

"Determination of electrical properties"

 NS protection as central NS protection

Type of NS protection:

Other manufacturer's data

Software version:

Manufacturer:

Measuring period: from JJJJ-MM-TT to JJJJ-MM-TT

Protection function	Setting value	Tripping value	Tripping time NS protection ^a
Voltage drop protection $U <$	$0,8 * U_n$	$* U_n$	ms
Rise-in-voltage protection $U >$	$1,1 * U_n$	$* U_n$	ms
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

^a The tripping time comprises the period before limit violation U/f until tripping signal to interface switch.

During planning of power generation system the proper time of interface switch shall be added to the highest value of time determined above. The break time (sum of tripping time NS protection plus proper time of interface switch) shall not exceed 200 ms.

 NS protection as integrated NS protection

Type of NS protection: Steca-ENS

Other manufacturer's data

Software version: Net13_ENS_APP_0_26_0.upd

Manufacturer: Steca Elektronik GmbH
Mammostraße 1
87700 Memmingen
Germany

Assigned to PGU type:

Turbo 3P1
Turbo 3P2

x

Integrated interface switch

Type of Switching equipment 1

relay

Type of Switching equipment 2

relay

Measuring period: from 2011-08-01 to 2011-12-21

Protection function	Setting value	Tripping value	Tripping time NS protection ^a
Voltage drop protection $U <$	$0,8 * U_n$	$0,8 * U_n$	186 ms
Rise-in-voltage protection $U >$	$1,1 * U_n$	$1,1 * U_n$	< 200 ms
Rise-in-voltage protection $U >>$	$1,15 * U_n$	$1,15 * U_n$	190 ms
Frequency decrease protection $f <$	47,5 Hz	47,5 Hz	168 ms
Frequency increase protection $f >$	51,5 Hz	51,5 Hz	184 ms
proper time of interface switch		< 5 ms	

The break time (sum of tripping time NS protection plus proper time of interface switch) shall not exceed 200 ms. The verification of the full functional chain "NS protection – Interface switch" has yielded to intended disconnection..