
 PHASE 3 CONNECTORS	<h1>Test Report</h1>	 bsi. ISO 9001 Quality Management FS648709	Date	04/07/16
			TR	05651
			Standard G Clamp 800 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
Standard G Clamp. Direct Resistance With 800A Current.

Object:

The object of this test is to assess the current carrying capacity of the Standard 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 800A from the 3000A load unit via a Powersafe Line Drain 800A connector on 300mm² 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 Standard G Clamp
- 1 x Powersafe 300mm 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	19.0		
Cable Core (P1)	84.0	65.0	803A
Connection Between Clamp & Busbar (P2)	82.5	63.5	803A
Busbar (P3)	69.8	50.8	803A
Clamp Insulated Body (P4)	68.9	49.9	803A

Maximum Allowable Temperature 125°C



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

Maximum Allowable Temperature Between Clamp & busbar 125°C

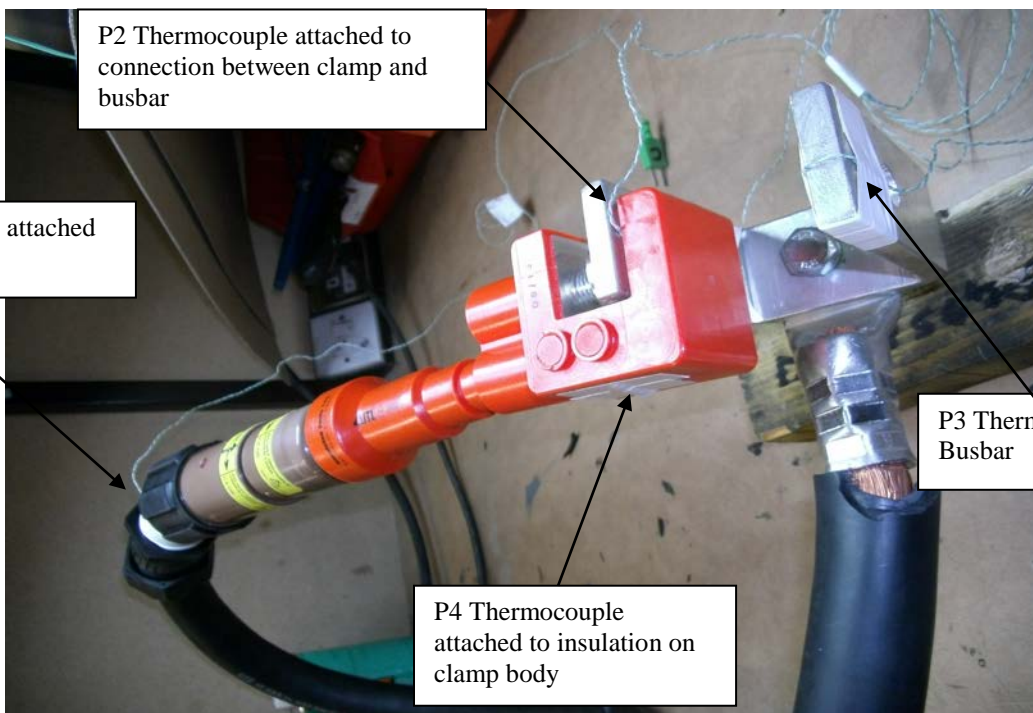
Maximum Recorded Temperature Rise was 63.5°C above ambient.

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)

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



P2 Thermocouple attached to connection between clamp and busbar

P1 Thermocouple attached to cable core

P3 Thermocouple attached to Busbar

P4 Thermocouple attached to insulation on clamp body



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Time	Busbar	Ambient	Cable	Connection	Insulation	Amps
0	16.1	20.4	16.0	16.0	16.6	800
1	56.8	24.1	63.3	64.8	55.2	808
2	70.9	20.4	82.4	81.9	67.3	809
3	72.2	22.7	83.5	83.8	69.1	802
4	70.4	18.0	83.5	82.9	68.6	803
5	72.3	22.1	84.7	84.4	70.2	802
6	69.8	19.0	84.0	82.5	68.9	803

