

 PHASE 3 CONNECTORS	<h1>Test Report</h1>	 bsi. ISO 9001 Quality Management F5648709	Date	06/07/16
			TR	05653
			Underground Connector 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
Underground Connector. Direct Resistance With 800A Current.

Object:

The object of this test is to assess the current carrying capacity of the Underground 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 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 copper lug adaptor 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 Underground Connector
- 1 x Powersafe 300mm Line Drain Connector
- 1 x Copper Lug Adaptor

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	16.5		
Cable Core (P1)	89.4	72.9	804A
Connection Between Clamp & Lug Adaptor (P2)	94.1	77.6	804A
Lug (P3)	92.2	75.7	804A
Clamp Insulated Body (P4)	75.6	59.1	804A

Maximum Allowable Temperature 125°C

Maximum Recorded Temperature Rise @ Insulated Body was 59.1°C above ambient.

Maximum Allowable Temperature Between Clamp & adaptor 125°C

Maximum Recorded Temperature Rise was 77.6°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

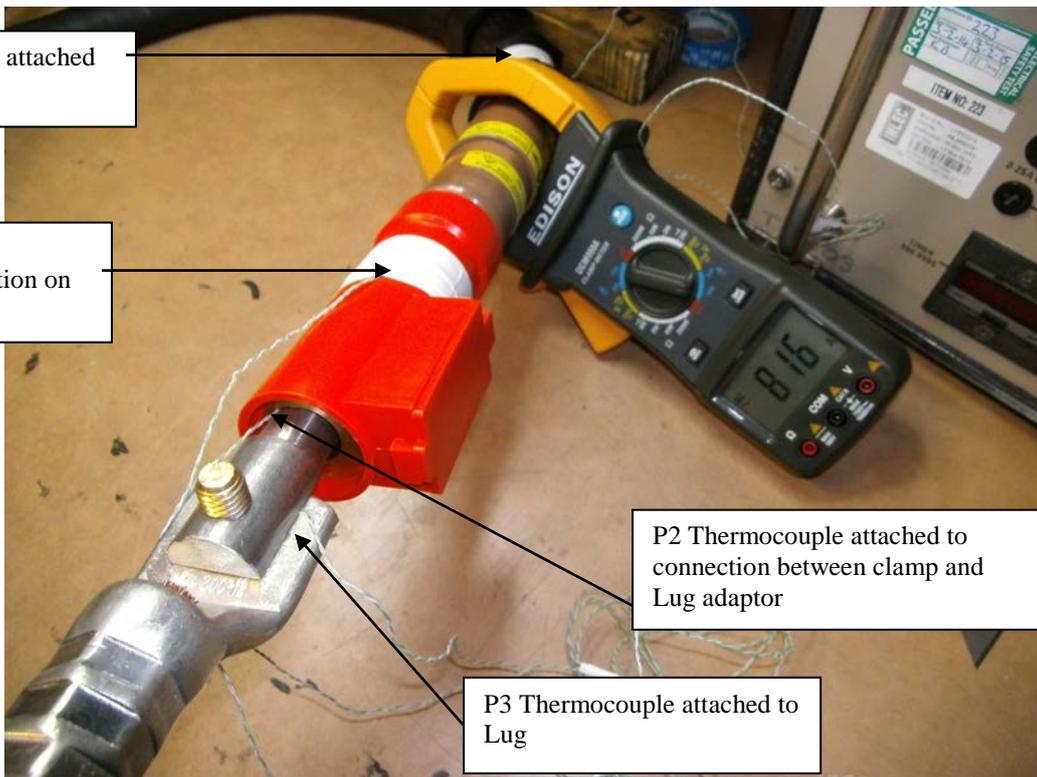


P1 Thermocouple attached to cable core

P4 Thermocouple attached to insulation on clamp body

P2 Thermocouple attached to connection between clamp and Lug adaptor

P3 Thermocouple attached to Lug





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Time	Busbar	Ambient	Cable	Connection	Insulation	Amps
0	12.5	17.8	11.5	12.2	12.5	815.0
1	72.3	20.0	70.7	72.1	61.1	807.0
2	88.7	16.4	86.5	88.1	69.9	810.0
3	93.9	18.4	87.7	93.1	74.9	808.0
4	92.3	22.9	89.3	95.0	75.7	801.0
5	92.6	21.8	90.1	95.1	75.9	806.0
6	92.2	16.5	89.4	94.1	75.6	804.0

