
 PHASE 3 CONNECTORS	 Test Report	Date	07/07/16
		TR	05663
Operator: D.Maclachlan		Powersafe Panel Drain T5	
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Type and description of test
Powersafe Panel Drain T5. Direct Resistance With 500A Current.

Object:

The object of this test is to assess the current carrying capacity of the Powersafe Panel Drain 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 Source Connector terminated with 150mm² cable.
- 1 x Powersafe Panel Drain 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	19.4		
P1 = Line Source Contact	89.9	70.5	505A
P2 = Cable Jacket	57.1	37.7	505A
P3 = Cable Core	77.6	58.2	505A
P4 = Panel Contact Stud	89.9	70.5	505A
P5 = Panel Drain Contact	92.7	73.3	505A
P6 = Panel Drain Insulator	69.3	49.9	505A

Maximum Allowable Temperature 125°C

Maximum Recorded Temperature Rise @ Insulator Body was 49.9°C above ambient.

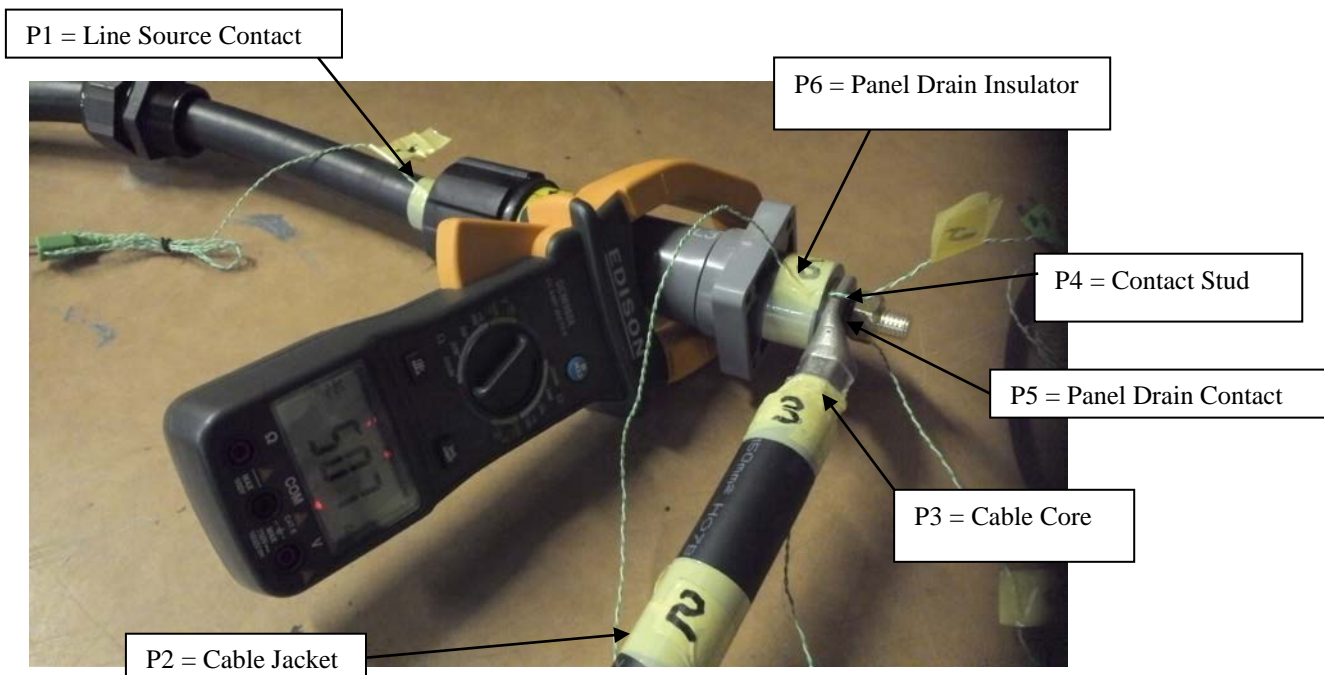
Maximum Allowable Temperature of Contacts 125°C

Maximum Recorded Temperature Rise was 73.3°C above ambient.

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

 <p>PHASE 3 CONNECTORS</p>	<p>Test Report</p>	 <p>ISO 9001 Quality Management FS648709</p>	Date	07/07/16
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T&R PCU1 Mk 3 P.C.I.T.S 3000A





Test Report

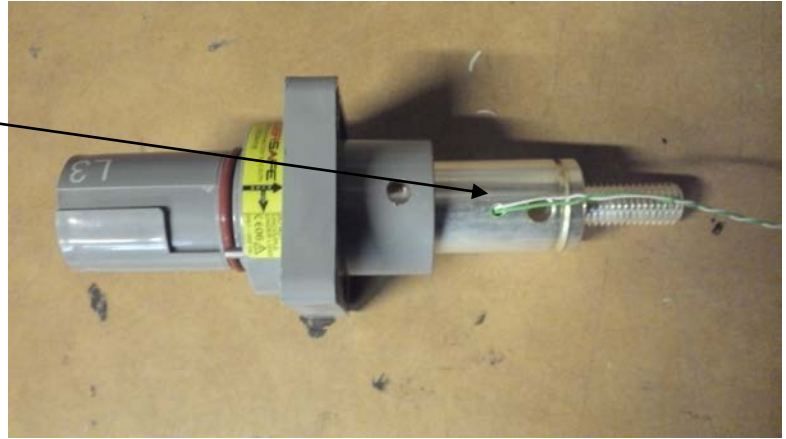


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P5 Probe was inserted into the Panel Drain contact and held in place by the insulator body



P1 Line Source contact



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Panel Drain T5

500amp Test Results

Time	Ambient	P1 Source Contact	P2 Cable Jacket	P3 Cable Core	P4 Contact Stud	P5 Drain Contact	P6 Insulator	Amps
0.5	18.9	72.3	45.5	65.6	75.9	76.6	53.5	508.0
1	19.0	82.7	53.6	72.3	85.4	86.3	65.7	506.0
1.5	19.3	87.2	54.6	74.2	87.1	89.1	66.3	506.0
2	19.7	89.1	56.1	76.1	89.3	91.2	67.1	504.0
2.5	20.0	89.7	56.6	77.6	89.6	92.5	69.1	504.0
3	19.9	89.9	56.8	77.5	89.8	92.6	69.2	503.0
3.5	19.7	90.0	57.1	77.6	90.0	92.7	69.4	503.0
4	19.4	89.9	57.1	77.6	89.9	92.7	69.3	505.0

