
FIRE PREVENTION AND BUILDING SAFETY COMMISSION
Department of Homeland Security

Written Interpretation of the State Building Commissioner

Interpretation #: CEB-2021-15-2020 IRC-M1307.3.1-(RWTC)

Note: For the purpose of making technical corrections, this interpretation replaces LSA Document #21-174.

Building or Fire Safety Law Interpreted

[675 IAC 14-4.4](#) Indiana Residential Code, 2020 Edition

M1307.3.1 Protection from impact. Building appliances and their appurtenances shall be installed outside the intended vehicle travel path. Vehicle travel path shall be determined by the garage door rough opening width. When building appliances and their appurtenances cannot be installed outside the vehicle travel path due to design and construction constraints, such appliances shall be protected by one of the following methods: [Protection methods 1-5 omitted for lack of relevance to the request.]

Issue

Whether an electric water heater requires impact protection under Section M1307.3.1 of the 2020 Indiana Residential Code (IRC).

Interpretation of the State Building Commissioner

An electric water heater does require protection under Section M1307.3.1 of the 2020 IRC if it utilizes an electrical switching device, including, but not limited to, a thermostat.

Rationale

To determine the answer to the question of whether M1307.3.1 applies to electric water heaters, we must examine the structure of the code and where in the document the requirement appears, and how its language may apply to the device in question.

Section M1307.3.1 is a subsection of Section M1307.3. That parent section limits its regulatory scope, and therefore the scope of its subsections, to *appliances* having *ignition sources*. Both terms are defined in the IRC, and for an appliance to be subject to the requirements of these sections it must meet both definitions:

APPLIANCE. A device or apparatus that is manufactured and designed to utilize energy and for which this code provides specific requirements.

IGNITION SOURCE. A flame, spark or hot surface capable of igniting flammable vapors or fumes. Such sources include *appliance* burners, burner ignitions and electrical switching devices.

Electric water heaters meet the code definition of "appliance" since they are designed and manufactured to utilize energy, and they are subject to specific code requirements.

The "ignition source" definition provides two statements: a statement of qualifying criteria, and a second statement intended to clarify the first by offering examples of devices that meet one or more of those criteria. Electric water heaters typically utilize thermostats to control the flow of current to the heating element. Thermostats are electrical switching devices, one of the provided examples, particularly if they are, or may become, capable of arcing. Accordingly, electric water heaters equipped with thermostats meet the code definitions for appliances with ignition sources and are therefore subject to the protection requirements of M1307.3.1.

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