 PHASE 3 <small>CONNECTORS</small>	Test Report  <small>bsi. ISO 9001 Quality Management FS648709</small>	Date	20/07/16
		TR	05671
		Powersafe Right Angled Connector 500 amp testing	
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 Right Angled Connector. Direct Resistance With 500A Current.

Object:

The object of this test is to assess the current carrying capacity of the Powersafe Right Angled 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 Right Angled Connector will be terminated with 150mm² cable fed with 500A from the 3000A load. It will be coupled with a Powersafe Panel Source 500A connector on 150mm² cable.

Requirements:

The Right Angled Connector 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 Right Angled Connector terminated with 150mm² cable.
- 1 x Powersafe Panel Source 500A connector terminated with 150mm² 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 +4 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	23.0		510A
Probe 1 = Contact	80.5	57.5	510A
Probe 2 = Cable Core	77.7	54.7	510A
Probe 3 = Cable Jacket	58.9	35.9	510A
Probe 4 = Insulator	45.4	22.4	510A



Maximum Allowable Temperature 125°C

Maximum Recorded Temperature Rise @ Right Angled Connector Body was 22.4°C above ambient.

Maximum Allowable Temperature of Contacts 125°C

Maximum Recorded Temperature Rise was 57.5°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





Test Report





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Time	Insulator	Cable Jacket	Cable Core	Contact	Ambient	Amps
0.5	36.2	48.1	60.9	62.5	21.5	505.0
1	42.3	56.9	72.3	74.8	22.0	508.0
1.5	44.4	58.0	75.6	78.3	22.0	507.0
2	45.0	58.2	76.5	78.6	22.4	507.0
2.5	44.4	58.3	77.0	79.3	22.0	509.0
3	45.0	58.5	77.6	80.0	22.3	507.0
3.5	45.4	58.5	77.7	80.2	22.2	511.0
4	45.1	58.6	77.5	80.3	22.1	510.0
4.5	45.0	58.7	77.5	80.3	22.2	510.0
5	45.4	58.9	77.7	80.5	23.0	510.0

