

## Chapter E 650

## ORGANS

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**E 650.01 General.** This chapter shall apply to those electric circuits and parts of electrically operated organs which are employed for the control of the sounding apparatus and keyboards. Electronic organs shall comply with the appropriate provisions of chapter E 640.✓

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 650.02 Source of energy.** The source of energy shall have a potential of not over 15 volts and shall be a self-excited generator, a 2-coil-transformer type rectifier or a primary battery.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 650.03 Insulation; grounding.** The generator shall be effectively insulated from the ground and from the motor driving it, or both the generator and the motor frames shall be grounded in the manner prescribed in chapter E 250.✓

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 650.04 Conductors.** Conductors shall comply with the following:

(1) **SIZE.** No conductor shall be smaller than No. 26, and the common-return conductor shall be not smaller than No. 14.

(2) **INSULATION.** Conductors shall have rubber, thermoplastic, asbestos, cotton, or silk insulation, except the common-return conductor which shall be rubber-covered, thermoplastic, asbestos-covered (types AA, AI, or AIA), or slow-burning (type SB). The cotton or silk may be saturated with paraffin if desired.

(3) **CONDUCTORS TO BE CABLED.** Except the common-return conductor, and conductors inside the organ proper, the organ sections and the organ console, conductors shall be cabled. The common-return conductor may be placed under an additional covering enclosing both cable and return conductor, or may be installed as a separate conductor and may be in contact with the cable.

(4) **CABLE COVERING.** The cable shall be provided with one or more braided outer coverings, provided that a tape may be used in place of an inner braid. Where not installed in metal raceways the outer braid shall be flame-retardant or shall be covered with a closely-wound fire-proof tape.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 650.05 Installation of conductors.** Cables shall be securely fastened in place and may be attached directly to the organ structure without insulating supports. Cables shall not be placed in contact with other conductors.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 650.06 Overcurrent protection.** Circuits shall be so arranged that all conductors, except the main supply conductors and the common-return conductor, shall be protected from overcurrent by an overcurrent device of not greater than 15-ampere rating.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.