

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Air-Conditioning and Refrigerating Equipment Branch Circuit Ampacity and Protection

Code: 2017 Electrical Code
Section: 440.6

Date: June 12, 2018

Example of the information found on a nameplate of a typical heat pump

MINIMUM CIRCUIT AMPACITY	26.3	AMPS
MAX FUSE / BREAKER (HACR)	45	AMPS

Question 1:

Is the overcurrent protective device for a heat pump branch circuit allowed to be greater than the ampacity of the circuit conductors as specified in 240.6(D) and 310.15(B)(16), similar to the example above?

Answer 1:

Yes. According to section 240.3, Articles 440 and 430 modify the general rules of Article 240 when determining the circuit ampacity and the overcurrent protective devices for air-conditioning equipment and motors. Typically, newer air-conditioning equipment is listed with a nameplate that provides the installer with the information similar to the example above. Section 440.6 requires the installer to adhere to the data provided on the nameplate of the heat pump where the information conflicts with the general rules of Article 240.

Question 2:

Is a circuit breaker or fuse required to be sized at the maximum rating listed on the nameplate of the heat pump when the minimum overcurrent protection is not mandated by the manufacturer?

Answer 2:

No. The maximum rating listed on the nameplate of the heat pump cannot be exceeded, but the electrical code does not prohibit the overcurrent protection to be sized less than the maximum rating listed on the nameplate.

A manufacturer mandating a minimum rating of an overcurrent protection device will provide such information on the nameplate of the heat pump or in the manufacturer's instructions as a requirement. A recommendation from the manufacturer shall not be enforced as a requirement.

Keywords:

air-conditioning, refrigerating, nameplate, heat pump, maximum rating, breaker, fuse, overcurrent device