
	<h1>Test Report</h1>		Date	04/07/16
			TR	05650
			Mini G Clamp 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**  
**Miniature G Clamp. Direct Resistance With 500A Current.**

**Object:**

The object of this test is to assess the current carrying capacity of the Miniature G clamp.

**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 Clamp will be fed with 500A from the 3000A load unit via a Powersafe Line Drain 500A connector on 150mm<sup>2</sup> cable and attached to a busbar which is connected to the other side of the load unit.

**Requirements:**

The clamp 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 Miniature G Clamp
- 1 x Powersafe 120mm Line Drain Connector
- 1 x 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	20.1		
Cable Core (P1)	69.7	49.6	507A
Connection Between Clamp & Busbar (P2)	49.1	29.0	507A
Busbar (P3)	45.3	25.2	507A
Clamp Insulated Body (P4)	42.7	22.6	507A

Maximum Allowable Temperature 125°C

Maximum Recorded Temperature Rise @ Insulated Body was 22.6°C above ambient.

Maximum Allowable Temperature Between Clamp & busbar 125°C

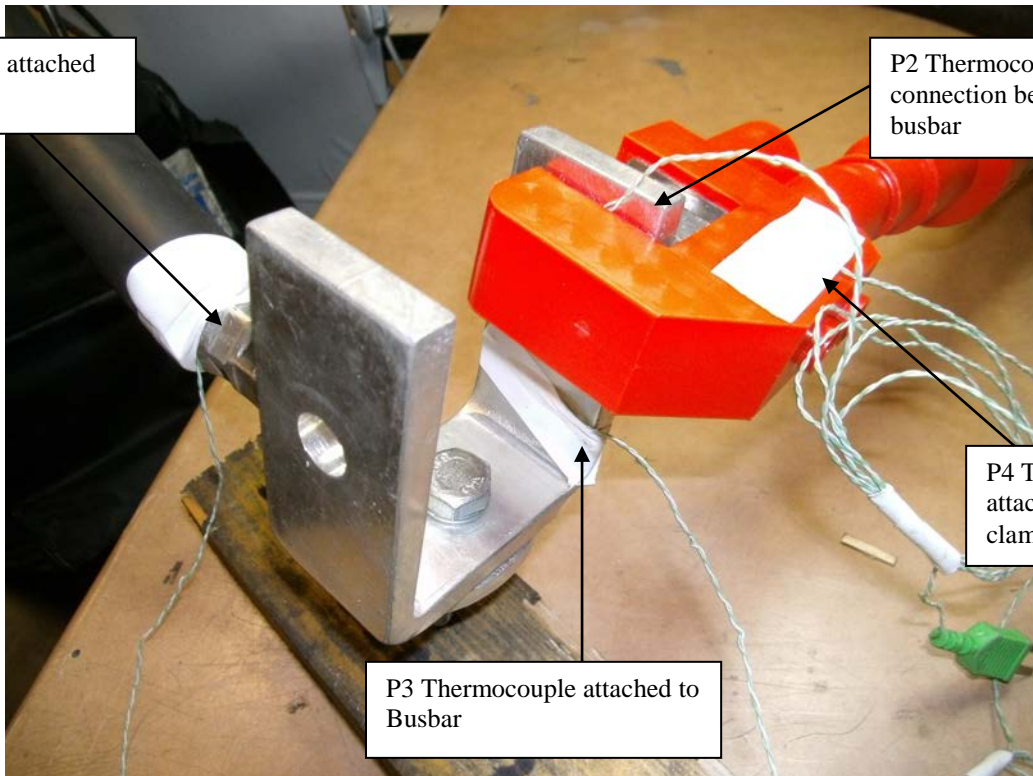
Maximum Recorded Temperature Rise was 29°C above ambient.

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

All Insulation on the clamp meets with IEC 60900 (live working, hand tools for use up to 1000Vac and 1500Vdc)

 <b>PHASE 3</b> CONNECTORS	<h1>Test Report</h1>	 <b>bsi.</b> ISO 9001 Quality Management F5648709	Date	04/07/16
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## T&R PCU1 Mk 3 P.C.I.T.S 3000A





P1 Thermocouple attached to cable core

P2 Thermocouple attached to connection between clamp and busbar

P4 Thermocouple attached to insulation on clamp body

P3 Thermocouple attached to Busbar

 <b>PHASE 3</b> CONNECTORS	<h1>Test Report</h1>	 bsi. ISO 9001 Quality Management F5648709	Date	04/07/16
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Time	Ambient	Cable	Busbar	Connection	Insulation	Amps
0	15	14.3	15.4	15.9	15.3	510
1	21.7	51.2	40.9	44.1	39.7	511
2	19.3	69	44.7	49.5	43.8	514
3	18.3	70.1	45.5	49.3	43.8	514
4	20.1	69.7	45.3	49.1	42.7	507

