

Ethernet-APL Test Guide

Test Type (Data or Power): Power

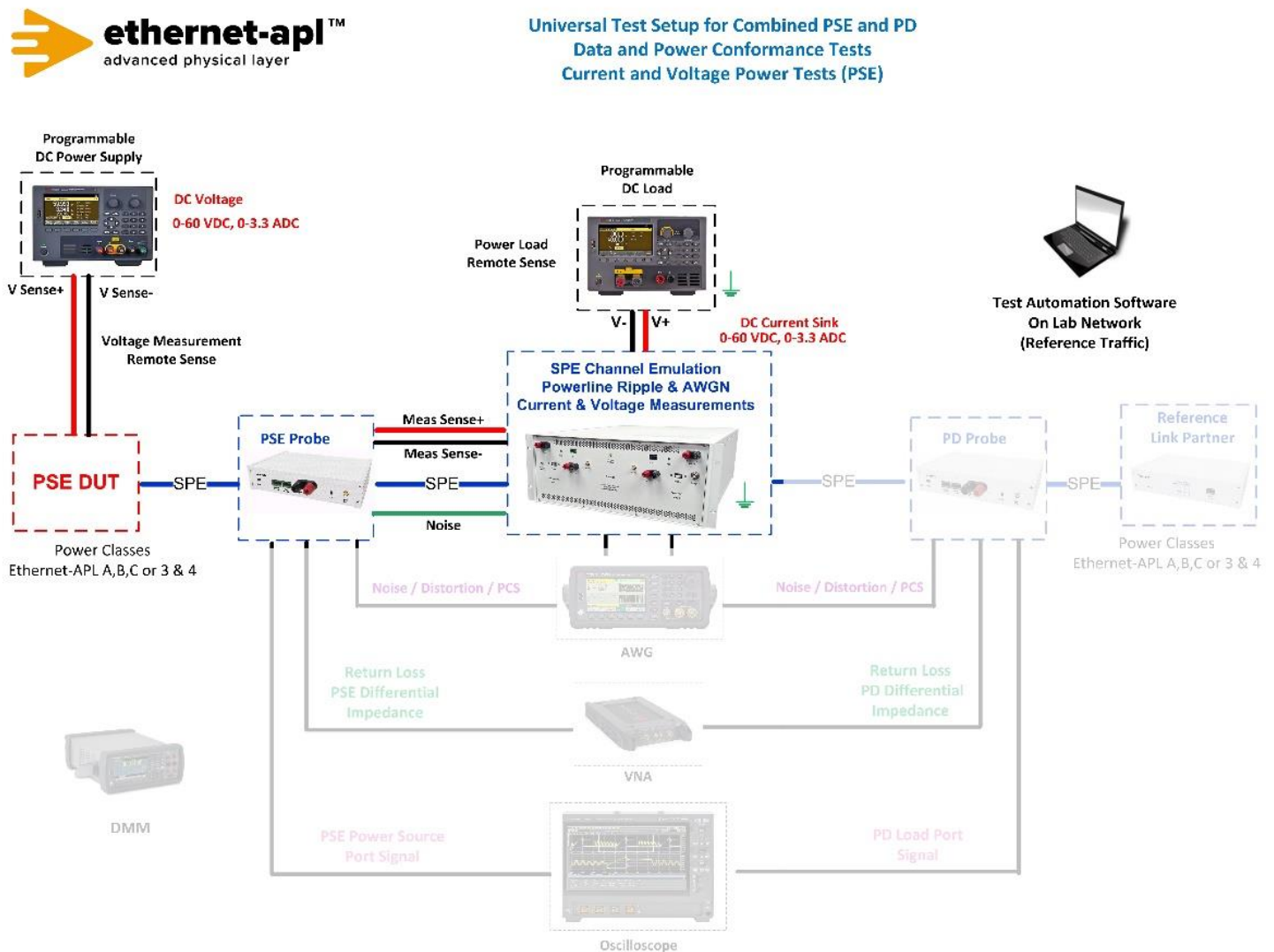
Test Name: TP.2.5 Over Current Limiting

Purpose/Description: To verify that a Trunk Power Source port will limit its output current to prevent an overload.

Required Test Equipment:

1. PSE Probe
2. DC Power Supply (To power the PSE Field Switch DUT)
3. Programmable DC Load
4. 4950 Channel Emulator
5. Test Automation Software

Test Setup / Connection Diagram:



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Device Under Test Setup:

- It is expected that all tests are performed with PHY communication abilities disabled. This is achieved by disabling Auto-Negotiation and setting the PHY to SLAVE mode. Regardless of the PHY state, each data line of the port under test shall be terminated with a 50 Ohm resistance behind a 1 μ F series capacitor in the Telebyte Probe.
- Enter the Power Class for the Device Under Test (Class 3 or 4) into the test automation software.

Expected Results (Pass/Fail Criteria):

Step	Status	Description
6	PASS	a. The port never sources more than $1.6 * I_{PS(MIN)}$ (Class 3 = 2A Class 4 = 3.2A) and b. No later than $t = 50$ ms, the port disables or limits current to $1.2 * I_{PS(MIN)}$ (Class 3 = 1.5A Class 4 = 2.4)
6	FAIL	The port sources more than $1.6 * I_{PS(MIN)}$ at anytime during the test (Class 3 = 2A Class 4 = 3.2A)
6	FAIL	The port sources at least $1.2 * I_{PS(MIN)}$ (Class 3 = 1.5A Class 4 = 2.4A) at any time after $t = 50$ ms

Notes:

[1] APL Port Profile 1.1 Section 5.4

[2] Methods Annex – Sampling with Digital Multimeter

[3] Methods Annex – Disabling PHY