PAR Change for P802.3bt

Proposed change

Old PAR:

5.2.b. Scope of the project: The scope of this project is to augment the capabilities of the IEEE Std 802.3 standard with 4-pair power and associated power management information. The project will augment the methodology for the provision of power via balanced cabling to connected Data Terminal Equipment with 802.3 interfaces. Optional augmented power limit will be made available for certain structured cabling systems. Compatibility with existing equipment will be maintained.

New PAR:

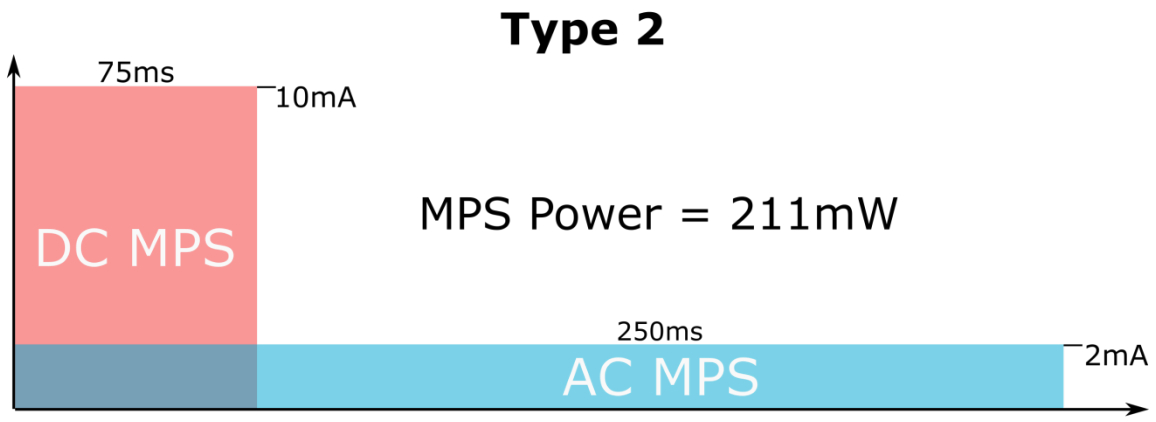
5.2.b. Scope of the project: The scope of this project is to augment the capabilities of the IEEE Std 802.3 standard with 4-pair power and associated power management information. The project will augment the methodology for the provision of power via balanced cabling to connected Data Terminal Equipment with 802.3 interfaces. Optional augmented power limit will be made available for certain structured cabling systems. Improvements, precluding raising the power limit, introduced for 4-pair systems may be enabled for 2-pair systems. Compatibility with existing equipment will be maintained.

Why?

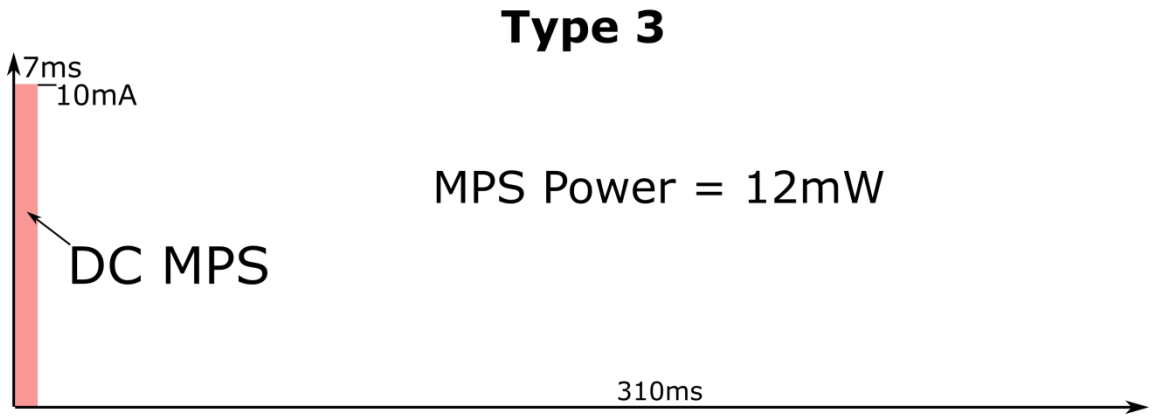
- 802.3bt is creating two new Types (PSE & PD)
  - **Type 3** allows **60W** PSE power
  - **Type 4** allows **90W** PSE power
- New features have been added to these new Types that also provide benefit for 2-pair systems at power levels addressed by Type 1 (802.3af) and Type 2 (802.3at)
- Type 3 PSEs are allowed to operate over 2P only with maximum power of 30W and provide these new features. This requires a PAR change.

Low Power Standby MPS

MPS = Maintain Power Signature
It is the minimum power a PD must draw. PDs with a low power state need to generate extra power consumption to meet MPS.



- Type 3 MPS power is lower than Type 2 MPS by a factor of 17
- Enables applications with stringent standby requirements such as PoE Lighting



Autoclass

Autoclass allows PSEs to allocate the precise amount of power needed by the PD. It requires a PD to be able to present its maximum power consumption. Autoclass works both with Physical Layer and Data Link Layer classification.

Example: