

Extract from Test report for NS protection: 28112188 015 rev.01  
 “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)			
<b>Central NS protection</b>			
<b>NS protection as central NS protection</b>		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
<b>Type of NS protection</b>	---	<b>Other manufacturer's data</b>	
<b>Software version</b>	---	---	
<b>Manufacturer</b>	---		
	---		
<b>Measuring period</b>		---	
<b>Protection function</b>	<b>Setting value</b>	<b>Tripping Value</b>	<b>Tripping time NS protection</b>
Voltage drop protection U <	0,8 U <sub>n</sub>	U <sub>n</sub>	- ms
Rise-in-voltage protection U >	1,1 U <sub>n</sub>	U <sub>n</sub>	- s
Rise-in-voltage protection U >>	1,15 U <sub>n</sub>	U <sub>n</sub>	- ms
Frequency decrease protection f <	47,5 Hz	Hz	- ms
Frequency increase protection f >	51,5 Hz	Hz	- ms
<b>Integrated NS protection</b>			
<b>NS protection as integrated NS protection</b>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
<b>Type of NS protection</b>	Circuit breaker	<b>Other manufacturer's data</b>	
<b>Software version</b>	1850F	Integrated interface switch Type of switching equipment 1: Contactor AF146-30 Series (1SFL467072R3210) Type of switching equipment 2: Switch XT4D 250 3p F F 800VAC + ACC (part number 1SDA105310R1)	
<b>Manufacturer</b>	ABB		
<b>Measuring period</b>		<b>20/08/2018 – 13/11/2018</b>	
<b>Protection function</b>	<b>Setting value</b>	<b>Tripping Value</b>	<b>Break time</b>
Voltage drop protection U <	0,8 U <sub>n</sub>	641.5 V	160 ms
Rise-in-voltage protection U >	1,1 U <sub>n</sub>	1.100 U <sub>n</sub>	451000 ms
Rise-in-voltage protection U >>	1,15 U <sub>n</sub>	920.45 V	190 ms
Frequency decrease protection f <	47,5 Hz	47.45 Hz	180 ms
Frequency increase protection f >	51,5 Hz	51.50 Hz	190 ms
proper time of interface switch	<5 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 U <sub>n</sub> = 800V NOTE: Test was carried out with the voltages phase to phase. Neutral not provided. Anti-Islanding test was not performed			

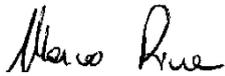
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This extract from the test report is only valid in conjunction with the test report no.: 28112188 015 rev.01

**Reviewed by:**



05/03/2019      Marco Piva / BFM

<b>Datum</b>	<b>Name/Stellung</b>	<b>Unterschrift</b>
<i>Date</i>	<i>Name/Position</i>	<i>Signature</i>