



Thomas & Betts

ANALYSIS OF NEC ®

2017 Code Changes: Article Section 690.56(C) Buildings with
Rapid Shutdown
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(C) Buildings with Rapid Shutdown. Buildings with PV systems shall have permanent as described in 690.56(C)(1) through (C)(3).

(1) Rapid Shutdown Type. The type of PV system rapid shutdown shall be labeled as described in 690.56(C)(1)(a) or (1)(b):

(a) For PV systems that shut down the array and conductors leaving the array:

SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN. TURN RAPID SHUTDOWN SWITCH TO THE “OFF” POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY.

The title “SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN” shall utilize capitalized characters with a minimum height of 9.5 mm (3/8 in.) in black on yellow background, and the remaining characters shall be capitalized with a minimum height of 4.8 mm (3/16 in.) in black on white background. [See Figure 690.56(C)(1)(a).]

(b) For PV systems that only shut down conductors leaving the array:

SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN TURN RAPID SHUTDOWN SWITCH TO THE “OFF” POSITION TO SHUT DOWN CONDUCTORS OUTSIDE THE ARRAY. CONDUCTORS IN ARRAY REMAIN ENERGIZED IN SUNLIGHT.

The title “SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN” shall utilize capitalized characters with a minimum height of 9.5 mm (3/8 in.) in white on red background, and the remaining characters shall be capitalized with a minimum height of 4.8 mm (3/16 in.) in black on white background. [See Figure 690.56(C)(1)(b).]

The labels in 690.56(C)(1)(a) and (b) shall include a simple diagram of a building with a roof. The diagram shall have sections in red to signify sections of the PV

system that are not shut down when the rapid shutdown switch is operated.

The rapid shutdown label in 690.56(C)(1) shall be located on or no more than 1 m (3 ft) from the service disconnecting means to which the PV systems are connected and shall indicate the location of all identified rapid shutdown switches if not at the same location.

(2) Buildings with More Than One Rapid Shutdown Type. For buildings that have PV systems with both rapid shutdown types or a PV system with a rapid shutdown type and a PV system with no rapid shutdown, a detailed plan view diagram of the roof shall be provided showing each different PV system and a dotted line around areas that remain energized after the rapid shutdown switch is operated.

(3) Rapid Shutdown Switch. A rapid shutdown switch shall have a label located on or no more than 1 m (3 ft) from the switch that includes the following wording:

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

The label shall be reflective, with all letters capitalized and having a minimum height of 9.5 mm (3/8 in.), in white on red background.

Analysis of the Change

Building labeling requirements for Rapid Shutdown were expanded upon with revised markings and additional labeling. The revision requires that any building with a rapid-shutdown PV system has a plaque to indicate to first responders that rapid-shutdown is provided. It also harmonizes the location with the requirements for general plaques for off grid systems (690.56 (A)), or utility interactive systems (690.56(B)). Lastly, if the rapid shutdown device is not the service disconnecting means or adjacent to it, the plaque is required to identify the initiator location.

Products

ABB's Rapid Shutdown Products



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Contact Us

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Disclaimer: This is not intended to be an iteration of all the changes, but a reference of a change that may affect the Thomas & Betts, ABB & Baldor product lines. For a more in-depth document, please contact the International Association of Electrical Inspectors at www.iaei.org.

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