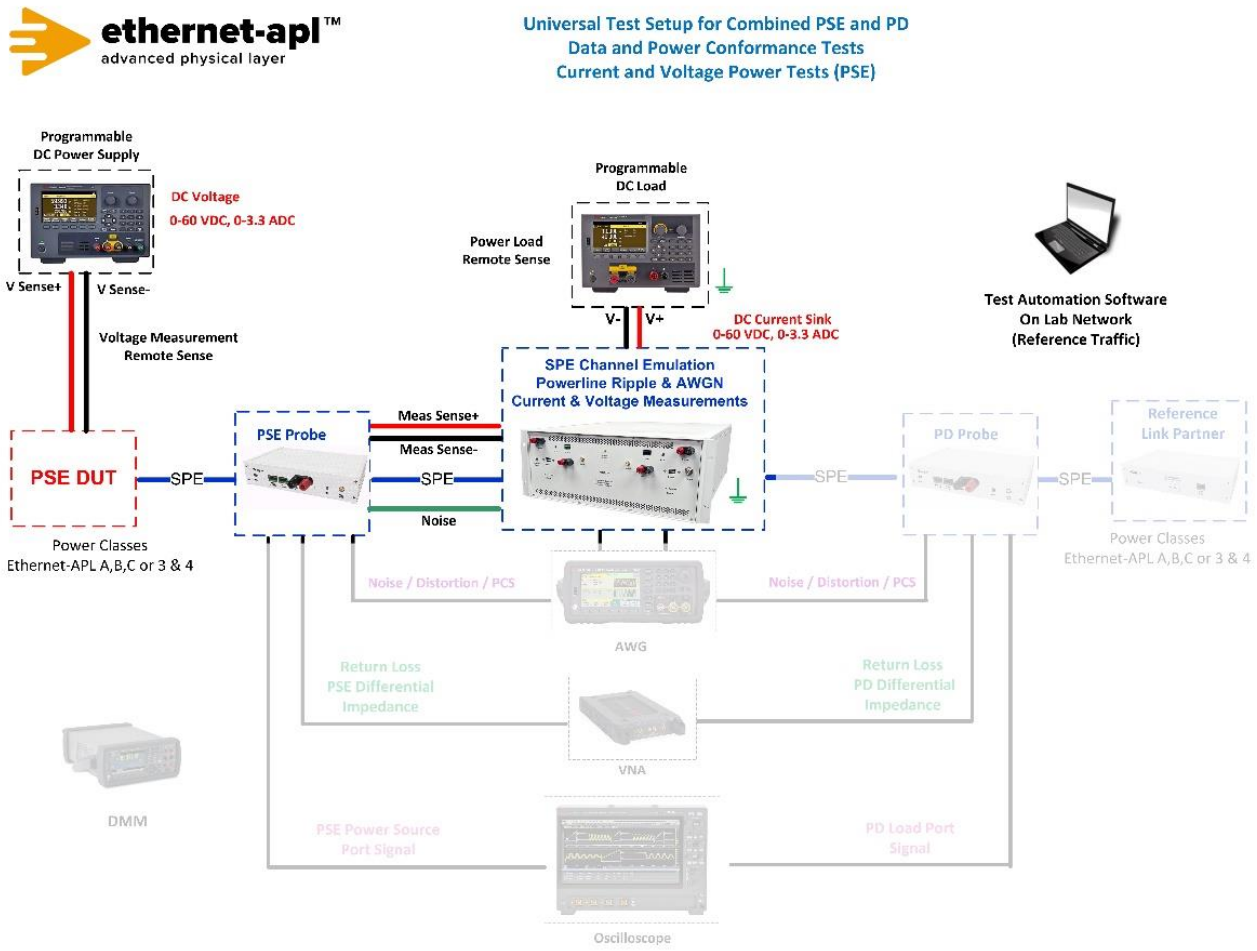
Test Type (Data or Power): Power
Test Name: TP.1.2 Powering Class Voltages

Purpose/Description: To verify that a Trunk Power Source port asserts the proper voltage at the port interface under normal operating conditions. Minimum and Maximum Supply Voltage.

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:



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 µF 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
5	PASS	U_{PS} is between U_{PS}(MIN)=46V and U_{PS} (MAX)=50V at any time during the test with a current load draw of I_{PS} (MIN) with a minimum supply voltage
5	FAIL	U_{PS} is not between U_{PS} (MIN) and U_{PS} (MAX) at any time during the test with a current load draw of I_{PS} (MIN) with a minimum supply voltage
7	PASS	U_{PS} is between U_{PS}(MIN)=46V and U_{PS} (MAX)=50V at any time during the test with a current load draw of 0mA
7	FAIL	U_{PS} is not between U_{PS} (MIN) and U_{PS} (MAX) at any time during the test with a current load draw of 0mA
10	PASS	U_{PS} is between U_{PS}(MIN)=46V and U_{PS} (MAX)=50V at any time during the test with a current load draw of I_{PS} (MIN)
10	FAIL	U_{PS} is not between U_{PS} (MIN) and U_{PS} (MAX) at any time during the test with a current load draw of I_{PS} (MIN)
12	PASS	U_{PS} is between U_{PS}(MIN)=46V and U_{PS} (MAX)=50V at any time during the test with a current load draw of 0mA
12	FAIL	U_{PS} is not between U_{PS} (MIN) and U_{PS} (MAX) at any time during the test with a current load draw of 0mA

Notes:

[1] APL Port Profile 1.1 Section 5.4

[2] Methods Annex – Disabling PHY

[3] Methods Annex – Sampling with Digital Multimeter