

IEEE 802.3 Ethernet Working Group Liaison Communication

Source: IEEE 802.3 Ethernet Working Group¹

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Subject: IEEE 802.3 Ethernet Working Group input to NEC Task Group

Approval: Agreed to at IEEE 802.3 Interim meeting, Huntington Beach, CA, USA, 12th January 2017

Dear Mr. Gallo,

The IEEE 802.3 Ethernet Working Group has recently been informed by the IEEE-SA that participation in the NEC Task Group is by individual, hence Bill McCoy is not representing IEEE. Based on this, the IEEE 802.3 Ethernet Working Group would like to provide the following feedback directly to the NEC Task Group:

1. The NEC text as adopted will orphan many devices already installed because it restricts the per conductor current to 0.3 A, without special measures. This does not allow the required tolerance to support the unbalance that results from assembling disparate components into a system, each of which have their own tolerance. Based on the experience of those involved in the development of IEEE 802.3 Power over Ethernet, we recommend a value of at least 0.36 A, which would be consistent with deployed devices based on our standards.

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

2. The NEC text as adopted states that 8P8C connectors are rated at 1.3 A. This is an incorrect statement, even at room temperature, but the requirement should include temperature dependence. IEC 60603-7 defines the current at 1.0 A at 60 °C and 0.0 A at 90 °C.
3. The NEC text specifies operation at temperatures beyond 60 °C. The Ethernet channel is specified only to 60 °C and communication at higher temperatures is not guaranteed. Any operation beyond 60 °C will require an engineered system.
4. The IEEE 802.3 Ethernet Working Group understands the testing for LP cable only involves thermal testing. This testing did not include data transmission testing. There is no evidence this testing has been performed. The IEEE 802.3 Ethernet Working Group would be interested in reviewing some LP cable data transmission testing at rated temperature.

Thank you for considering the above as input to your Task Group.

Sincerely,

David Law

Chair, IEEE 802.3 Ethernet Working Group