

EUROPROT +

Residual definite time overvoltage protection function



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Residual definite time overvoltage protection function

The residual definite time overvoltage protection function operates according to definite time characteristics, using the RMS values of the fundamental Fourier component of the zero sequence voltage ($U_N=3U_0$).

The Fourier calculation inputs are the sampled values of the residual or neutral voltage ($U_N=3U_0$) and the outputs are the RMS value of the basic Fourier components of those.

The function generates start signal if the residual voltage is above the level defined by parameter setting value.

The function generates a trip command only if the definite time delay has expired and the parameter selection requires a trip command as well.

The residual overvoltage protection function has a binary input signal, which serves the purpose of disabling the function. The conditions of disabling are defined by the user, applying the graphic equation editor.

Technical data

Function	Value	Accuracy
Pick-up starting accuracy	2 – 8 % 8 – 60 %	< ± 2 % < ± 1.5 %
Reset time U> → Un U> → 0	60 ms 50 ms	
Operate time	50 ms	< ± 20 ms

Parameters

Enumerated parameters

Parameter name	Title	Selection range	Default
Parameter for enabling/disabling:			
TOV59N_Oper_EPar_	Operation	Off, On	On

Integer parameter

Parameter name	Title	Unit	Min	Max	Step	Default
Starting voltage parameter:						
TOV59N_StVol_IPar_	Start Voltage	%	2	60	1	30

Boolean parameter

Parameter name	Title	Default
Enabling start signal only:		
TOV59N_StOnly_BPar_	Start Signal Only	FALSE

Timer parameters

Parameter name	Title	Unit	Min	Max	Step	Default
Definite time delay:						
TOV59N_Delay_TPar_	Time Delay	ms	0	60000	1	100

Binary output status signals

Binary output signals	Signal title	Explanation
TOV59N_GenSt_GrI_	General Start	General starting of the function
TOV59N_GenTr_GrI_	General Trip	General trip command of the function

Binary input status signals

Binary input status signal	Title	Explanation
TOV59N_BlK_GrO_	Block	Output status signal of a graphic equation defined by the user to disable the residual definite time overvoltage protection function.