

Technical Service Bulletin

National Electric Code (NEC) Chapter #1, Articles 110-9 & 110-10 and how they relate to the use of relays and relay panels for the control of lighting and other load circuits.

This Technical Service Bulletin is to clarify and correct misleading and inaccurate information being distributed by a particular manufacturer. It has become apparent that this manufacturer is suggesting that their product, specifically a remote controlled circuit breaker, is the only product which will satisfy the requirements of the National Electrical Code Chapter #1, Articles 110-9 and 110-10.

The National Fire Protection Association (NFPA), the agency responsible for the creation and management of the National Electrical Code has also noted errors in the interpretation of these articles of the code. The National Fire Protection Association has in fact made changes to the 1999 NEC to further clarify the intent of these articles.

110-9. Interrupting Rating. Equipment intended to interrupt current at fault levels shall have an interrupting rating sufficient for the nominal circuit voltage and the current that is available at the line terminals of the equipment. Equipment intended to interrupt current at other than fault levels shall have an interrupting rating at normal circuit voltage sufficient for the current that must be interrupted."

It is important to note that the above article of the National Electrical Code specifically states that: *"Equipment intended to interrupt current at other than fault levels shall have an interrupting rating at normal circuit voltage sufficient for the current that must be interrupted."*, clearly allowing for the use of 20 amp rated relays for the control of a 20 amp lighting circuit.

110-10. Circuit Impedance and Other Characteristics. The overcurrent protective devices, the total impedance, the component short-circuit current ratings, and other characteristics of the circuit to be protected shall be selected and coordinated to permit the circuit-protective devices used to clear a fault to do so without extensive damage to the electrical components of the circuit. This fault shall be assumed to be either between two or more of the circuit conductors or between any circuit conductor and the grounding conductor or enclosing metal raceway. Listed products applied in accordance with their listings shall be considered to meet the requirements of this section.

The above article of the National Electrical Code specifically states that: *"Listed products applied in accordance with their listings shall be considered to meet the requirements of this section."* The NEC does not seek to limit devices used within an electrical circuit to those which have a short circuit current rating which meets or exceeds that of the maximum deliverable fault current within the circuit. Such a limitation would most assuredly disallow the use of most wiring devices in use today including items such as switches, receptacles, occupancy sensors, and sockets, to name only a few. The changes made to the 1999 NEC were clearly made to allow the use of these types of devices so long as they are applied within their listings.



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