

Using CSH120 and CSH200 with VAMP protection relay range

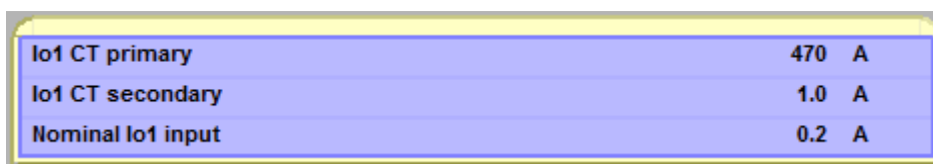
General

The specifically designed CSH120 and CSH200 core balance CTs are for direct residual current measurement. The only difference between them is the diameter. Due to their low voltage insulation, they can only be used on cables.

These core balance CTs can be connected to VAMP protection relay range when 0.2A Io-input is used. This needs to be determined when ordering the protection relay (select 1A and 0.2A or 1A/0.2A in Earth fault current input at order options).

Settings in VAMP protection relay

When CSH 120 or CSH 200 is connected to VAMP protection relay the scaling settings must be set as following to secure correct operation of the protection functions and measurement values. Io(X) CT primary 470A, Io(X) CT secondary 1A and Nominal Io(X) input 0.2A. See attached picture 1. **NOTE:** (X) refers to the Io-input channel number i.e. 1 or 2.



Io1 CT primary	470 A
Io1 CT secondary	1.0 A
Nominal Io1 input	0.2 A

Picture 1.

Measuring specifications

When CSH 120 or CSH 200 is used with VAMP protection relays the measuring range is 0.2A-300A of primary current. Minimum setting for primary current is $0.005 \times I_n$ which in this case means $0.005 \times 470A = 2.35A$ of primary current. See attached picture 2.

EARTH-FAULT STAGE Io> 50N/51N

Enable for Io>		<input checked="" type="checkbox"/>
Io input	Io1	
Io1 residual current	0.000	pu
Status	-	
Estimated time to trip	0.0	s
Start counter	0	
Trip counter	0	

Set group DI control			-
Group			1
	Group 1	Group 2	
Pick-up setting	2.35 A	23.50 A	
Pick-up setting	0.005 pu	0.050 pu	
Delay curve family	DT	DT	
Delay type	DT	DT	
Operation delay	0.04 s	1.00 s	
Inverse delay (20x)	- s	- s	
Inverse delay (4x)	- s	- s	
Inverse delay (1x)	- s	- s	
Network grounding	Res	Res	
Common settings			
Intermittent time	0.00 s		

Picture 2.



CSH120 and CSH200 core balance CTs.

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