

Extract from Test report for NS protection: 28109456 001
 “Determination of electrical properties”

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Extract No: 2 _ Annex F.4 (VDE-AR-N 4105)

Table: Construction of the power generation system/network and system protection (NS-protection)			
Central NS protection			
NS protection as central NS protection		<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Type of NS protection	---	Other manufacturer's data	
Software version	---		
Manufacturer	---		

Measuring period	---		
Protection function	Setting value	Tripping Value	Tripping time NS protection
Voltage drop protection U <	0.8 * U _n	* U _n	- ms
Rise-in-voltage protection U >	1.1 * U _n	* U _n	- s
Rise-in-voltage protection U >>	1.15 * U _n	* U _n	- ms
Frequency decrease protection f <	47.5 Hz	Hz	- ms
Frequency increase protection f >	51.5 Hz	Hz	- ms
Integrated NS protection			
NS protection as integrated NS protection		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
Type of NS protection	Relay contacts	Other manufacturer's data	
Software version	Remark *	Assigned to PGU Type: TRIO-27.6 serie Integrated interface switch Type of switching equipment 1: Relay Type of switching equipment 2: Relay	
Manufacturer	Power-One Italy S.p.A Via San Giorgio 642, 52028 Terranuova Bracciolini - AR - Italy		
Measuring period	From 2011-12-13 to 2011-12-13		
Protection function	Setting value	Tripping Value	Break time
Voltage drop protection U <	0.8 * U _n	0.81 * U _n	195 ms
Rise-in-voltage protection U >	1.1 * U _n	1.1 * U _n	477 s
Rise-in-voltage protection U >>	1.15 * U _n	1.15 * U _n	199 ms
Frequency decrease protection f <	47.5 Hz	47.52 Hz	103 ms
Frequency increase protection f >	51.5 Hz	51.50 Hz	128 ms
proper time of interface switch	20 ms Max.		
The break time (sum of tripping time NS protection plus proper time of interface switch) shall not exceed 200ms. The verification of the full function chain “NS-protection – Interface switch” has yield to intended disconnection			

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Remark:

- (Approved for Solar version)
Booster (DSP) A.0.3.7 ; Inverter (DSP) B.0.C.4 ; Supervisor (uP) C.0.9.F
- (Approved for Wind version)
Booster (DSP): A.0.3.E - Inverter (DSP): B.0.F.D - Supervisor (uP): C.1.2.1
- (Approved Alternative for both versions)
Bundle Firmware Update Version: not less than 1422G standard selection: VDE 4105

This extract from the test report is only valid in conjunction with the test report no.: **28109456 001**

End of Annex