Translation from Finnish
Legally binding only in Finnish and Swedish
Ministry of Economic Affairs and Employment, Finland

Government Decree on Electrical Installations

(1434/2016)

By decision of the Government, the following is enacted under the Electrical Safety Act (1135/2016):

Section 1
Scope of application

This Decree shall apply to electrical installations referred to in chapter 3 of the Electrical Safety Act (1135/2016).

This Decree is not applicable to electrical installations of communications networks, lifts, aircraft or land vehicles or vessels.

Section 2
Essential safety requirements

Provisions on the essential safety requirements for electrical installations are laid down in the Annex to the Decree.

Section 3
Derogating from standards

If derogations from standards or publications corresponding to essential safety requirements are made under section 85 of the Electrical Safety Act, the report on the matter shall include:

1) the solutions selected to fulfil essential safety requirements;

2) a description on how the solutions comply with the essential safety requirements;

3) the customer's consent for derogating from the standards or publications;

4) identification and signature of the party drawing up the report.

The report may be complemented by a statement submitted by an authorised body or inspector qualified to inspect electrical installations referred to in section 75 of the Electrical Safety Act on whether the electrical installation complies with the essential safety requirements.

The report shall be attached to the commissioning inspection record of the electrical installation.

Section 4
Content of the commissioning inspection record

The commissioning inspection record referred to in section 43 of the Electrical Safety Act shall identify the inspected installation, the name of the installer of the electrical installation and the name and contact information of the electrical work supervisor, a report on compliance with regulations and orders on electrical installations, applied standards, the existence of a report conforming to section 34 of the Electrical Safety Act on non-compliance with regulations, an overview of inspection methods used and the results of the inspections and tests. The inspector of the equipment shall sign the inspection report or certify it in a corresponding reliable manner.

Section 5
Minor electrical work and the commissioning inspection

A commissioning inspection record referred to in section 43 of the Electrical Safety Act is not required:

1) for electrical work that may only cause minor danger or disturbance;

2) for installation of electrical installations with a rated voltage of a maximum of 50 volts of alternating voltage or 120 volts of direct-current;

3) for changing or adding single components - or comparable measures;

4) modifications in the power supply of single devices with a rated voltage of a maximum of 1 000 volts;

5) modifications to substations with a maximum rated voltage of 1 000 volts without changing the rated values of the substation;

6) installation of temporary installation that is assembled from standard-compliant construction site electrical switchboards.

Section 6
Significant modification and expansion work of electrical installations

Modification and expansion work of electrical installations is not considered significant as stated in section 45 of the Electrical Safety Act if:

1) the electrical work is work referred to in section 5;

2) if the rated voltage of the electrical installations subject to modification and expansion work is 1,000 volts maximum and the rated current or voltage adjustment range of the overcurrent protector of the area where work is being performed does not exceed 35 amperes, if a supervisor of operations is not required, and otherwise 250 amperes;

3) the modification and expansion work is performed on a switchgear assembly and the switchgear assembly's rated values are not changed.

Other modification and expansion work than those referred to in section 5 is regarded as significant installation work of an electrical installation, if the electrical installation is located:

1) in potentially explosive atmospheres referred to as zones 0, 1, 20 or 21 in Annex 1 of the Government Decree on the Prevention of Danger for Workers Caused by Potentially Explosive Atmospheres (576/2003);

2) in premises where explosives are manufactured;

3) in operating theatres of hospitals and private clinics.

Operating theatres refer to premises in which surgical procedures requiring general anaesthetic or spinal and epidural anaesthesia are performed.

Electrical installations referred to in subsection 2 also includes electrical installations located outside these premises directly connected to the protection system of the electrical installations of the premises.

Section 7
Time of certification inspection

The certification inspection referred to in section 45 of the Electrical Safety Act shall be performed within three months of the commissioning of the electrical installation.

A certification inspection shall be performed for electrical networks built for possessors of electrical networks by the end of the calendar year following the construction of the network.

The certification inspection of electrical installations referred to in section 6, subsection 2 shall, however, be performed before the premises are commissioned for their intended purpose.

Section 8
Certification inspection certificate

The certificate referred to in section 46 of the Electrical Safety Act shall identify the inspected installation, the inspection method and a report on compliance with regulations and orders.

The inspection certificate shall state any violations of the regulations detected in the certification inspection. The inspector shall sign the certificate or certify it in a corresponding reliable manner.

Section 9
Certification inspection sticker

The inspection sticker referred to in section 46 of the Electrical Safety Act shall state the name of the inspector, the date of the inspection and the date of the following periodic inspection.

Section 10
Record of the periodic inspection

The record referred to in section 51 of the Electrical Safety Act shall state information on the inspection and detected deficiencies in electrical safety. The inspector of the installation shall sign the inspection record or certify it in a corresponding reliable manner.

Section 11
Inspection sticker of periodic inspection

The inspection sticker referred to in section 51 of the Electrical Safety Act shall state the name of the inspector, the date of the inspection and the date of the following periodic inspection.

Section 12
Entry into force

This Decree enters into force on 1 January 2017.

Annex

ESSENTIAL SAFETY REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

1. People and livestock shall be protected from danger that may arise from touching live parts of electrical installations or when getting too close to them.

Protection shall be implemented by preventing the flow of electric current through humans or livestock or limiting the flow of electricity to non-dangerous levels.

Insulation or encapsulation from touch shall be used as the preferred protection method be unless the electric current has been limited to non-dangerous levels.

If insulation or encapsulation is not technically or financially possible or appropriate, positioning live parts out of reach may be used as a protection method.

If use of insulation or encapsulation is not possible in research or testing installations, barriers or other appropriate protection methods may be used to prevent accidental contact provided that access of bystanders to the danger area is prevented.

2. Humans and livestock shall be protected from danger that may arise due to a fault in an electrical installation when touching exposed conductive parts or when in close proximity of the installation.

3. The structure of the electrical installations shall not be conducive to creating a danger of ignition, caused by high temperatures or an electric arc, of flammable substances that are not part of the installations.

4. Electrical installations shall not cause danger of burns to humans or livestock.

5. Any overcurrent in live conductors shall not cause high temperatures or electromechanical loads that may cause damage to humans, livestock or property.

6. Conductors and other exposed conductive parts that are de-energized in normal situations shall in case of a fault in the electrical installations be able to withstand any fault current passing through them without their temperature rising dangerously high or causing mechanical danger.

7. Protective devices shall operate at currents, voltages and response times which guarantee sufficient security.

8. The electronic safety system of electrical installations shall be selected so that it can be maintained in operational condition throughout the service life of the installations.

9. Faults between live parts of circuits fed with different voltages or overvoltage in the electrical installations caused by other reasons shall not cause danger or damage to humans, livestock or property.

10. The dielectric strength and level of insulation of electrical installations shall correspond to voltages used in operational conditions.

11. The structure of the electrical installations shall be able to withstand external loads and conditions likely to prevail in its intended use and location.

12. Electrical installations shall be built from electrical equipment and other equipment and parts intended for that purpose and conditions. The structure of the equipment shall comply with applicable regulations. The equipment and parts shall be installed as the manufacturer has intended and while guaranteeing their safety.

13. The structure of installations intended to be used by persons who are not electrically skilled shall permit the safe use of the installations and enable them to perform actions they are meant to perform safely without danger of touching live parts or of causing an electric arc.

14. The structure and location of the electrical installations shall prevent easy access to live parts by persons not familiar with the dangers involved.

15. Exceptional dangers connected to electric railway installations or other special electrical installations shall be taken into account in the structure and protection of the installations.

16. Only installations with an appropriate structure or protection assuring its safety in the premises in question may be placed in medical premises, in potentially explosive atmospheres or other premises with risk factors.

17. The structure of overhead lines and other electrical installations involved in electric power distribution shall take into account the following factors in addition to safety requirements concerning regular electrical installations:

– heat stress caused by weather and other factors, mechanical stress and other effects;

– distance of live structures from buildings, trees and similar;

– movement of people and traffic;

– mutual effect of overhead lines attached to the same pylons or otherwise in close proximity with each other;

– the effect of other installations and equipment located on pylons of overhead lines.

18. All parts of the electric installation shall be compatible with each other. Electrical installations or equipment shall not endanger the safety of other electrical installations or equipment.

19. Electrical installations shall not have an adverse effect on operations between electrical and non-electrical installations.

20. The structure of electrical installations shall be so clear-cut that it does not cause hazardous situations during the use or maintenance of the installations.

21. Appropriate markings and warning signs shall be put on electrical installations for the purposes of use and maintenance.

Protective equipment, lines and conductors shall be grouped clearly and, if necessary, marked so that circuits can be identified.

The necessary diagrams and instructions for the construction, use and maintenance shall be drawn up for electrical installations.

22. The structure of the electrical installations shall permit all scheduled inspection, testing, maintenance or repair work on the electrical installations to be performed safely and appropriately.

23. Electrical installations shall have a sufficient number of isolating equipment to permit the circuits or individual equipment to be isolated from the network for maintenance, testing, fault diagnostics or repairs.

24. If in a hazardous situation a need arises to cut the supply of power immediately, the device cutting power or the device controlling it shall be installed so that it can be detected easily and can be efficiently and easily used.