
 PHASE 3 CONNECTORS	<h1>Test Report</h1>	 bsi. ISO 9001 Quality Management FS648709	Date	07/07/16
			TR	05662
Operator: D.Maclachlan			Powersafe Panel Source T5	
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 Panel Source T5. Direct Resistance With 500A Current.

Object:

The object of this test is to assess the current carrying capacity of the Powersafe Panel Source T5 connector.

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 Powersafe Connectors will be fed with between 500A and 510A from the 3000A load unit via 2 x 1m lengths of HO7RN-F single core 150mm² cable.

Requirements:

The 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 S120 Line Drain Connector terminated with 150mm² cable.
- 1 x Powersafe Panel Source T5 Connector terminated with A30-M12 Lug on 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 +6 probes	060300489	04/02/2017

Recorded Results at the end of testing – (detailed hourly results and graph on pg4)

Probe position	Temperature ° C	T (measured – ambient)	Amps
Ambient	19.1		
P1 = Line Drain Contact	90.3	71.2	507A
P2 = Cable Jacket	58.8	39.7	507A
P3 = Cable Core	78.7	59.6	507A
P4 = Panel Contact Stud	92.5	73.4	507A
P5 = Panel Source Contact	91.2	72.1	507A
P6 = Panel Source Insulator	64.7	45.6	507A


Maximum Allowable Temperature 125°C

Maximum Recorded Temperature Rise @ Insulator Body was 45.6°C above ambient.

Maximum Allowable Temperature of Contacts 125°C

Maximum Recorded Temperature Rise was 73.4°C above ambient.

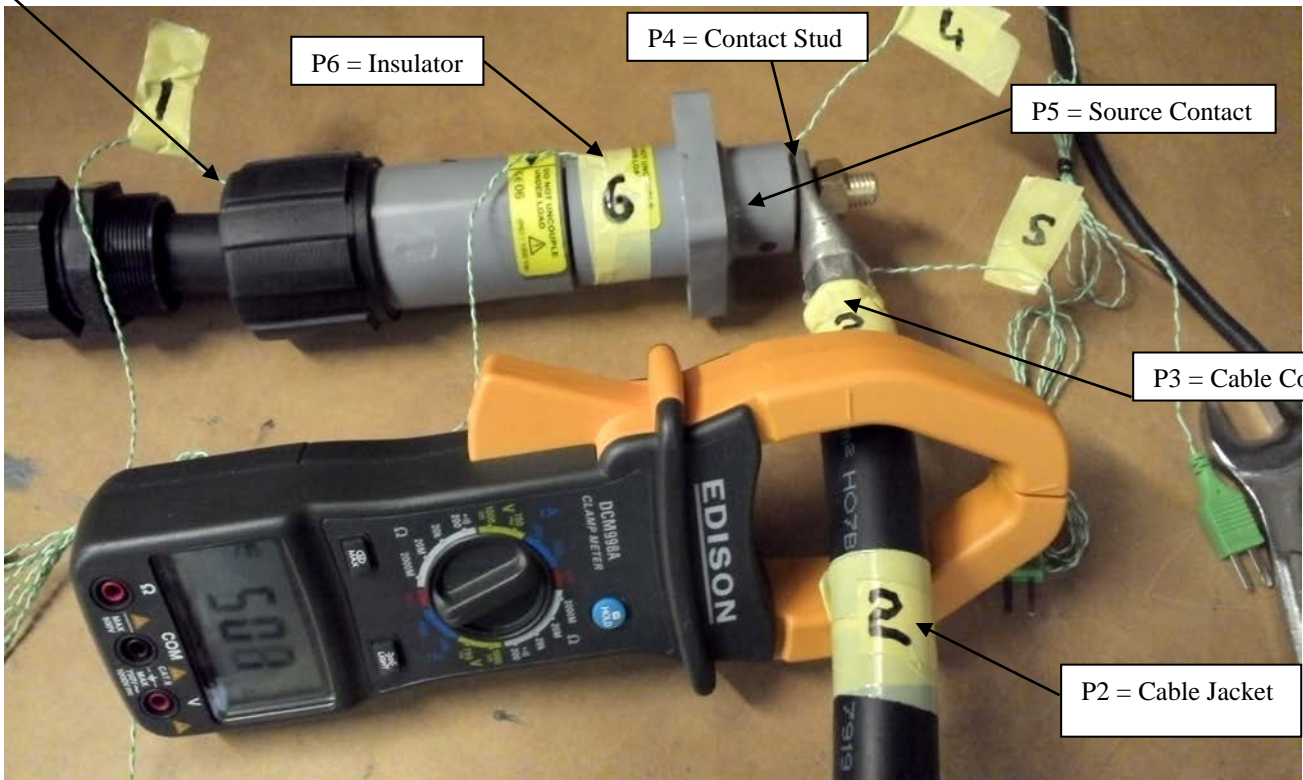
Conclusion: Temperature Rise within BS EN 61984 -2009 and VDE allowable limits. PASS

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



P1 = Drain Contact



P6 = Insulator

P4 = Contact Stud

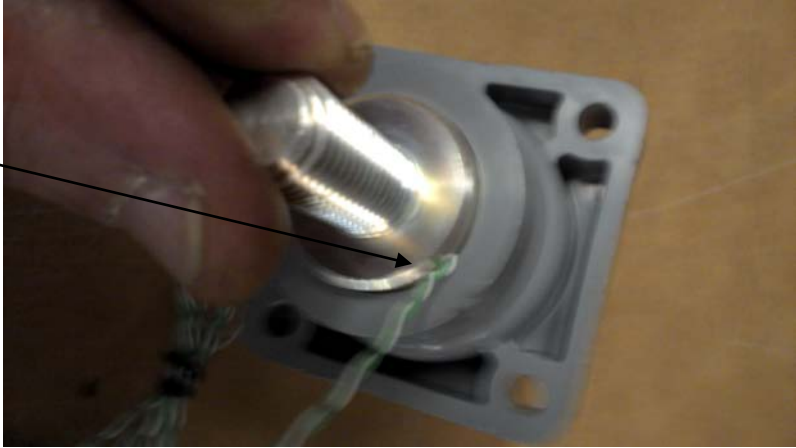
P5 = Source Contact

P3 = Cable Core

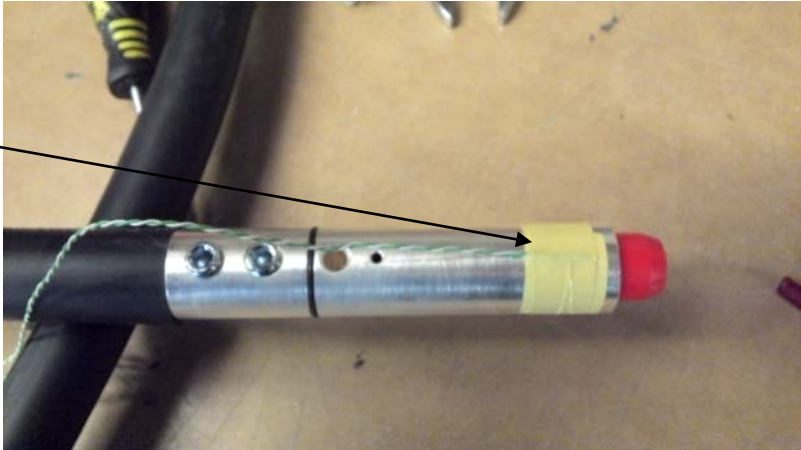
P2 = Cable Jacket


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P5 = Source Contact
 Probe was inserted into the insulator and held against the body of the contact.



P1 = Drain Contact



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Powersafe Panel Source T5 500amp Test Results

Time	Ambient	P1 Drain Contact	P2 Cable Jacket	P3 Cable Core	P4 Contact Stud	P5 Source Contact	P6 Insulator	Amps
0.5	18.2	61.3	41.6	59.7	66.4	66.9	40.1	504.0
1	19.6	76.3	50.6	68.8	79.6	77.3	52.8	502.0
1.5	19.7	85.4	56.5	77.5	89.3	88.1	61.6	504.0
2	19.5	87.3	58.1	77.8	91.4	90.2	64.6	502.0
2.5	19.7	90.1	58.7	78.2	91.8	90.7	64.9	505.0
3	19.7	91.0	58.9	78.6	92.0	90.9	64.9	505.0
3.5	19.5	89.9	58.9	78.7	92.4	91.1	64.8	507.0
4	19.1	90.3	58.8	78.7	92.5	91.2	64.7	507.0

