

Temperature Rise Test Report

Panel source to line drain current carrying capacity test

Test date: 2026-08-10

Associated third-party report: SEMT Report No. 2026JC (KP) 008

Purpose and scope

To evaluate the current carrying capacity and temperature rise of the PowerFit 800A connector assembly under the specified test conditions. Measurements cover conductors, connection points and insulating components as listed in the results table.

Test conditions

Parameter	Recorded condition
Test current	807A
Ambient temperature	27.0°C
Cable cross-section	400mm ²
Test voltage	0.379V
Frequency / duration	50 Hz / 3 hours

Tested samples

PFPS-2BK-T8

PowerFit 800A panel source connector assembled with 400mm² cable

PFLD-2BK-C300-C400-M40/50

PowerFit 800A line drain connector assembled with 400mm² cable

Measured results

Temperature rise (ΔT) = measured temperature (T) – ambient temperature (Ta).

#	Measurement point	Ambient Ta (°C)	Measured T (°C)	Rise ΔT (°C)	Load (A)
1	Panel Source-Lug Connection	27.0	61.0	34.0	807
2	Panel Source Conductor	27.0	60.6	33.6	807
3	Panel Source Outer Casing	27.0	48.8	21.8	807
4	Panel Source Insulating Head	27.0	70.2	43.2	807
5	Line Drain Outer Casing	27.0	49.0	22.0	807
6	Line Drain Insulating Head	27.0	70.3	43.3	807
7	Line Drain Conductor	27.0	68.1	41.1	807
8	Line Drain Cable Core	27.0	66.7	39.7	807
9	Cable Jacket	27.0	60.8	33.8	807

Report evaluation summary

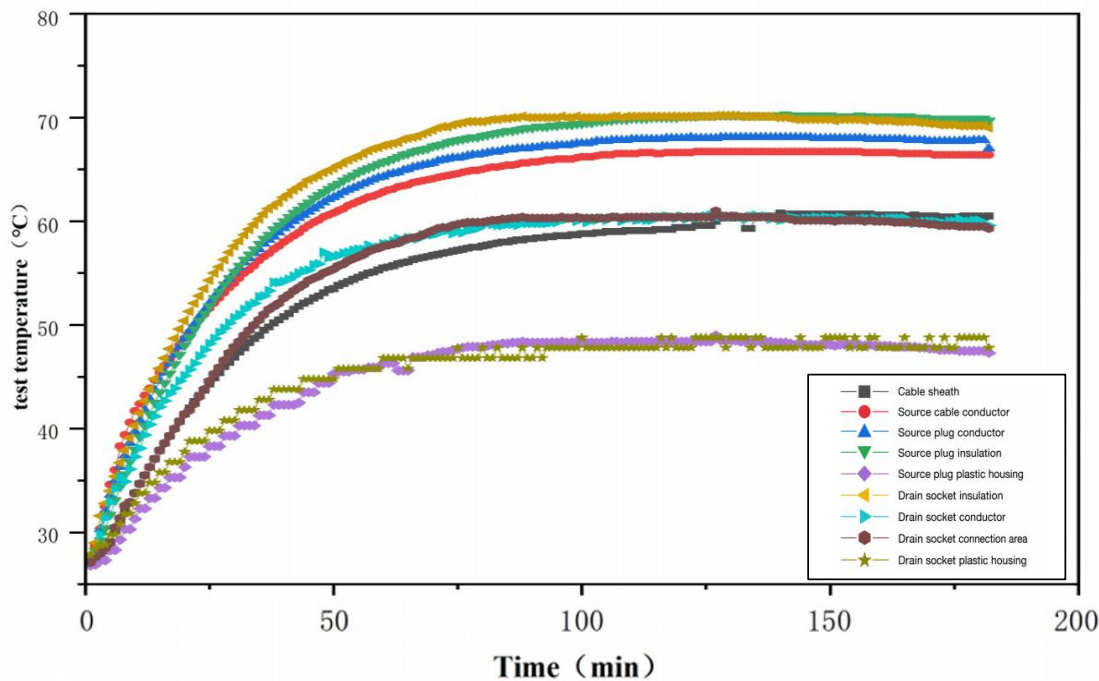
Criterion	Result	Assessment
Maximum allowable temperature	125°C	
Maximum contact temperature rise	41.1°C	PASS
Maximum outer-casing temperature rise	22.0°C	PASS
Temperature rise within the cited allowable limits		PASS

The maximum contact rise is 41.1°C. The line drain insulating head records a separate rise of 43.3°C; it is not included in the contact category.

Assessments are reproduced from the supplied report and apply to the stated test conditions. The 125°C figure is an allowable temperature, not a 125°C temperature-rise limit.

Original temperature test curve

Original curve reproduced from the supplied English PDF. Vertical axis: test temperature (°C). Horizontal axis: time (min).



The plotted curve is retained as supplied. Numerical values in this report come from the measured-results table.

Test basis

The source acceptance statement records energization at 800-815A for 3 hours and cites “IEC EN61984:2009/ BS EN 61984 -2009”. The recorded test current is 807A.

Test equipment

Equipment	Calibration date
Strong Current Generator	2026.7.28
Multi-Channel Temperature Tester	2026.7.12
Clamp-On Multimeter	2026.7.12

Source: POWERFIT 800A PANEL SOURCE-LINE DRAIN TEMP RISE TEST - ENG 20260902.pdf

The source document identifies SEMT Report No. 2026JC (KP) 008 as its associated third-party report. This English revision preserves the supplied numerical data and is not a new third-party test report.