

# Ethernet-APL Test Guide

**Test Type (Data or Power):** Power

**Test Name:** SL.3.1 Terminal and Connectors

**Purpose/Description:** To verify that a Spur Power Load port uses a valid port connector and that the pins of the connector exhibit their assigned functions.

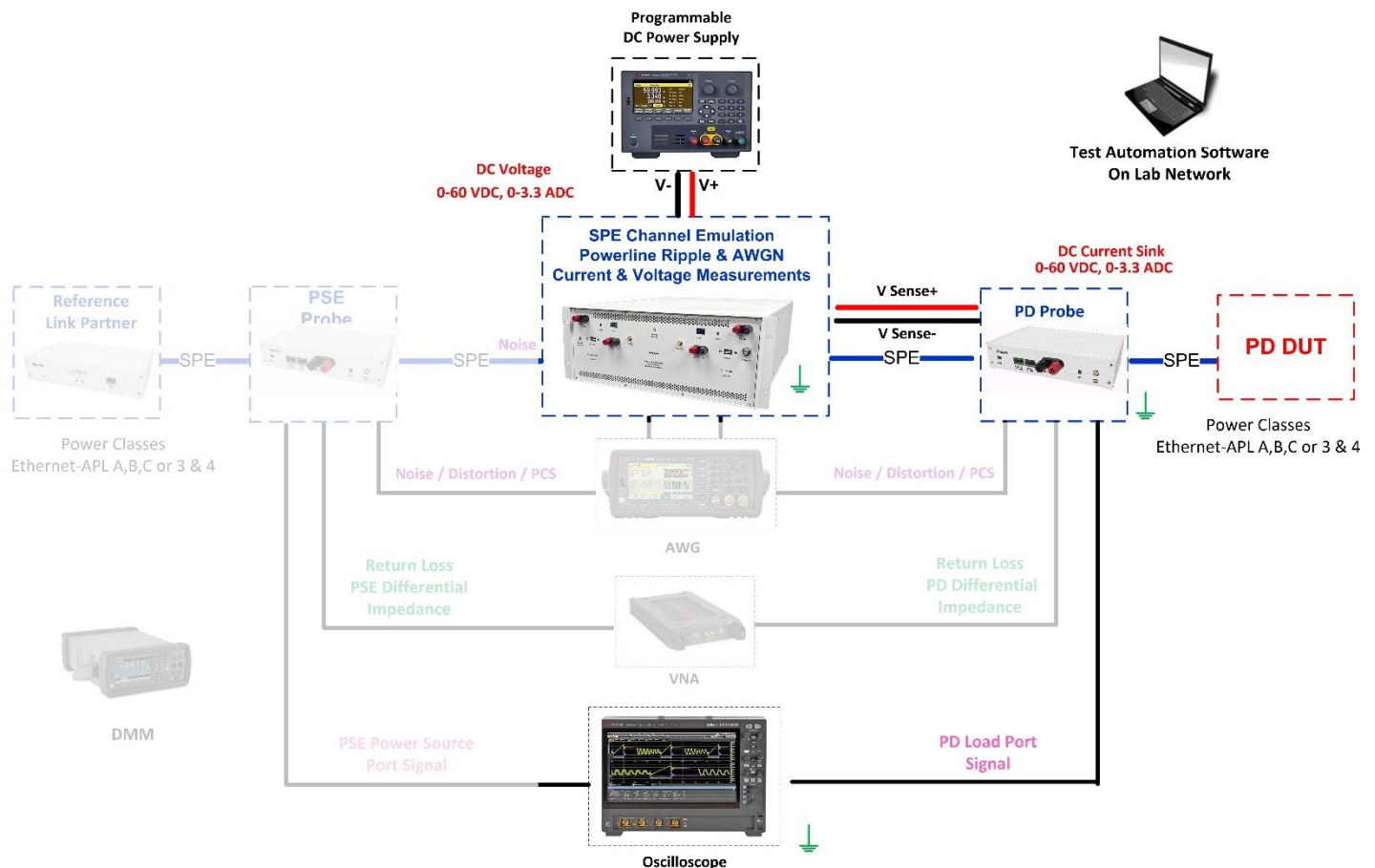
## Required Test Equipment:

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

## Test Setup / Connection Diagram:



### Universal Test Setup for Combined PSE and PD Data & Power Conformance Testing Port Under Test PD



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## Device Under Test Setup:

- Enter the Power Class for the Device Under Test (Class A, B or C) into the test automation software.

## Expected Results (Pass/Fail Criteria):

| Step  | Status | Description   |
|-------|--------|---|
| 2, 6, | PASS   | a. The observed connector is an M8 or M12 socket (A-Coded), or a terminal block connection; <b>and</b><br>b. An auto-negotiation signal is present between the APL signal+ and APL signal– pins 10BASE-T1L is using Low Speed Mode (LSM) DME clock edge to clock edge is 625kHz |
| 2     | FAIL   | The observed connector is not an M8 or M12 socket (A-Coded) or a terminal block connection  |
| 6     | FAIL   | An auto-negotiation signal is not present between the APL signal+ and APL signal– pins  |

## Notes:

## References:

- [1] APL Port Profile 1.2 Section A.1, A.3, A.4
- [2] IEC 60603-7-3
- [3] IEC 61076-2-101
- [4] IEC 61076-2-104
- [5] Methods Annex – Power Supply Voltage Sensing