

TR-05681

Powersafe 800A Connectors



Test Date: 19/05/22

Operator: D.Maclachlan

OBJECTIVE

The object of this test is to assess the current carrying capacity of the Powersafe 800A connectors.

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 Powersafe 800A connectors will be fed with between 800A and 820A from the 5000A load unit via 2 x 1.5m lengths of Radaflex-A single core 300mm² cables.

REQUIREMENTS

The Powersafe 800A connectors 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 Line Drain C300 800A connector terminated with 300mm² cable

1 x Powersafe Panel Source T8 800A connector terminated with 300mm² cable.

EQUIPMENT USED

INSTRUMENT	DESCRIPTION	CALIBRATION DATE
Current Generation	T & R PCU1 -SPmk2 P.C.I.T.S. (6TE1838)	11/04/2022
External Load Unit	5000A Loading Unit	11/04/2022
Digital Thermometer	YF-160A Thermocoupler +6 probes SN: 210107534	30/04/2022



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FINAL RESULTS

PROBE POSITION	TEMPERATURE (C)	T (MEASURED-AMBIENT)	AMPS
Ambient	19.1	N/A	809
Panel Source T8 Contact (P1)	64.6	45.5	809
Panel Source Insulator (P2)	43.1	24.0	809
T8 Connection to Lug (P3)	63.7	44.6	809
Cable Core (P4)	64.6	45.5	809
Line Drain Contact (P5)	65.1	46.0	809
Cable Jacket (P6)	50.2	31.1	809
Line drain Insulator (P7)	40.6	21.5	809

CONCLUSION

MEASUREMENT	RESULT
Maximum Allowable Temperature	125°C
Maximum Recorded Temperature Rise @ Insulator Body (above ambient)	24.0°C
Maximum Allowable Temperature of Contacts	125°C
Maximum Recorded Temperature Rise (above ambient)	46.0°C
TEMPERATURE RISE WITHIN BS EN 61984 -2009 AND VDE ALLOWABLE LIMITS.	PASS



NEXT TEST IS DUE ON 19TH MAY 2027