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# Certificate of compliance

**Applicant:** Zucchetti Centro Sistemi SpA  
Via Lungarno 305/A  
52028 Terranuova Bracciolini (AR)  
Italy

**Product:** Photovoltaic (PV) inverter

**Model:** AZZURRO 3PH 15000TL-V3  
AZZURRO 3PH 17000TL-V3  
AZZURRO 3PH 20000TL-V3  
AZZURRO 3PH 22000TL-V3  
AZZURRO 3PH 24000TL-V3

Inverter for three-phase parallel connection to the public grid. The network monitoring and disconnection device is an integral part of the above-mentioned model.

## Applied rules and standards:

### EN 50549-1:2019, I.S. EN 50549-1:2019

Requirements for parallel connection of installations with distribution networks - Part 1: Connection to an LV distribution network - Production of installations up to and including Type B

- 4.4 Normal operating range
- 4.5 Immunity to disturbances
- 4.6 Active response to frequency deviation
- 4.7 Power response to voltage variations and voltage changes
- 4.8 EMC and power quality
- 4.9 Interface protection
- 4.10 Connection and starting to generate electrical power
- 4.11 Ceasing and reduction of active power on set point
- 4.13 Requirements regarding single fault tolerance of interface protection system and interface switch

### EN 50438:2013, I.S. EN 50438:2013

Requirements for micro-generating plants to be connected in parallel with public low-voltage distribution networks

### DIN V VDE V 0126-1-1:2006 (4.1 Functional safety)

Automatic disconnection device between a generator and the public low-voltage grid

At the time of issue of this certificate, the representative product listed above corresponds to the stated rules and standards.

**Report number:** 21TH0192-EN50549-1\_IRE\_ZCS\_0      **Certification program:** NSOP-0032-DEU-ZE-V01  
**Certificate number:** U22-0150      **Date of issue:** 2022-03-09

**Certification body**

Thomas Lammel

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

*Testing laboratory accredited according to DIN EN ISO/IEC 17025*

*A partial representation of the certificate requires the written permission of Bureau Veritas Consumer Products Services Germany GmbH*





# Annex to the EN 50549-1 certificate of compliance No. U22-0150

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## Appendix

Extract from test report according to EN 50549-1 No. 21TH0192-EN50549-1\_IRE\_ZCS\_0

### Type Approval and declaration of compliance with the requirements of EN 50549-1 and Commission Regulation (EU) 2016/631 of 14 April 2016

<b>Manufacturer / applicant</b>	Zucchetti Centro Sistemi SpA Via Lungarno 305/A 52028 Terranuova Bracciolini (AR) Italy
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Micro-generator Type	Photovoltaic inverter			
	AZZURRO 3PH 15000TL-V3	AZZURRO 3PH 17000TL-V3	AZZURRO 3PH 20000TL-V3	AZZURRO 3PH 22000TL-V3
<b>MPP DC voltage range [V]</b>	140-1000			
<b>Input DC voltage range [V]</b>	Max. 1100			
<b>Input DC current [A]</b>	26,0 / 26,0			
<b>Output AC voltage [V]</b>	380-400V 50/60Hz			
<b>Output AC current [A]</b>	23,9	27,1	31,9	35,1
<b>Output power [kVA]</b>	16,5	18,7	22,0	24,2
	AZZURRO 3PH 24000TL-V3	--	--	--
<b>MPP DC voltage range [V]</b>	140-1000	--	--	--
<b>Input DC voltage range [V]</b>	Max. 1100	--	--	--
<b>Input DC current [A]</b>	26,0 / 26,0	--	--	--
<b>Output AC voltage [V]</b>	380-400V 50/60Hz	--	--	--
<b>Output AC current [A]</b>	38,3	--	--	--
<b>Output power [kVA]</b>	26,4	--	--	--

<b>Firmware version</b>	V010000
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**Description of the structure of the power generation unit:**  
 The power generation unit is equipped with a PV and line-side EMC filter. The power generation unit has no galvanic isolation between DC input and AC output. Output switch-off is performed with single-fault tolerance based on the inverter bridge and two series-connected relays in each line and neutral. This enables a safe disconnection of the power generation unit from the network in case of error.

**Note:**  
 The settings of the interface protection are password protected adjustable.  
 In case the above stated generators are used with an external protection device, the protection settings of the inverters are to be adjusted according to the manufacturer's declaration.  
 The above stated generators are tested according to the requirements in the EN 50549-1:2019 Commission Regulation (EU) 2016/631 of 14 April 2016. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements.