

Cephos Electronic Circuits Ltd.

Calibration Certificate

for the DCTR-1B Impedance / undervoltage relay

Date:

Serial no.:

This test certificate for this DCTR-1B Impedance / undervoltage relay has been completed in accordance with the test procedure Ref: C001, Issue B May 1999 using test set type DCTR-2TE and modified simulated circuit breaker Cephos CB002 with full monitoring of the status and integrity of the on-board trip, alarm, track-alive and fault relays.

Impedance test (Zf= 207.5 m Ω)

Vs(V)	Is(low)	Is(test)	Is(high)
3.000	0.961		0.981
4.000	1.272		1.298
7.000	2.227		2.271
10.000	3.181		3.245

Undervoltage test

Vu(V)	Vs(low)	Vs(test)	Vs(high)
150	1.447		1.477
275	2.693		2.747
425	4.218		4.282
525	5.211		5.289

Impedance test (Zf=130.0m Ω)

Vs(V)	Is(low)	Is(test)	Is(high)
3.000	1.523		1.555
4.000	2.031		2.072
7.000	3.554		3.626
10.000	5.077		5.179

Trip timing

Tf(mS)	Tf(low)	Tf(test)	Tf(high)
0	0.003		0.012
400	0.378		0.402
3200	3.094		3.286
6300	6.101		6.479

Impedance test (Zf=50m Ω)

Vs(V)	Is(low)	Is(test)	Is(high)
3.000	3.960		4.040
4.000	5.280		5.387
5.000	6.600		6.733
7.000	9.240		9.427

Track alive threshold Vta
Vtd

High set current Ih

Reverse undervoltage
threshold current Ir

DCTR-2TE test set Ser. No: EP00101..

Tested by:..G.T.Le Cornu.....

Signature:.....

Impedance / undervoltage
threshold current If

System fault
threshold current Ix+
Ix-