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To whom it may concern

Schneider Electric statement regarding the use of 90 °C rated conductors

BS7671 regulation 512.1.5 requires that “Switchgear, protective devices, accessories and other types of equipment shall not be connected to conductors intended to operate at a temperature exceeding 70 °C at the equipment in normal service, unless the equipment manufacturer has confirmed that the equipment is suitable for such conditions”.

BS 7671 regulation; 523.1 (note b) requires that “Where a conductor operates at a temperature exceeding 70 °C, it shall be ascertained that the equipment connected to the conductor is suitable for the resulting temperature at the connection”.

Unless specifically stated otherwise, Schneider Electric has verified the performance of its switchgear and controlgear devices and assemblies using test conductors designed to operate at a temperature not exceeding 70 °C in accordance with the product standards.

However, 90 °C rated cable can be used for external wiring provided the conductor operating temperature does not exceed 70 °C i.e., where the electrical design is based on current ratings given in the equivalent table for 70 °C thermoplastic insulated cables, Regulation 512.1.5 Note 3 refers.

Specifically, for low-voltage switchgear and controlgear assemblies, whenever a declaration states that built-in components (e.g., MCBs / MCCBs) which also contain the terminals for external insulated conductors, are suitable for conductors operating at a temperature exceeding 70 °C, then the components must have been temperature rise tested as part of the assembly, using the appropriate reduced section conductors, and otherwise in accordance with the applicable assembly standard, by the end-user/ Panelbuilder.

Low-voltage switchgear and controlgear assemblies include switchboards, panelboards, distribution boards, busbar trunking systems and consumer units. Wiring accessories include wall switches, socket-outlets, fused spurs, and plugs.

In assemblies where the terminals of the built-in components e.g. MCCBs/ MCBs are the terminals for external insulated conductors the British (BS) and harmonized standards (BS EN) for these products include temperature rise limits that apply to thermoplastic insulation i.e., PVC. These limits must be observed.

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