

Ethernet-APL Test Guide

Test Type (Data or Power): Power

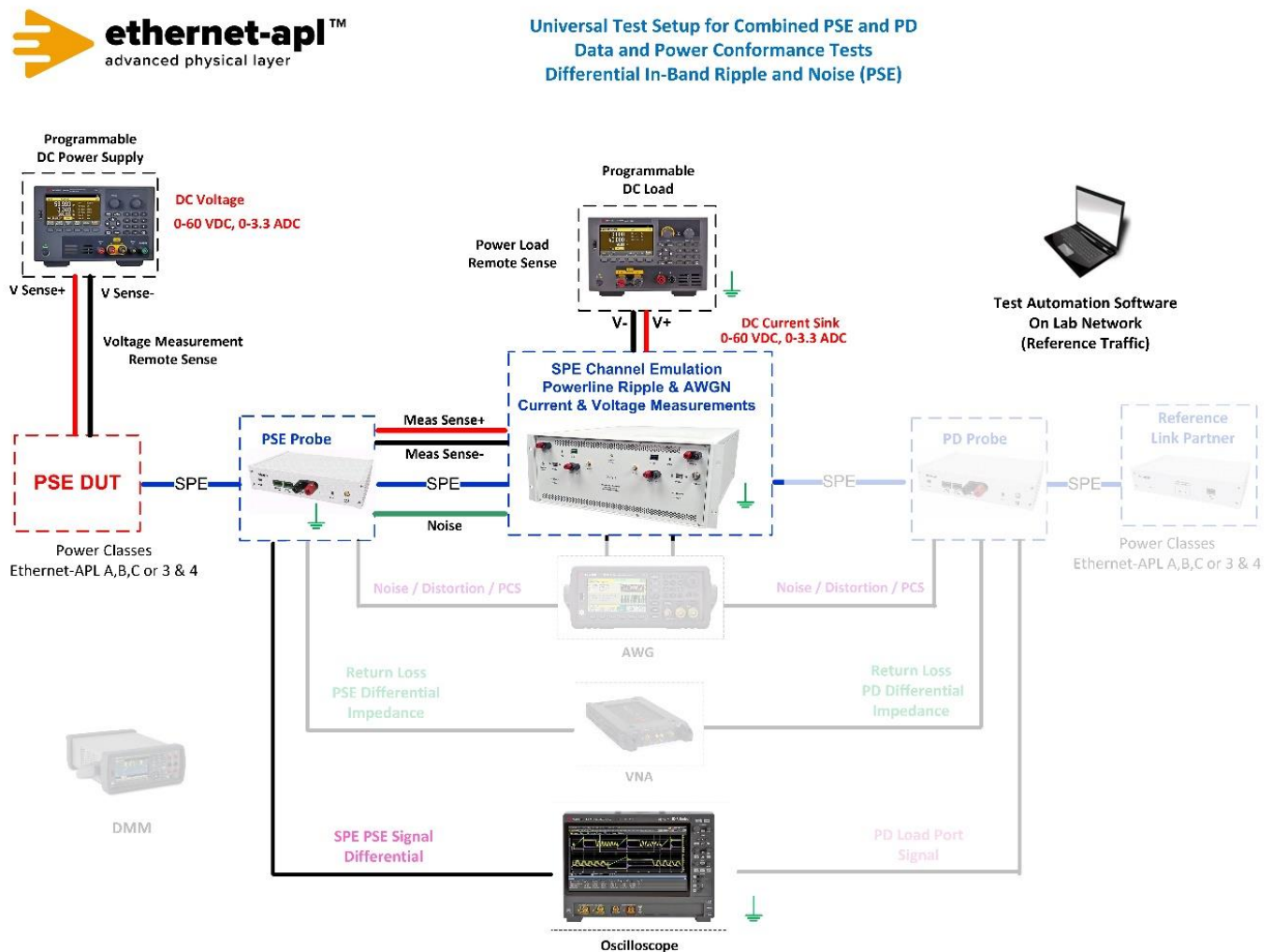
Test Name: SP.3.1 Terminal and Connectors

Purpose/Description: To verify that a Spur Power Source port uses a valid port connector and that the connector conforms to the appropriate electrical specifications.

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:



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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, 7	PASS	<ol style="list-style-type: none">The observed connector is an M8 or M12 socket (A-Coded), or a terminal block connection; andThe power polarity observed is positive with respect to the definition of APL signal+ and APL signal– (APL signal+ has the higher potential); andAn auto-negotiation signal is present between the APL signal+ and APL signal– pins. 10BASE-T1L uses Low Speed Mode (LSM) Auto-Negotiation. 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	The power polarity observed is negative with respect to the definition of APL signal+ and APL signal– (APL signal+ has the lower potential)
7	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 6.2
- [2] APL Port Profile Draft 1.2 Section A.1,A.3,A.4
- [3] IEC 60603-7-3
- [4] IEC 61076-2-101
- [5] IEC 61076-2-104
- [6] Ethernet-APL Power Test Specification v1.3