

Subject: Inclusion of AC powering into Addendum 6- Additional Cabling Requirements for DC power.

It has been brought to our attention that TR42 is considering the inclusion of AC powering into Addendum 6- Additional Cabling Requirements for DC power.

We have a number of specific concerns on the potential for damage to 802.3af-2003 devices from AC power sources.

1. Interconnecting an AC power source and a DC PSE will result in a short circuit in the DC PSE during one-half of the AC cycle due to a diode connected directly across the output of the DC PSE (802.3af-2003 -figure 33-8 and figure 33-9). This is one example of a diode implementation in the power source output there are other examples of this implementation.
2. An AC power source connected to the data pair of a DTE via an 802.3af midspan PSE receiving DC power may result in the PD receiving a summation of both voltages; exceeding 802.3af specifications.