

TR-05658

Insulated T-Piece (800amp testing)



Test Date: 09/07/16

Operator: D.Maclachlan

TYPE AND DESCRIPTION OF TEST

INSULATED T-PIECE . DIRECT RESISTANCE WITH 800A CURRENT.

OBJECTIVE

The object of this test is to assess the current carrying capacity of the Insulated T-Piece.

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 T-Piece will be fed with 800A from the 3000A load unit via a Powersafe Line Drain 800A connector on 300mm² cable and attached to the other side of the load unit via 2 x 800A Line Source Connectors on 300mm² cables.

REQUIREMENTS

The T-Piece must be capable of carrying the specified test current for a minimum period of 3 hours without exceeding the specified temperature rise.

TEST ITEMS

1x Powersafe Insulated T-Piece fitted with 1x Powersafe Panel Source 800A and 2x Powersafe Panel Drain 800A connectors.

1x Powersafe 800amp Line Drain Connector on 300mm² cable

2x Powersafe 800amp Line Source Connectors on 300mm² cables

EQUIPMENT USED

INSTRUMENT	DESCRIPTION	CALIBRATION EXPIRY DATE
Current Generation	T & R PCU1 Mk3 P.C.I.T.S. (21TE0216)	20/01/2017
External Load Unit	3000A Loading Unit	20/01/2017
Digital Thermometer	YF-160A Thermocoupler + 5 Probes	04/02/2017



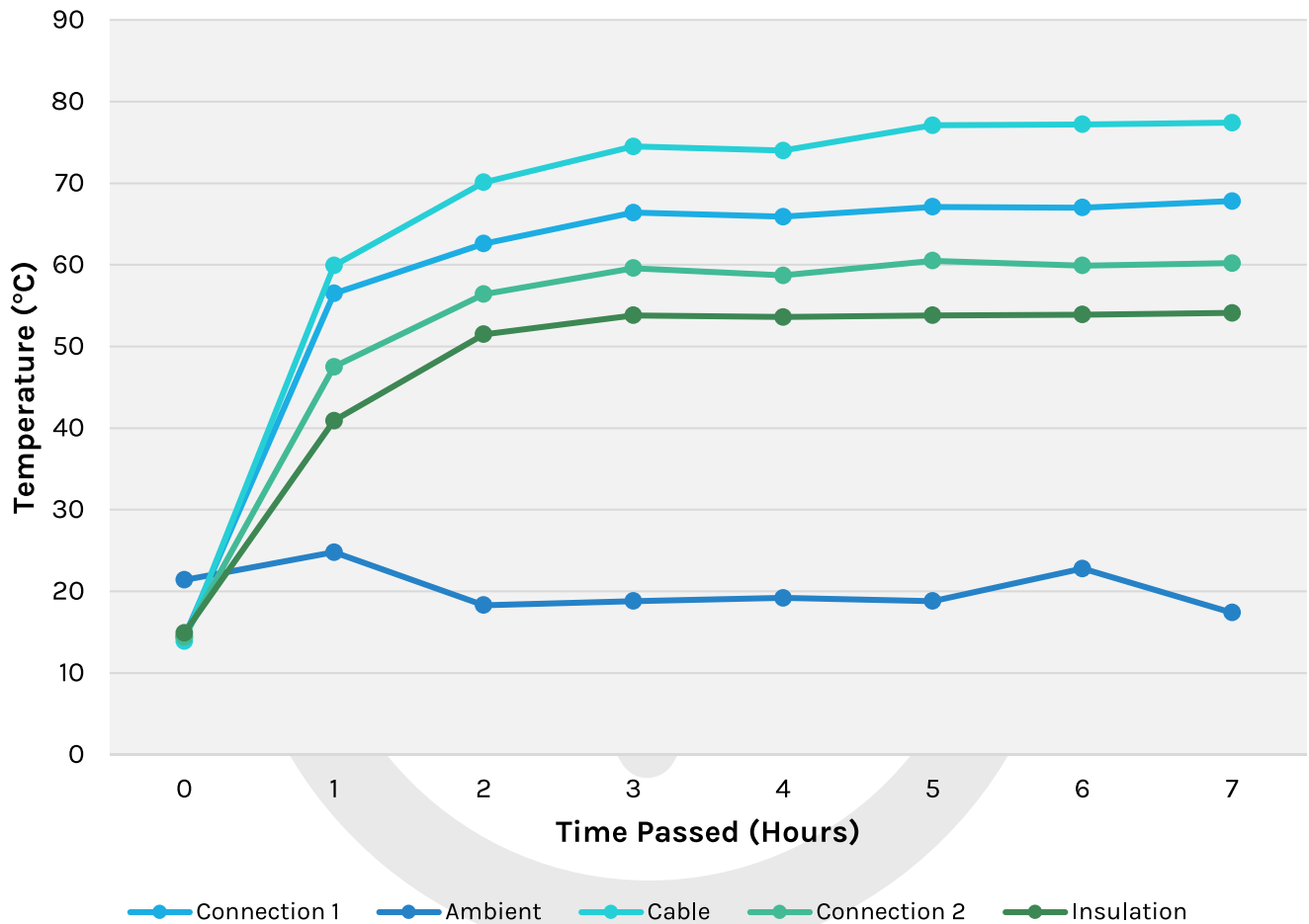
This report is the property of Phase 3 Connectors Ltd and must not, without their written consent, be passed on, copied or used for any other purpose.

TR-05658

Insulated T-Piece (800amp testing)

Test Date: 09/07/16

Operator: D.Maclachlan



TIME	CONNECTION 1	AMBIENT	CABLE	CONNECTION 2	INSULATION	AMPS
0	14.4	21.4	13.9	14.4	14.9	800.0
1	56.5	24.8	59.9	47.5	40.9	810.0
2	62.6	18.3	70.1	56.4	51.5	806.0
3	66.4	18.8	74.5	59.6	53.8	804.0
4	65.9	19.2	74.0	58.7	53.6	812.0
5	67.1	18.8	77.1	60.5	53.8	816.0
6	67.0	22.8	77.2	59.9	53.9	817.0
7	67.8	17.4	77.4	60.2	54.1	820.0

TR-05658

Insulated T-Piece (800amp testing)

Test Date: 09/07/16

Operator: D.Maclachlan



FINAL RESULTS

PROBE POSITION	TEMPERATURE (C)	T (MEASURED-AMBIENT)	AMPS
Ambient	17.4	N/A	N/A
Cable Core (P1)	77.4	60.0	820A
Connection 1 (P2)	67.8	50.4	820A
Connection 2 (P3)	60.2	42.8	820A
T-Piece Insulated Body (P4)	54.1	36.7	820A

CONCLUSION

MEASUREMENT	RESULT
Maximum Allowable Temperature	125°C
Maximum Recorded Temperature Rise @ Insulated Body (above ambient)	36.7°C
Maximum Allowable Temperature of Connections	125°C
Maximum Recorded Temperature Rise (above ambient)	50.4°C
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)	



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.