

IEEE 802.3 Ethernet Working Group Liaison Communication

Source: IEEE 802.3 Working Group¹

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From: David Law Chair, IEEE 802.3 Ethernet Working Group
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Subject: IEEE P802.3bt Clause Referencing

Dear Dr Oehler,

Recently, the IEEE P802.3bt Task Force agreed to move the new 4-pair Power over Ethernet specification into a new clause. This may impact ISO/IEC documents that reference IEEE 802.3 Power over Ethernet (i.e. ISO/IEC 11801 and 29125). IEEE 802.3 Clause 33 will continue to specify 2-pair PoE systems. These systems are called Type 1 and Type 2 in IEEE 802.3. Type 1 delivers up to 15.4W over Class D cabling at a maximum of 350mA, 13W of which is available at the Powered Device (PD). Type 2 delivers up to 30W over Class D cabling at a maximum of 600mA, 25.5W of which is available at the PD.

IEEE 802.3 Clause 145 is being drafted and will cover the 4-pair PoE systems, called Type 3 and Type 4. Type 3 delivers up to 60W over Class D cabling at a maximum of 600mA nominal current per pair, 51W of which is available at the PD. Type 4 delivers up to 90W over Class D cabling at a maximum of 866mA nominal current per pair, 71.3W of which is available at the PD. You will notice that the 4-pair systems are specified as a nominal current while the 2-pair systems are specified simply as current. This is to allow for the current imbalance that may happen in a 4-pair system due to resistive unbalance between the power supply in the Power Sourcing Equipment (PSE) and the hotswap (engage/disengage while under power) component in the PD, including the structured cabling.

¹ This document solely represents the views of the IEEE 802.3 Working Group, and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

Approval of IEEE P802.3bt as an IEEE standard is planned for June 2018. Please use this information to update any references to IEEE 802.3 as appropriate.

Sincerely,

David Law

Chair, IEEE 802.3 Ethernet Working Group