

2011 NEC PROPOSALS

[Draft text of 4 “companion” proposals to be presented to the NEC in its 2011 revision cycle in conjunction with the present proposal to revised UL 489]

1. Voltage Drop definition

[*new Definition added to 100 Definitions*]

100 Definitions

I. General

Voltage Drop. Voltage-drop is the difference in the voltage of a circuit created by the connection of a resistor or load to the circuit. Voltage-drop may be measured by connecting a known resistance at a certain point in a circuit. Since the applied resistance is a constant, the change in circuit voltage that is created by the known resistance can be calculated as the impedance of the circuit itself from the source of the voltage to the point of the measurement.

2. Maximum Permissible Voltage Drop

[*new paragraph (5) added to 210.19 Conductors- Minimum Ampacity and size*]

210.19 Conductors- Minimum Ampacity and size

(A) Branch Circuits Not More Than 600 Volts.

(5) **Maximum Permissible Voltage-Drop.** Conductors shall be sized such that voltage-drop at the furthest outlet on a 120-volt branch circuit shall not exceed 8.0% to ensure sufficient available short-circuit or fault current to facilitate the operation of the branch circuit overcurrent protection device as required by Article 250.4(A)(5).

3. DIT Circuit Breaker

[*new article*]

240.87 Defined Instantaneous Trip (DIT) Circuit Breaker.

(A) Definition. Defined Instantaneous Trip (DIT) Circuit Breaker. A circuit breaker that opens within 1 cycle of being subjected to an overcurrent equal to or greater than 12 times its rated current.

(B) Circuit Breakers Installed in Dwelling Units. 120/240-volt circuit breakers rated 50 amperes or less installed in dwelling units to meet the overcurrent protection requirements of 240.4 shall be of the DIT type.

Exception No. 1: Use of non-DIT type circuit breakers in compliance with 240.4 shall be permitted on circuits supplying dedicated loads with high inrush or motor starting current where a DIT breaker can be shown to nuisance trip.

Exception No. 2: Where 240.3 or 240.4(G) applies.

4. DIT circuit Breaker Marking Requirement

[*add new marking requirement (F) to 240.83 Marking*]

240.83(F) Circuit breakers installed in accordance with 240.87 shall be marked in accordance with 240.83(A) with the letters “DIT”.