PHASE 3 CONNECTORS	**Test Report**	Date	18/07/16
		TR	**05670**
		Powersafe C240 Bi-Metal Connectors 500A Test	
Operator: D.Maclachlan	This report is the property of Phase 3 Connectors Ltd and must not,without their written consent be passed on, copied or used for any other purpose		

Type and description of test
Powersafe C240 500A Bi-Metal Connectors . Direct Resistance With 500A Current.

Object:
The object of this test is to assess the current carrying capacity of the Powersafe C240 Bi-Metal 500amp Connectors.

Test method:
A specified test current shall be applied to the contacts of the specimen for a minimum period of 3 hours or until equilibrium is reached. (Less than 1 degree per hour).
The test will consist of a mated pair of Powersafe C240 Bi-Metal Connectors (Line Source to Line Drain) terminated onto 240mm^2 aluminium cables that are attached to the 3000amp load unit. A current of 500amps will be used for this test.

Requirements:
The mated connectors must be capable of carrying the specified test current for a minimum period of 3 hours without exceeding the specified temperature rise.

Test Items
1 x Powersafe Line Source C240 Bi-Metal Connector terminated onto 240mm^2 aluminium cable.
1 x Powersafe Line Drain C240 Bi-Metal Connector terminated onto 240mm^2 aluminium cable.

Instrument	Description s/n	Expiry calibration
Current generation	T & R PCU1 Mk3 P.C.I.T.S. (21TE0216)	20/01//2017
External Load Unit	3000A Loading Unit	20/01/2017
YF-160A Thermocoupler +6 probes	060300489	04/02/2017

Recorded Results at the end of testing – (detailed hourly results and graph on pg3)

Probe position	Temperature ° C	T (measured – ambient)	Amps
Ambient	23.5		
Probe 1 = Cable Jacket	67.5	44.0	505A
Probe 2 = Drain Insulator	54.2	30.7	505A
Probe 3 = Source Insulator	52.7	29.2	505A
Probe 4 = Source Contact	86.3	62.8	505A
Probe 5 = Cable Core	87.3	63.8	505A
Probe 6 = Drain Contact	81.7	58.2	505A

Maximum Allowable Temperature 125°C
Maximum Recorded Temperature Rise @ Insulator Body was 30.7^{oC} above ambient.

Maximum Allowable Temperature of Contacts 125°C
Maximum Recorded Temperature Rise was 62.8°C above ambient.

Conclusion: Temperature Rise within EN, BS and VDE allowable limits. PASS

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T&R PCU1 Mk 3 P.C.I.T.S 3000A

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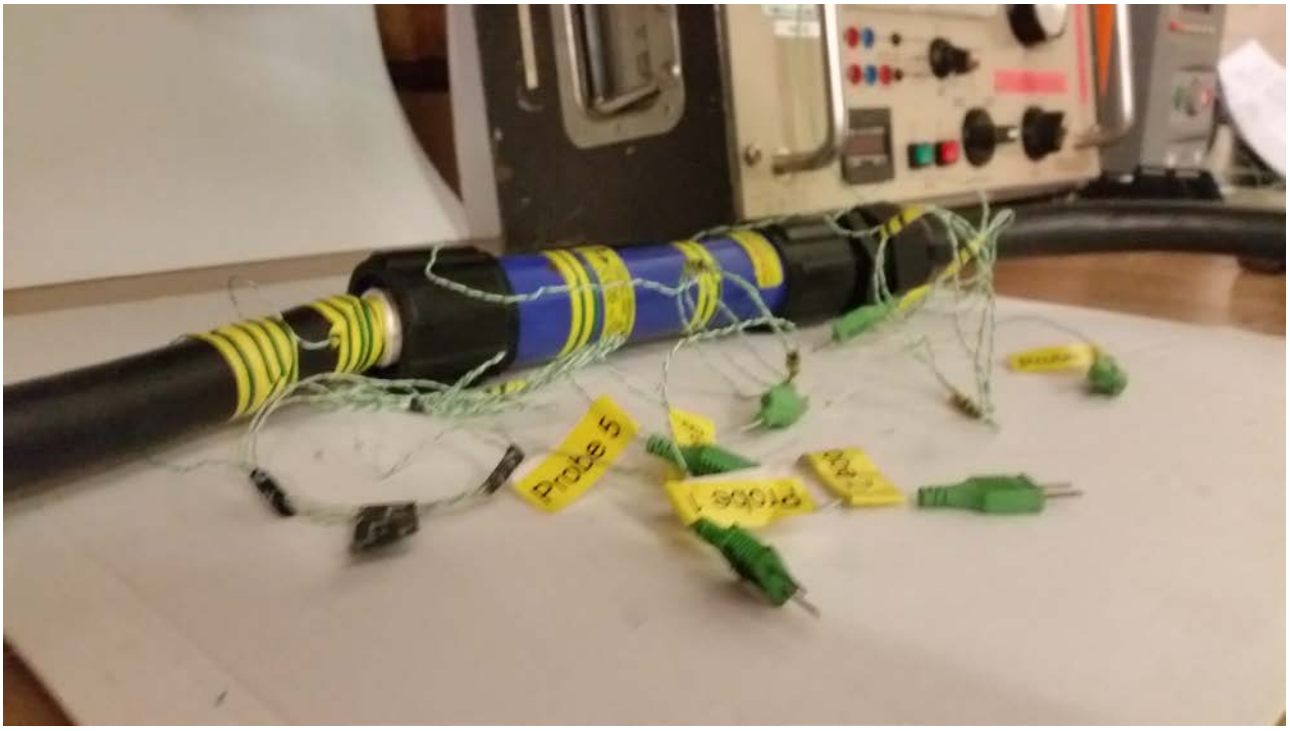

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Time	Drain Contact	Drain Insulator	Ambient	Source Contact	Cable Core	Cable Jacket	Source Insulator	Amps
0.5	56.4	34.8	17.9	58.3	58.6	45.9	34.7	505.0
1	69.8	43.5	18.8	72.8	73.1	55.6	43.2	510.0
1.5	74.6	46.8	19.1	78.4	78.2	60.4	45.9	509.0
2	78.1	49.6	19.5	81.5	82.4	62.6	48.7	508.0
2.5	78.8	52.1	19.5	83.8	83.6	64.1	50.6	507.0
3	79.3	52.3	20.4	83.9	83.8	64.4	50.8	504.0
3.5	79.5	52.6	20.6	84.6	84.4	64.6	51.2	506.0
4	79.6	53.0	20.9	85.0	84.7	65.1	51.6	506.0
4.5	79.5	53.4	21.2	85.2	85.4	65.6	51.8	505.0
5	80.6	53.8	21.7	85.8	86.7	66.6	51.9	507.0
5.5	81.2	53.8	22.4	86.3	87.0	67.0	52.0	505.0
6	81.5	53.9	22.8	86.6	87.6	67.3	52.6	505.0
6.5	81.8	54.1	22.9	86.5	87.6	67.4	52.5	505.0
7	81.6	54.2	23.2	86.4	87.4	67.4	52.6	504.0
7.5	81.7	54.3	23.4	86.4	87.2	67.5	52.7	505.0
8	81.7	54.2	23.5	86.3	87.3	67.5	52.7	505.0