

TR-05673

Powersafe Sequential Box (Drain)



Test Date: 21/07/16 Operator: D.Maclachlan

TYPE AND DESCRIPTION OF TEST POWERSAFE SEQUENTIAL BOX (DRAIN) DIRECT RESISTANCE CURRENT CABLE 300MM² (600MCM), WITH A CURRENT OF 800A.

OBJECTIVE

The object of this test is to detail a standard test method to assess the current carrying capacity of electro-mechanical components.

TEST METHOD

A specified test current shall be applied to the contacts of the specimen for a period of 5 hours, or until equilibrium is reached.

REQUIREMENTS

Every contact of the specimen must be capable of carrying the specified test current for a period of 5 hours without exceeding the specified temperature rise.

TEST ITEMS

1x Powersafe Drain Sequential Box PD5-E

1x Powersafe C300 Source Connector terminated on H07RN-F-1C-300mm cable

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 + 3 Probes | 04/02/2017 |



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FINAL RESULTS

| PROBE POSITION | TEMPERATURE (C) | T (MEASURED-AMBIENT) |
|-----------------|-----------------|----------------------|
| Ambient | 15.5 | N/A |
| Rear Terminal | 80.7 | 65.2 |
| Insulator | 48.5 | 33.0 |
| Cable Conductor | 91.4 | 75.9 |

CONCLUSION

| MEASUREMENT | RESULT |
|---|--------|
| Maximum Allowable Temperature | 125°C |
| Maximum Recorded Temperature Rise (less ambient) | 75.9°C |
| Maximum Recorded Temperature Rise | 91.4°C |
| TEMPERATURE RISE WITHIN BS EN 61984 -2009 AND VDE ALLOWABLE LIMITS. PROBE PROOF CONFORMS TO IEC 60309-1. VOLTAGE IDENTIFICATION IN ACCORDANCE WITH IEC 60309-2. CONFORMS AS AN "APPLIANCE INLET" TO IEC 60309-1. | PASS |



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