

TR-05668

CAB-CON



Test Date: 13/07/16 Operator: D.Maclachlan

TYPE AND DESCRIPTION OF TEST

POWERSAFE CAB-CON CONNECTOR. DIRECT RESISTANCE WITH 800A CURRENT.

OBJECTIVE

The object of this test is to assess the current carrying capacity of the Powersafe Cab-Con 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 Powersafe Cab-Con Connector will be fed with a minimum of 800A from the 3000A load unit via 2 x 1m lengths of HO7RN-F-1C-300 cable each with a A60-M12 Lug attached.

REQUIREMENTS

The Cab-Con Connector 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 Cab-Con Connector terminated with 2 x 1m Lengths of HO7RN-F-1C-300 with A60-M12 Lugs

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

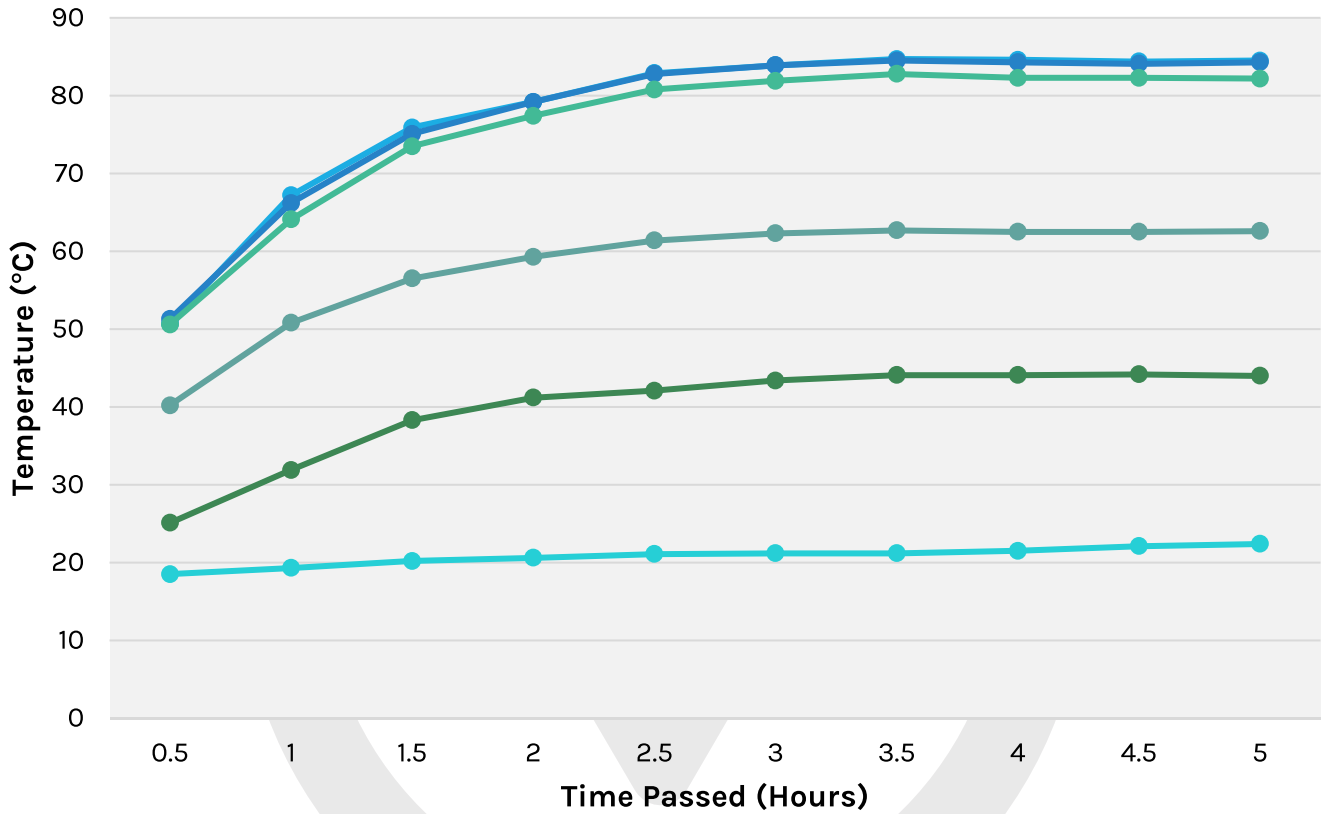


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● Lug Connection 1 ● Lug Connection 2 ● Ambient
● Cable Core ● Connector Body ● Cable Jacket

TIME	LUG CONNECTION 1	LUG CONNECTION 2	AMBIENT	CABLE CORE	CONNECTOR BODY	CABLE JACKET	AMPS
0.5	50.7	51.3	18.5	50.6	25.1	40.2	809.0
1	67.2	66.2	19.3	64.1	31.9	50.8	808.0
1.5	75.9	75.1	20.2	73.5	38.3	56.5	805.0
2	79.2	79.2	20.6	77.4	41.2	59.3	807.0
2.5	82.9	82.8	21.1	80.8	42.1	61.4	814.0
3	83.9	83.9	21.2	81.9	43.4	62.3	812.0
3.5	84.7	84.5	21.2	82.8	44.1	62.7	806.0
4	84.6	84.3	21.5	82.3	44.1	62.5	803.0
4.5	84.4	84.1	22.1	82.3	44.2	62.5	803.0
5	84.5	84.3	22.4	82.2	44.0	62.6	805.0

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FINAL RESULTS

PROBE POSITION	TEMPERATURE (C)	T (MEASURED-AMBIENT)	AMPS
Ambient	22.4	N/A	N/A
Lug Connection 1 (P1)	84.5	62.1	805A
Lug Connection 2 (P2)	84.3	61.9	805A
Cable Core (P3)	82.2	59.8	805A
Cab-Con Body (P4)	44.0	21.6	805A
Cable Jacket (P5)	62.6	40.2	805A

CONCLUSION

MEASUREMENT	RESULT
Maximum Allowable Temperature	125°C
Maximum Recorded Temperature Rise @ Insulated Body (above ambient)	21.6°C
Maximum Allowable Temperature of Connections	125°C
Maximum Recorded Temperature Rise (above ambient)	62.1°C
TEMPERATURE RISE WITHIN EN, BS AND VDE ALLOWABLE LIMITS.	PASS



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