



Certificate of conformity NS protection																
Manufacturer	Power One Italy S.p.a															
Type of NS protection	See Table 1															
Integrated NS protection assigned to power generation unit type	See Table 1															
Network connection rule	VDE-AR-N 4105 “Power generation systems connected to the low-voltage network” Technical minimum requirements for connection and parallel operation of power generation systems connected to the low-voltage network															
The network and system protection integrated in the power generation units listed in Table 1 meets the requirements of VDE-AR-N 4105.																
The setting values and disconnection times (total break times) of the protective functions are as follows:																
<table border="0"> <tr> <td>Voltage drop protection U < :</td> <td>184 V</td> <td>< 200ms</td> </tr> <tr> <td>Rise-in-voltage protection U > (*):</td> <td>253 V</td> <td>< 200ms</td> </tr> <tr> <td>Rise-in-voltage protection U >>:</td> <td>264,5 V</td> <td>< 200ms</td> </tr> <tr> <td>Frequency decrease protection f <:</td> <td>47,5 Hz</td> <td>< 200ms</td> </tr> <tr> <td>Frequency increase protection f >:</td> <td>51,5Hz</td> <td>< 200ms</td> </tr> </table>		Voltage drop protection U < :	184 V	< 200ms	Rise-in-voltage protection U > (*):	253 V	< 200ms	Rise-in-voltage protection U >>:	264,5 V	< 200ms	Frequency decrease protection f <:	47,5 Hz	< 200ms	Frequency increase protection f >:	51,5Hz	< 200ms
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(*) moving 10-minute average protection acc. EN 50160																
<ul style="list-style-type: none"> - All requirements of VDE-AR-N 4105 are fulfilled and have been confirmed via type tests conducted in Power One and witnessed by an accredited certification institute. - The conformity is ensured for all Power One inverter products with model name and firmware version as listed in Table 1. 																
Terranuova Bracciolini, 18.01.2012																
Power One Italy S.p.A  Dr. Marco Trova (Director of Technical Sales)																
This certificate of conformity shall not be used in parts. Power-One Italy S.p.a. Via San Giorgio, 642 – 52028 Terranuova Bracciolini – Arezzo – Italy Web Site: www.power-one.com																

VDE-AR-N 4105 Certificate of conformity for the NS protection integrated in the inverters

Inverter model	Maximum active power P_{Emax}	Maximum apparent power S_{Emax}	AC reference voltage	Fulfill VDE-AR-N 4105 requirements from firmware version
PVI-3.0-TL-OUTD	3.0 kW	3.16 kVA	230 V	A.3.0.1 ; B.3.0.B ; C.0.3.3
PVI-3.6-TL-OUTD	3.6 kW	3.80 kVA	230 V	A.3.0.1 ; B.3.0.B ; C.0.3.3
PVI-4.2-TL-OUTD	4.2 kW	4.42 kVA	230 V	A.3.0.1 ; B.3.0.B ; C.0.3.3
PVI-10.0-OUTD-DE	10.0 kW	11 kVA	230 / 400 V	A.0.9.6 ; B.1.4.F ; C.0.0.6
PVI-12.5-OUTD-DE	12.5 kW	13.8 kVA	230 / 400 V	A.0.9.6 ; B.1.4.F ; C.0.0.6
PVI-20.0-TL-OUTD	20.0 kW	22.0 kVA	230 / 400 V	A.0.3.7 ; B.0.C.4 ; C.0.9.F
PVI-27.6-TL-OUTD	27.6 kW	30.0 kVA	230 / 400 V	A.0.3.7 ; B.0.C.4 ; C.0.9.F

Table 1: Power One inverters in compliance with VDE-AR-N 4105.

Revision: 0 / 18.01.2012