



## **The safety of electrical installations in entertainment**

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**Topic:** Educational Lighting Site

### The characteristics of electrical installations pursuant to the Law Regulation CEI64-8

The construction of premises used for public entertainment (even if for temporary use) must accurately observe a few specific law regulations aimed at ensuring the maximum possible degree of safety for the spectators. The present article analyzes in detail the characteristics of electrical installations, in the light of what is established in the Law Regulation CEI64-8 part 7 sect.752 in which the dispositions already comprised by the Law Regulation CEI64-10 are absorbed and integrated. Premises used for public entertainment are included in the more general category of premises that run a higher fire risk, provided for by the Law Regulation CEI64-8/7 currently in force; the installation designer must evaluate the risk related to fire on the basis of some parameters amongst which are:

- density of crowding;
- maximum potential crowding;
- out-flow or evacuation capacity
- likely entity of the damage to persons, animals and things;
- reaction to fire of the structures;
- kind of use of the premises;
- fire protection organization;

It must be remembered that these parameters regard new installations or installations that underwent significant transformations after 1990, pre-existing installations are considered of acceptable level if they meet the requisites of the previous Law Regulation CEI64-2 for class 3 premises.

### General characteristics of electrical installations

Beside the general requisites provided for by the Law Regulation CEI64-8, electrical plants installed in premises that run a higher fire risk (and among them premises for public entertainment) must follow the following rules:

- The installed electrical components must be limited to those necessary for the uses provided for, only the pipes can be in the transit area (thus beware of overabundance);
- Exit system devices must not contain inflammable fluids/oil transformers or power factor correction capacitors;
- Control devices present in areas accessible to the public must be closed inside a cupboard or a box that can be opened only with a key or a tool; all minimum distances established between lighting appliances and illuminated surfaces must be respected, when the latter are made of combustible material (this rule is applies in particular to high power projectors);
- The use of the distribution system TN-C (Coinciding neutral wire and protection

- conductor);
- Electric ducts that cross safety exits must not represent an obstacle or a hindrance to the outflow and must be placed inside a shell or behind barriers that guarantee an adequate protection against mechanical damages.

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