
 PHASE 3 <small>CONNECTORS</small>	Test Report  <small>bsi. ISO 9001 Quality Management FS648709</small>	Date	09/07/16
		TR	05657
		JP82 & JS92 Fuse Carrier 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
JP82 & JS92 Fuse Carrier. Direct Resistance With 500A Current.

Object:

The object of this test is to assess the current carrying capacity of the JP & JS Fuse Carriers.

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 Fuse Carrier will be fed with 500A from the 3000A load unit via a Powersafe Line Drain 500A connector on 150mm² cable and attached to a copper busbar which is connected to the other side of the load unit.

Requirements:

The Fuse Carrier 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 Fuse Carrier fitted with Panel Source 500A connector.
- 1 x Powersafe 500amp Line Drain Connector on 150mm² cable.
- 1 x Copper Busbar.

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 +5 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	21.0		
Cable Core (P1)	56.6	35.6	522A
Connection Between Fuse Carrier & Busbar (P2)	98.2	77.2	522A
Busbar (P3)	70.4	49.4	522A
Fuse Carrier Body (P4)	25.1	4.1	522A

Maximum Allowable Temperature 125°C



Maximum Recorded Temperature Rise @ Fuse Carrier Body was 4.1^{0C} above ambient.

Maximum Allowable Temperature Between Fuse Carrier & busbar 125°C

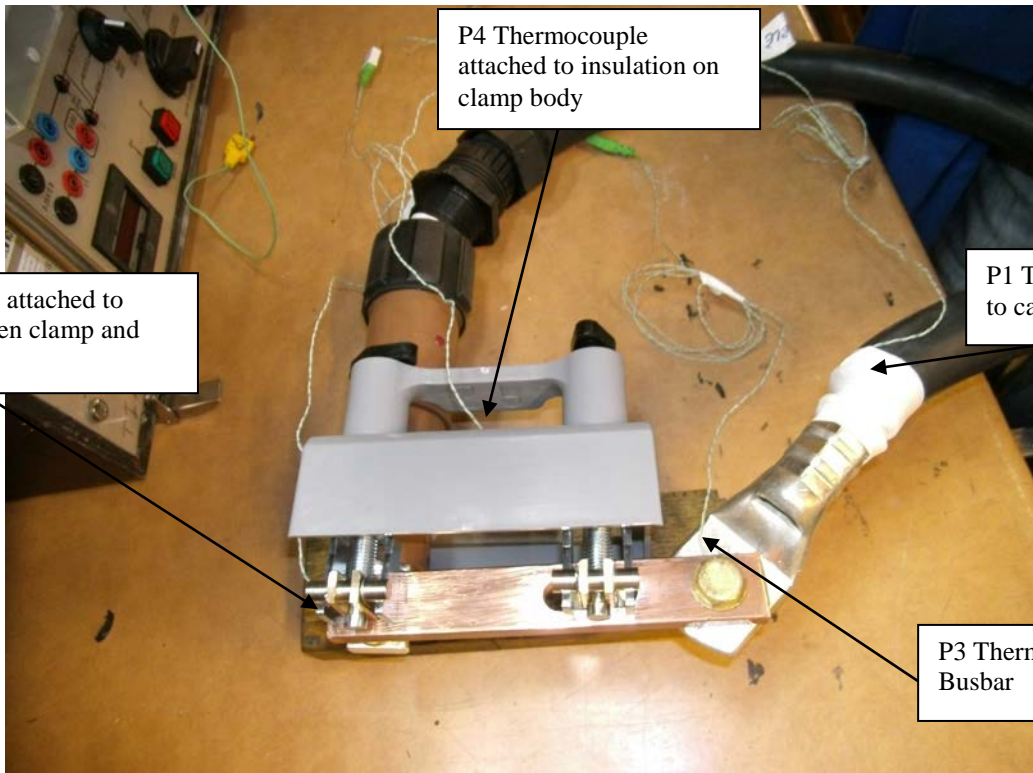
Maximum Recorded Temperature Rise was 77.2°C above ambient.

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

The Unit complies with the requirements of EAT37-2.

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



P4 Thermocouple attached to insulation on clamp body

P1 Thermocouple attached to cable core

P2 Thermocouple attached to connection between clamp and busbar

P3 Thermocouple attached to Busbar



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Time	Busbar	Ambient	Cable	Connection	Shroud	Amps
0	15.8	19.9	15.4	16.3	16.9	520.0
1	60.7	20.3	50.7	88.9	22.3	520.0
2	71.2	19.8	63.2	98.0	25.1	522.0
3	67.6	25.5	63.0	95.4	24.9	518.0
4	70.4	27.6	63.0	98.1	25.1	523.0
5	70.2	25.5	62.8	98.2	25.0	520.0
6	70.4	21.0	63.0	98.2	25.1	522.0

