system incidents (Reactive current characteristic according to TransmissionCode 2007)
- Protection on generating unit level (Note in appendix p.38)\*\*
- Report of power quality
- Validated type model: ABB PRO-33 TL v1\_5-ABB-3RD PF14.1 2014-11-03-03

The manufacturer has proven the certification of his quality management system according to ISO 9001.

\* The measurements were conducted with neutral connected.

\*\* A connecting terminal plate has to be installed separately if necessary.

**The certificate includes the following information:**

- Technical data of the power generating unit, additional components and implemented software versions
- The schematic layout of the power generating unit
- Summarized information on the characteristic of the power generating unit

**BV project number:** **13TH0463**

**Certificate no.:** **14-114\_0**

**Issued:** **2014-11-26**

**Valid until:**

**2019-11-16**

**Zertifizierungsstelle**



Dieter Zitzmann

(Eine auszugsweise Darstellung des Zertifikats bedarf der schriftlichen Genehmigung der Bureau Veritas Consumer Products Services Germany GmbH.)



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

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