



MIKE CAUSEY
INSURANCE COMMISSIONER & STATE FIRE MARSHAL

BRIAN TAYLOR, CHIEF STATE FIRE MARSHAL

December 16, 2020

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Donald Kevin Somerset
Brunswick County Code Administration

Formal Interpretation by NCDOT
State Electrical Code

"[W]hen a "sunroom" is created using vinyl film windows (EZ Breeze) to enclose a covered porch, is receptacle spacing per NEC 210.52(A) and arc fault protection per NEC 210.12(A) required?"
See Appendix E below for citation.

2017 State Electrical Code

210.52 Dwelling Unit Receptacle Outlets. This section provides requirements for 125-volt, 15- and 20-ampere receptacle outlets. . . .

(A) General Provisions. In every kitchen, family room, dining room, living room, parlor, library, den, sunroom, bedroom, recreation room, or similar room or area of dwelling units, receptacle outlets shall be installed in accordance with the general provisions specified in 210.52(A)(1) through (A)(4).

2017 State Electrical Code

210.12 Arc-Fault Circuit-Interrupter Protection. Arc-fault circuit-interrupter protection shall be provided as required in 210.12(A), (B), (C), and (D). The arc-fault circuit interrupter shall be installed in an accessible location.

(A) Dwelling Units. All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by any of the means described in 210.12(A)(1) through (6):

According to the 2017 State Electrical Code, any room or area defined as, or similar to, a sunroom shall meet the provisions described in section 210.52(A) for receptacle spacing and section 210.12(A) for arc-fault circuit-interrupter (AFCI) protection. Sunrooms share the requirements of sections 210.52(A) and 210.12(A) with other rooms that possess similar electrical needs. Sunrooms, living rooms, bedrooms, dining rooms, etc. have similar receptacle spacing requirements because the Code expects the user of the electrical system to utilize

receptacle outlets for similar equipment, such as vacuum cleaners, table lamps, phone chargers, televisions, etc.

Therefore, the 2017 State Electrical Code requires a sunroom that is created by using vinyl film windows to enclose a covered porch comply with the provisions described in section 210.52(A) for receptacle spacing and section 210.12(A) for arc-fault circuit-interrupter (AFCI) protection.

“Also, homeowners are instructed by manufactures instructions to remove the panels if the wind speed is expected to exceed 65 MPH. With that said, would the receptacles in a sunroom enclosed by vinyl film windows be required to have GFCI protection since they would then be outdoor per 210.8(A)3 in a high wind event?” See Appendix E below for citation.

Section 210.8(A) requires that 125-volt, single-phase, 15- and 20-ampere receptacles possess GFCI protection when such receptacles are located outdoors but not when such receptacles are located in sunrooms. “A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.” See Article 100, Location, Dry.

Removal of the transparent panels for storm preparation does not redefine the room as outdoors because such temporary alteration does not change the intent of the room from being normally utilized as a sunroom. A living room with large French-style doors that encompass an exterior wall and that can be left open has no merit to reclassify the location of the living room receptacles as outdoor receptacles. The outdoors is generally considered a damp or wet location in accordance with their respective definitions in Article 100, but never a dry location. In accordance with the electrical code’s definition of a dry location, the Code recognizes that parts of the electrical system may sustain moisture during abnormal events without diminishing the approval of the system as dry.

Receptacles in a sunroom enclosed by vinyl film windows are not be required by the State Electrical Code to possess GFCI protection even if the sunroom’s manufacturer instructions recommend removal of the panels in a high wind event.



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Office of State Fire Marshal
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Example:



<https://ezebreezhome.com/porches/>



APPENDIX E APPEALS NORTH CAROLINA BUILDING CODE COUNCIL

325 North Salisbury Street, Room 5_44
Raleigh, North Carolina 27603
(919) 647-0019

APPEAL TO NCDOI/NCBCC

Hearing Date ____/____/____

GS 153A-374, GS 160A-434

Formal Interpretation by NCDOI

Appeal of Local Decision to NCDOI _____

GS 143-140, GS 143-141

Appeal of Local Decision to NCBCC _____

Appeal of NCDOI Decision to NCBCC _____

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North Carolina State Building Code, Volume 2017 NEC - Section 210.8(A)3, 210.52(A), 210.12(A).

REQUEST ONE: Formal Interpretation by NCDOI Appeal of Local Decision to NCBCC
 Appeal of Local Decision to NCDOI Appeal of NCDOI Decision to NCBCC

Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.

Per NCAC 203.2.1.2, when a "sunroom" is created using vinyl film windows (EZ Breeze) to enclose a covered porch, is receptacle spacing per NEC 210.52(A) and arc fault protection per NEC 210.12(A) required?

Also, homeowners are instructed by manufactures instructions to remove the panels if the wind speed is expected to exceed 65 MPH. With that said, would the receptacles in a sunroom enclosed by vinyl film windows be required to have GFCI protection since they would then be outdoor per 210.8(A)3 in a high wind event?