AC MPS Modifications for Type 3 and 4
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AC MPS modifications

Background

- PSE Maintain Power Signature (MPS) consists of two components:

  - AC MPS component

  - DC MPS component

- The PSE shall monitor either the DC MPS component, the AC MPS components or both.

- It may be future advantage to preserve AC component specification for 802.3bt since it allows almost zero STBY power support.

- It may help in the future if we will have AC disconnect method that has no power loss on PSE series output diode in current AC disconnect implementations.

- The following is a proposal to modify AC MPS text for 802.3bt that preserves 802.3 Type 1 and 2 requirements for Type 3 and 4 without additional requirements from PSE and PD.

33.2.9.1.1 PSE AC MPS component requirements (Changes and additions)

- A PSE that monitors the AC MPS component shall meet the "AC Signal parameters" and "PSE PI voltage during AC disconnect detection" parameters in Table 33–1.

- A PSE shall consider the AC MPS component to be **present** when it detects an AC impedance at the PI equal to or lower than |Zac1| as defined in Table 33–1.

- A PSE shall consider the AC MPS component to be **absent** when it detects an AC impedance at the PI equal to or greater than |Zac2| as defined in Table 33–1.

- A PSE may consider the AC MPS component to be either present or absent when it detects a AC impedance between the values |Zac1| max and |Zac2| min.

- Power shall be removed from the PI when AC MPS has been absent for a time duration greater than TMPDO.

- For Type 3 or 4 PSEs connected to a single signature PD: Power shall be removed from the PI when AC MPS has been absent on both pair-set for a duration greater than T_{MPDO}.

- For Type 3 or 4 PSEs connected to a dual signature PD: The PSE shall remove power from any pair-set on which the AC MPS has been absent for a duration greater than T_{MPDO}. The PSE may remove power from both pair sets if the AC MPS has been absent for duration greater than T_{MPDO} on either pair set.