POWERFIT 500A

SET-SCREW CONNECTOR TERMINAL CONDUCTOR AXIAL PULL-OUT TEST

ASSOCIATED THIRD-PARTY REPORT NUMBERS	TEST DATES
SEMT Report No. 2026JC (KP) 020	**2026-11-04**
SEMT Report No. 2026JC (KP) 021	**2026-11-09**

01 PURPOSE AND SCOPE

Purpose

To evaluate the mechanical connection reliability of PowerFit 500A set-screw line conductors, verify the axial retention of conductors installed on 150 mm² cables, and record the tensile forces during initial slippage and complete pull-out.

Scope

This test applies to the PowerFit 500A set-screw connector terminal installed on a 150 mm² copper conductor. Axial tensile force is applied to evaluate the terminal's conductor clamping and retention performance. The tensile forces associated with conductor slippage and complete pull-out are recorded.

02 TEST BASIS AND ACCEPTANCE CRITERIA

Acceptance statement

This test is conducted with reference to IEC 60947-7-1:2025, Clause 9.3.3.3 and Table 2. Acceptance is based on the absence of conductor slippage or pull-out under the specified axial tensile load. The actual forces at initial conductor slippage and complete pull-out are also recorded. The standard is used solely as a test reference and does not imply compliance of the complete connector.

03 TESTED SAMPLES

ITEM	PRODUCT PART NUMBER	CONFIGURATION
1	PFLS-S150M40A	PowerFit 500A Line Source set-screw conductor assembled with 150 mm² cable
2	PFLD-S150M40A	PowerFit 500A Line Drain set-screw conductor assembled with 150 mm² cable

04 TESTING EQUIPMENT

INSTRUMENT	CALIBRATION DATE
Universal testing machine	2026-07-13

05 EVALUATION SUMMARY

CRITERION	ASSESSMENT
With reference to IEC 60947-7-1:2025, an axial tensile force of 427 N was applied to the 150 mm² copper conductor for 1 min to verify that the conductor did not slip or pull out of the terminal.	PASS

Assessment scope

The specified-load verification was passed by both tested configurations. Initial slippage and complete pull-out forces are recorded measurements, rather than additional acceptance thresholds.

06 MEASURED RESULTS

Line Source conductor - PFLS-S150M40A

NO.	TEST ITEM	FORCE (N)	TIME (s)	RESULT
1	Specified load verification	427	60	PASS, no slippage
2	Initial slippage	5,115	201	--
3	Complete pull-out	5,229	259	--

Line Drain conductor - PFLD-S150M40A

NO.	TEST ITEM	FORCE (N)	TIME (s)	RESULT
1	Specified load verification	427	60	PASS, no slippage
2	Initial slippage	4,661	186	--
3	Complete pull-out	5,617	267	--

Result interpretation

Both conductors showed no slippage under 427 N for 60 seconds. The recorded initial-slippage and complete-pull-out forces apply to the tested samples and documented test conditions.

07 TEST CURVES

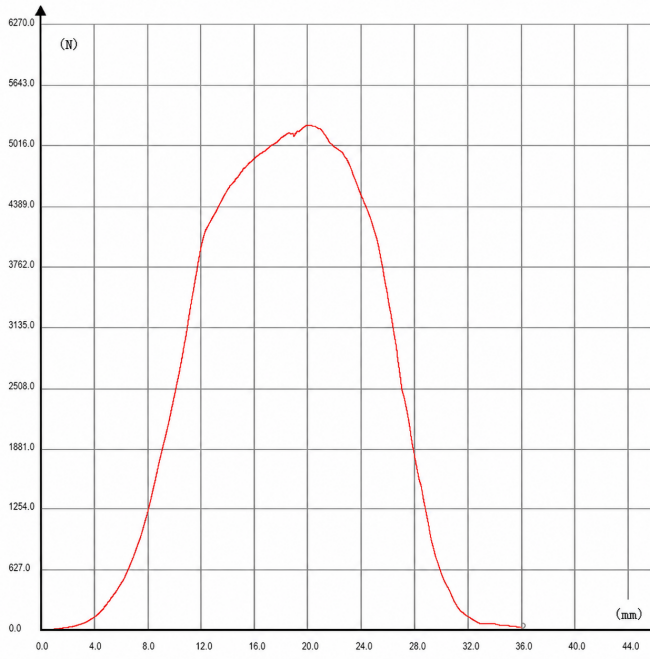


Figure 1: Line Source conductor test curve

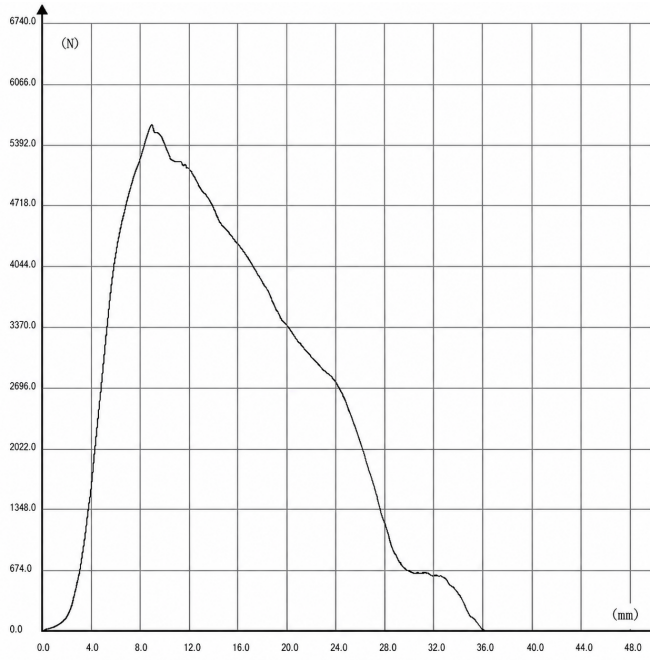


Figure 2: Line Drain conductor test curve