

**First Revision No. 4644-NFPA 70-2015 [ Sections Part VI., 840.170, 840.180 ]****840.170 Equipment and Cables.**

Premises-powered broadband communications systems equipment and cables shall comply with [840.170\(A\)](#) through ~~(D)~~ [\(I\)](#).

**(A) Optical Network Terminal.**

The ONT network terminal and applicable grounding means shall be listed for application with premises-powered broadband communications systems.

Informational Note No. 1: One way to determine applicable requirements is to refer to UL 60950-1-2007, *Standard for Safety of Information Technology Equipment*; UL 498A-2008, *Current Taps and Adapters*; or UL 467-2007, *Grounding and Bonding Equipment*, or UL 62368-1-2014, *Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements*.

Informational Note No. 2: There are no requirements on the network terminal and its grounding methodologies except for those covered by the listing of the product.

**(B) Optical Fiber Cables.**

Optical fiber cables shall be listed in accordance with [770.179\(A\)](#) through (D) and shall be marked in accordance with [Table 770.179](#).

**(C) Premises Communications Circuits. Communications Equipment.**

Communications equipment shall be listed in accordance with 800.170. Premises communications wires and cables connecting to the ONT shall be listed in accordance with 800.179. Communications raceways associated with the premises-powered broadband communications system shall be listed in accordance with 800.182.

**(D) Cable Routing Assemblies and Communications Raceways**

Cable routing assemblies and communications raceways shall be listed in accordance with 800.182.

**(E) Premises Communications Wires and Cables.**

Communications wires and cable shall be listed and marked in accordance with 800.179.

**(F) Communications Limited-Power Cables**

Communications limited-power cables shall be listed as suitable for carrying communications circuits and limited power circuits as specified in 840.160(C). Communications limited-power cable shall be marked CMP-LP, CMR-LP or CM-LP, as applicable

**(G) Premises Community Antenna Television (CATV) Circuits.**

Premises community antenna television (CATV) coaxial cables connecting to the ONT network terminal shall be listed in accordance with [820.179](#). Applicable grounding means shall be listed for application with premises-powered broadband communications systems.

**(H) Power Source.**

The power source for circuits intended to provide power over communications cables to remote equipment shall be limited in accordance with Table 11(B) in Chapter 9 for voltage sources up to 60 V dc and be listed as specified in 840.170(H)(1) or 840.170(H)(2):

- (1) A power source shall be listed as specified in 725.121(A)(1), (A)(2), (A)(3), or (A)(4). The power sources shall not have the output connections paralleled or otherwise interconnected unless listed for such interconnection.
- (2) A power source shall be listed as communications equipment for limited-power circuits.

Informational Note: Informational Note: One way to determine applicable requirements is to refer to ANSI/UL 60950, Safety of Information Technology Equipment; ANSI/UL 60950-1-2007, Standard for Safety of Information Technology Equipment-Safety-Part 1; or ANSI/UL 62368-1, Audio/Video, information and Communication Technology Equipment- Part 1: Safety Requirements. Typically such circuits are used to interconnect equipment for the purpose of exchanging information (data).

**(I) Accessory Equipment.**

Communications accessory equipment and/or assemblies shall be listed for application with premises-powered communications systems.

Informational Note: One way to determine applicable requirements is to refer to UL 1863, Communications-Circuit Accessories.

**840.180** Grounding Devices.

Where bonding or grounding is required, devices used to connect a shield, a sheath, or non-current-carrying metallic members of a cable to a bonding conductor, or grounding electrode conductor, shall be listed or be part of listed equipment.

## Submitter Information Verification

**Submitter Full Name:** CMP 16  
**Organization:** [ Not Specified ]  
**Street Address:**  
**City:**  
**State:**  
**Zip:**  
**Submittal Date:** Fri Jan 16 10:12:19 EST 2015

## Correlating Committee Actions

The correlating committee may override this FR with a First Correlating Revision or with a Committee Note

## Committee Statement

**Committee Statement:** The expanded coverage of Article 840 to cover PoE requires that the article recognize twisted pair-based and coaxial cable-based systems in addition to optical fiber-based systems. Instead of "optical network terminal" which applies only to optical fiber-based systems, the recommended text simply calls the interface a "network terminal".

Revised Informational Note No. 1 updates the list of referenced UL standards.

New paragraph (H) is added to cover listing requirements for these power sources.

Listing requirements were developed considering worst-case installation conditions. Similar to CMP-CI, CMR-CI and CM-CI cables, the new cables are marked Types CMP-LP, CMR-LP and CM-LP.

Premises-powered installations especially at multi-dwelling units include more equipment than ONTs, such as, optical cross-connects, slack storage units, and other assemblies which need to be listed for the application. Adding (I) Accessory Equipment addresses this issue.

## Response Message:

[Public Input No. 1618-NFPA 70-2014 \[Section No. 840.170\(A\)\]](#)

[Public Input No. 2269-NFPA 70-2014 \[Section No. 840.170\]](#)

[Public Input No. 965-NFPA 70-2014 \[Section No. 840.170 \[Excluding any Sub-Sections\]\]](#)

[Public Input No. 4253-NFPA 70-2014 \[New Section after 840.170\(D\)\]](#)

[Public Input No. 325-NFPA 70-2014 \[Global Input\]](#)

[Public Input No. 4742-NFPA 70-2014 \[Section No. 840.170\(C\)\]](#)

## Ballot Results

 **This item has passed ballot**

17 Eligible Voters

0 Not Returned

15 Affirmative All

2 Affirmative with Comments

0 Negative with Comments

0 Abstention

**Affirmative All**

Bish, George

Dawson, Fred C.

Ivans, Randolph J.

Jensen, Robert W.

Johnson, Steven C.

Lawrence, Eric

McCoy, William J.

McNamara, Jack

Moore, Thomas E.

Murphy, Michael F.

Ohde, Harold C.

Parrish, Thomas J.

Pirkle, W. Douglas

Prezioso, Luigi G.

Zieman, Leo

**Affirmative with Comment**

Brunssen, James E.

The second sentence of 840.170(C) contains the term "ONT" that should be "Network Terminal". Further, this sentence is redundant and may be deleted as the information is covered in 840.170(E).

Dorna, Gerald Lee

The second sentence of 840.170(C) contains the term "ONT" that should be "Network Terminal".