



SQUARE D COMPANY
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To whom it may concern:

This letter is in response to questions about the sizing of conductors in our motor control centers.

Our Model 5 and Model 6 MCC's are UL-Listed under File E40610 and comply with the requirements of UL 845, the Underwriters Laboratories Standard for Motor Control Centers. Paragraph 11.1.3 (February 15, 1995) of this standard states, "A current-carrying part shall be of such size that a temperature rise does not exceed the limits specified in Table 22.1." This is the only requirement in this standard for determining the size of the bussing or wires within an MCC. There is no requirement that the bus bars have a certain current density (amperes per square inch of cross section) or that wires be sized per Article 310 of the National Electrical Code; temperature-rise testing is done in lieu of those requirements.

The National Electrical Code itself states that its conductor ampacity requirements do not apply inside of listed equipment such as motor control centers. Paragraph 310-1, which outlines the scope of Article 310, states "...These requirements do not apply to conductors that form an integral part of equipment, such as motors, motor controllers, and similar equipment..." In Article 430, which covers motor control centers and similar equipment, Paragraph 430-21 says that "...The provisions of Articles 250, 300, and 310 shall not apply to conductors that form an integral part of approved equipment, or to integral conductors of motors, motor controllers, and the like" Paragraph 90-7 tells electrical inspectors that "... factory-installed internal wiring ... need not be inspected at the time of installation of the equipment, except to detect alterations or damage, if the equipment has been listed by a qualified electrical testing laboratory"

I hope this answers your questions. Please let me know if I can be of further assistance.

Jim Cunningham
Standards Engineer