

Tentative Interim Amendment (TIA) Request Form

Submitter's Information

Name: Donny Cook

Affiliation: (Technical Committee, company, organization): NEC CMP-17, NEC CC, Shelby County, AL, Development Services

Address: 1123 County Services Drive

City: Pelham

State: AL

Zip: 35124

Email Address: dcook@shelbyal.com

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Proposed TIA Information

NFPA Standard No.: NFPA 70

Editions affected (Current and/or Proposed): 2020

Proposed text of the TIA (wording to be added, revised, how to be revised, or deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Proposed text of the TIA (wording to be added, revised, how to be revised, or deleted):

Revise 210.8 (F) as follows:

210.8(F) Outdoor Outlets.

All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel. This requirement shall become effective for ductless mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed on January 1, 2023.

Informational Note: Power conversion equipment is the term used to describe components that are used in HVAC equipment that is commonly referred to as a Variable speed drive. Use of power conversion equipment to control compressor speed differs from multi-stage compressor speed control.

Exception: Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in [210.8\(C\)](#).

Statement of the problem and substantiation for the TIA

This expansion of GFCI protection in the 2020 NEC to cover exterior outlets on dwelling units other than just those rated 125V is a necessary enhancement to safety. Code Making Panel 2 supported the expansion of GFCI protection to cover outdoor outlets rated 250V based on the electrocution of a young boy who came in contact with the energized enclosure of an outdoor HVAC unit. However recent field experience with new installations performed in accordance with the 2020 NEC has demonstrated some random opening of the GFCI devices protecting ductless mini splits. It has also become apparent that random opening may also occur with

other equipment employing power conversion equipment controlling the speed of the compressor.

The purpose of this TIA is not to eliminate the GFCI protection but provide time for the industry to understand and address the field tripping on ductless mini splits and units containing power conversion equipment. This TIA extends the date of enforcement for the industry to address the present tripping issues that are occurring in the field on these specific equipment types.

Emergency Nature of the Proposed TIA*

Select one or all that apply as to why you believe the TIA is of an Emergency Nature:

- ☐ The standard contains an error or an omission that was overlooked during the regular revision process.
- ☐ The NFPA Standard contains a conflict within the NFPA Standard or within another NFPA Standard.
- ☐ The proposed TIA intends to correct a previously unknown existing hazard.
- ☐ The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.
- ☐ The proposed TIA intends to accomplish a recognition of an advance in the art of safeguarding property or life where an alternative method is not in current use or is unavailable to the public.
- ☒ The proposed TIA intends to correct a circumstance in which the revised NFPA Standard has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process or was without adequate technical (safety) justification for the action.

***NOTE: a TIA cannot be processed without identification of Emergency Nature above.**

Detailed basis supporting that the TIA is of an Emergency Nature requiring prompt action:

While the 2020 NEC text clearly enhances safety of electrical workers, HVAC technicians and the general public, the application of the newly revised requirements in 210.8 (F) inadvertently has an unintended consequence on ductless mini split systems and other units employing power conversion equipment. Without this TIA, designers, installers, AHJs, and consumers are forced to choose between a compliant and an operational installation. Additional time is necessary for the industry to resolve the operational aspects of these specific types of equipment while retaining the enhanced safety benefit for other outdoor installations.

Additional Requirements

Please provide the written agreement of at least two members of the involved Technical Committee or Correlating Committee to the processing of the TIA. The agreement to the processing of the TIA is for the sole purpose to allow the TIA to be processed and does not imply support for the proposed text or emergency nature of the TIA.

**Mail to: Secretary, Standards Council • National Fire Protection Association
1 Batterymarch Park • Quincy, MA 02169
Fax No. 617-770-3500 or email to TIA_Errata_Fls@nfpa.org**

