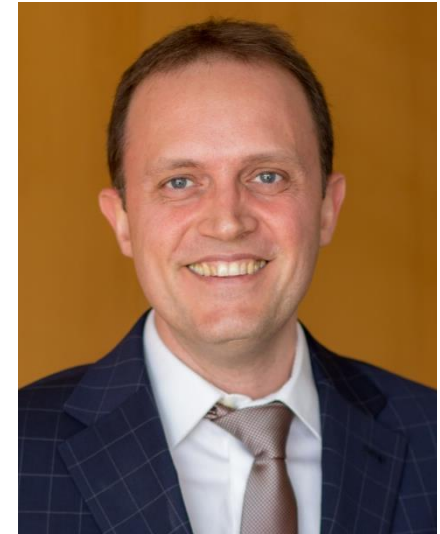


Inspections

Spain

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- ✱ Electrical wiring rules in Spain are mandatory by law (Royal Decree 842/2002).
- ✱ REBT: Reglamento Electrotécnico para Baja Tensión
- ✱ These rules include a list of types of installations that have to be inspected (either initial or periodic inspections)

- ✳ Installations subject to initial inspections according to REBT:
- a) Industrial installations that require a Project ($P > 20\text{kW}$ and others) and have an installed power of more than 100 kW;
 - b) Public premises;
 - c) Class 1 premises where there is a risk of fire or explosion, excepting garages with less than 25 parking places;
 - d) Wet premises with an installed power of more than 25 kW;
 - e) Swimming pools with an installed power of more than 10 kW;
 - f) Operating theatres and medical intervention rooms
 - g) External lighting installations with an installed power of more than 10kW
 - h) Installations of electric vehicle charging stations, which require the preparation of a project for their execution (all DC, AC indoor where $P > 10\text{ kW}$ and outdoors where $P > 50\text{ kW}$)

✦ Periodic inspections

- a) Every 5 years: electrical installations requiring an initial inspection
- b) Every 10 years: Common installations of residential buildings with a total installed power of more than 100 kW

The REBT does not require periodic inspection of installations in dwellings

- ✦ In Spain there are many inspection bodies, which are responsible to carry out the initial and periodic inspection which are mandatory by law
- ✦ In Spain there are 17 regions and every one may establish specific procedures
- ✦ To avoid conflicts and to standardise the procedure, a UNE standard was developed: UNE 192007-X
- ✦ The standard has been developed by the inspection bodies, Spanish Ministry of Industry and the Regional Authorities and is recognized by ENAC (the Spanish Accreditation body).
- ✦ AFME is the leader of the committee developing this standard

✳ Procedure in inspections (third party inspection body) (1/3)

1. Before the inspection: To compile the mandatory documentation (identification of the installation, design data, results of the initial verification (carried out by installer), etc.)
2. During the inspection: To check that the installation is in accordance with the Spanish wiring regulations (REBT). This includes:
 - Visual inspection of 100% of the installation
 - Checking of distribution boards,
 - Dismantling of some elements (e.g. covers of junction boxes, etc.)
 - Testing (earth loop, continuity of PE, etc.)
 - Emergency lighting
 - Etc.

- ✳ Procedure in inspections (third party inspection body) (2/3)
 - 3a. After the inspection (**initial inspections**): To prepare a report. Based on the deficiencies detected, the result may be:
 - I. Positive → The installation can be put into operation
 - II. Conditioned result (at least 1 serious deficiency) → The installation cannot be put into operation until all deficiencies detected are corrected
 - III. Negative result (at least 1 very serious deficiency) → The installation cannot be put into operation until all deficiencies detected are corrected

- ✦ Very serious deficiency: A fault that reason or experience has shown to constitute an imminent danger to the safety of persons or property
- ✦ Serious deficiency: A fault that does not involve an immediate risk to the safety of persons or property, but which could do so in the event of a failure in the installation. This classification also includes a fault which could substantially reduce the operation capacity of the electrical installation.
- ✦ Minor deficiency: A fault that does not represent a risk to persons or property, does not interfere with the operation of the installation and whose deviation from regulations has no significance for the installation's effective use or operation

✳ Procedure in inspections (third party inspection body) (3/3)

- 3b. After the inspection (**periodic inspections**): To prepare a report. Based on the deficiencies detected, the result may be:
- I. Positive → The installation can continue in service
 - II. Conditioned result (at least 1 serious deficiency or a minor deficiency detected in a previous inspection) → The installation may continue in service but all deficiencies shall be corrected maximum in 6 months. Otherwise the inspection will be qualified with negative result
 - III. Negative result (at least 1 very serious deficiency or 1 serious deficiency not corrected within the prescribed time limit) → The inspector will apply appropriate measures to eliminate the risk and may even take the defective part of the installation out of service.

