

OCCUPATIONAL QUALIFICATION STANDARD

Security and Fire Protection Systems Installer, EstQF Level 5

An occupational qualification standard is a document which describes the set of skills, knowledge and attitudes, i.e. competence requirements, needed to successfully accomplish duties. Occupational qualification standards are used for compiling curricula and awarding qualifications.

Occupational title	Level of Estonian Qualifications Framework (EstQF)
Security and Fire Protection Systems Installer, EstQF Level 5	5

Part A DESCRIPTION OF WORK

A.1 Description of work
<p>Security and Fire Protection Systems Installer, EstQF Level 5 organises the construction and maintenance of security and fire protection systems. A security and fire protection systems installer works independently. They are responsible for the construction and maintenance of security and fire protection systems and monitor their implementation.</p> <p>Security and Fire Protection Systems Installer operates in at least one of the following areas of activity: installation and maintenance of security systems; installation and maintenance of fire alarm systems; installation and maintenance of gas fire-extinguishing systems; installation and maintenance of water and foam fire-extinguishing systems; installation and maintenance of smoke control systems; installation and maintenance of notification systems of buildings; installation and maintenance of emergency lighting.</p> <p>Security and Fire Protection Systems Technician, EstQF Level 4 also works as a security and fire protection systems technician and it is their job to build and maintain security and fire protection systems.</p>
A.2 Tasks
<p>A.2.1 Planning and organisation of work</p> <ol style="list-style-type: none"> 1) Familiarisation with the content of the task. 2) Sequencing activities and compiling a schedule. 3) Selection of tools and materials according to the task. 4) Planning the supply of tools, materials and equipment. 5) Assigning tasks to the work group. 6) Verifying the existence of or need for approval. <p>A.2.2 Ensuring working environment safety</p> <ol style="list-style-type: none"> 1) Considering occupational safety requirements. 2) Complying with the safety of the working environment at the specified site. 3) Complying with fire and electrical safety requirements. 4) Maintenance of the work site. 5) Using work and protective equipment. <p>A.2.3 Installation and construction work on installations and equipment and transfer of systems</p> <ol style="list-style-type: none"> 1) Preparation/assembly of tools and equipment. 2) Construction work in their field. 3) Installation of cables and construction of cable paths, making the necessary markings.

- 4) Installation of equipment.
- 5) Connecting system components.
- 6) System tuning and testing.
- 7) Checking the quality of work.
- 8) Documenting the work.
- 9) Handing over the work.

A.2.4 Inspection and maintenance of installations

- 1) Inspection and maintenance operations.
- 2) Documentation of maintenance activities and results.
- 3) Assessment of the system and of maintenance activities.

A.2.5 Management and supervision

- 1) Supervising employees.
- 2) Management.
- 3) Organisation of work.
- 4) Evaluating the results of employees' work.

Elective areas of work

A.2.6 Installation and maintenance of security systems

- 1) Building complete solutions from security systems.
- 2) Selection and assembly of security systems.
- 3) Configuration of security systems and network devices.
- 4) Testing and inspecting security systems.
- 5) Updating and upgrading security systems.

A.2.7 Installation and maintenance of fire alarm systems

- 1) Preparing a complete solution for a fire alarm system.
- 2) Selection and assembly of a fire alarm system.
- 3) Installation of a fire alarm system.
- 4) Handing over a fire alarm system.
- 5) Maintenance of a fire alarm system.
- 6) Updating and upgrading a fire alarm system.

A.2.8 Installation and maintenance of gas fire-extinguishing systems

- 1) Preparing a complete solution for a gas fire-extinguishing system.
- 2) Selection and assembly of a gas fire-extinguishing system.
- 3) Installation of a gas fire-extinguishing system.
- 4) Handing over a gas fire-extinguishing system.
- 5) Maintenance of a gas fire-extinguishing system.
- 6) Updating and upgrading a gas fire-extinguishing system.

A.2.9 Installation and maintenance of water and foam fire-extinguishing systems

- 1) Preparing a complete solution for a water and foam fire-extinguishing system.
- 2) Selection and assembly of water and foam fire-extinguishing systems.
- 3) Installation of water and foam fire-extinguishing systems
- 4) Handing over water and foam fire-extinguishing systems.
- 5) Maintenance of water and foam fire-extinguishing systems.
- 6) Updating and upgrading water and foam fire-extinguishing systems.

A.2.10 Installation and maintenance of smoke control systems

- 1) Preparing a complete solution for a smoke control system.
- 2) Selection and assembly of a smoke control system.
- 3) Installation of a smoke control system.
- 4) Handing over a smoke control system.
- 5) Maintenance of a smoke control system.
- 6) Updating and upgrading a smoke control system.

A.2.11 Installation and maintenance of notification systems of buildings

- 1) Preparing a complete solution for a fire notification and evacuation management system.
- 2) Selection and assembly of a fire notification and evacuation management system.
- 3) Installation of a fire notification and evacuation management system.
- 4) Handing over a fire notification and evacuation management system.
- 5) Maintenance of a fire notification and evacuation management system.
- 6) Updating and upgrading a fire notification and evacuation management system.

A.2.12 Installation and maintenance of emergency lighting

- 1) Preparing a complete solution for emergency lighting.
- 2) Selection and assembly of emergency lighting.
- 3) Installation of emergency lighting.
- 4) Handing over an emergency lighting system.
- 5) Maintenance of an emergency lighting system.
- 6) Updating and upgrading emergency lighting.

A.3 Work environment and specific nature of work

The working hours of a specialist responsible for security and fire protection systems are generally fixed. The need to work outside of working hours may arise. The work may require physical and mental effort and the pace of work is periodically fast and intense. Work must be performed outdoors, at heights and in dangerous environments, if necessary.

A.4 Tools

The tools of a specialist responsible for security and fire protection systems are hand-held and special tools, ladders, hoists, measuring equipment, technical documentation, standard documents (standards and instructions), computers and their software, office equipment and special calculation programmes. A specialist responsible for security and fire protection systems uses personal protective equipment according to the specific nature of the site.

A.5 Personal qualities required for work: abilities and characteristics

The work of a specialist responsible for security and fire protection systems requires willingness to cooperate, a sense of responsibility, the ability to analyse and generalise, accuracy, decisiveness, independence and good leadership qualities.

A.6 Professional preparation

Security and Fire Protection Systems Installer, EstQF Level 5 generally has secondary education with occupational skills acquired through work experience or at a vocational education institution. Generally, Security and Fire Protection Systems Installer, EstQF Level 5 has previously worked as Security and Fire Protection Systems Installer, EstQF Level 4.

A.7 Most common occupational titles

Security systems specialist, installation manager, maintenance manager, property manager, project manager.

A.8 Regulations governing profession

The work of a security and fire protection systems installer in their capacity as a responsible specialist is regulated by the Fire Safety Act and the Security Act.

Part B COMPETENCY REQUIREMENTS

B.1 Structure of occupation

The following competences must be certified when applying for the qualification of Security and Fire Protection Systems Installer, EstQF Level 5:

everyone is required to certify competences B.2.1-B.2.5, recurring competence B.2.13 and at least one competence from options B.2.6-B.2.12:

Installation and maintenance of security systems, competence B.2.6;

Installation and maintenance of fire alarm systems, competence B.2.7;

Installation and maintenance of gas fire-extinguishing systems, competence B.2.8;
 Installation and maintenance of water and foam fire-extinguishing systems, competence B.2.9;
 Installation and maintenance of smoke control systems, competence B.2.10;
 Installation and maintenance of notification systems of buildings, competence B.2.11;
 Installation and maintenance of emergency lighting, competence B.2.12.

B.2 Competences

MANDATORY COMPETENCES

B.2.1 Planning and organisation of work	EstQF Level 5
Performance indicators: 1. familiarises themselves with the content of the task based on project documentation, technical standards and legislation; 2. arranges their activities and those of their subordinates taking into account the order of priority of tasks, the construction schedule of the site and the readiness of construction/the situation on site; 3. selects standard tools and materials for themselves and their subordinates according to the task and the instructions for the use of the tools, taking into account the specific nature of the task and the environmental conditions; provides the necessary materials and mechanisms for the work group; 4. economically plans tools, equipment and material according to the work schedule and delivery time; 5. assigns tasks taking into account the competence of employees; 6. verifies the existence of approval taking into account legislation; informs the parties involved in accordance with procedure if deficiencies are detected.	
B.2.2 Ensuring working environment safety	EstQF Level 5
Performance indicators: 1. takes into account occupational safety requirements and the site rules; checks subordinates' awareness of occupational safety requirements; 2. complies with the occupational safety requirements set for the site; checks that subordinates comply with the occupational safety requirements; 3. complies with fire and electrical safety requirements; checks that subordinates comply with fire and electrical safety requirements; coordinates the execution of flammable and electrical work; 4. keeps their workplace well organised; checks the condition of their subordinates' workplaces and issues necessary directions; 5. verifies the availability and working order of work and protective equipment; uses prescribed protective equipment; checks to ensure that work and protective equipment is being used by subordinates for the intended purpose.	
B.2.3 Installation and construction work on installations and equipment and transfer of systems	EstQF Level 5
Performance indicators: 1. checks that tools, materials and equipment are used in accordance with their instructions and for the intended purpose of the work; organises the timely delivery of equipment to the technician/installer; 2. organises construction work in their field according to the construction organisation project, taking into account general construction requirements and the specific nature of the site while maintaining the integrity of other systems; complies with important structural safety requirements; 3. checks the conformity of cable installation and the construction of cable routes with the manufacturer's instructions, standards and requirements; checks the conformity of markings with the work project; 4. checks that the installation of equipment complies with the manufacturer's instructions, standards and requirements; 5. checks that the assembly of system components complies with the manufacturer's instructions; 6. tunes and adjusts the system according to the terms of reference, taking into account the specific nature of the site; tests the operation of the system in cooperation with other systems according to the engagement limit; 7. checks the quality of work carried out according to the criteria; arranges for the elimination of shortcomings/non-compliances if they occur;	

8. checks that installation and construction work documentation complies with established procedures; ensures that documentation complies with standards/agreements;
9. hands over their work to the site owner/customer in accordance with the arrangements set out in the agreement; arranges for user training.

B.2.4 Inspection and maintenance of installations

EstQF Level 5

Performance indicators:

1. organises inspection and maintenance activities in accordance with technical standards, maintenance instructions, legislation and other relevant regulations;
2. checks the documentation of maintenance activities and results in accordance with established procedures;
3. assesses the efficiency, reliability and stability of the system; performs failure analysis; makes proposals to the parties involved to eliminate deficiencies and improve the system.

B.2.5 Management and supervision

EstQF Level 5

Performance indicators:

1. supervises with consideration for the needs and capabilities of the person being supervised; listens to them and asks constructive questions; advises and demonstrates; solves problems; monitors them and intervenes in critical situations in a timely manner;
2. selects and sets priorities based on the tasks;
3. monitors the functioning of processes, analyses the situation, intervenes and plans changes in a timely manner, if necessary; is oriented towards results and achieving personal work goals; develops their management-related competence;
4. organises the work of subordinates; makes relevant decisions, including decisions based on incomplete information;
5. assesses the results of employees' work and provides feedback; motivates subordinates.

OPTIONAL COMPETENCES

When applying for the qualification of Security and Fire Protection Systems Installer, EstQF Level 5 at least one competence from options B.2.6-B.2.12 must be certified.

B.2.6 Installation and maintenance of security systems

EstQF Level 5

Performance indicators:

1. complies with the complete solution of security systems based on the project, legislation, technical regulations and relevant regulations;
2. selects and assembles security systems according to the task and the specific nature of the site, taking into account technical compatibility and suitability;
3. organises the configuration of security systems and network devices; checks the conformity of the configuration with the specific nature of the site, the instructions and the terms of reference;
4. organises the testing and inspection of security systems to ensure the system functions as a whole; checks the results;
5. assesses the operation of systems; proposes updates and/or upgrades to security systems, if necessary.

B.2.7 Installation and maintenance of fire alarm systems

EstQF Level 5

Performance indicators:

1. complies with the complete solution of the system based on the project, legislation, technical regulations and relevant regulations;
2. selects and assembles fire alarm systems according to the task and the specific nature of the site, taking into account technical compatibility and suitability;
3. organises the installation of the fire alarm system according to the specific nature of the site and project; checks the performance of work;
4. hands over the fire alarm system in accordance with the agreement; provides the necessary documents according to legislation and relevant regulations;
5. organises the maintenance of the fire alarm system in accordance with legislation, relevant regulations and implementation documents; checks the performance of maintenance work;
6. assesses the operation of the fire alarm system; proposes updates and/or upgrades to the system, if necessary.

B.2.8 Installation and maintenance of gas fire-extinguishing systems	EstQF Level 5
Performance indicators: 1. complies with the complete solution of the system based on the project, legislation, technical regulations and relevant regulations; 2. selects and assembles gas fire-extinguishing systems according to the task and the specific nature of the site, taking into account technical compatibility and suitability; 3. organises the installation of the gas fire-extinguishing system according to the specific nature of the site and project; checks the performance of work; 4. hands over the gas fire-extinguishing system in accordance with the agreement; provides the necessary documents according to legislation and relevant regulations; 5. organises the maintenance of the gas fire-extinguishing system in accordance with legislation, relevant regulations and implementation documents; checks the performance of maintenance work; 6. assesses the operation of the gas fire-extinguishing system; proposes updates and/or upgrades to the system, if necessary.	
B.2.9 Installation and maintenance of water and foam fire-extinguishing systems	EstQF Level 5
Performance indicators: 1. complies with the complete solution of the system based on the project, legislation, technical regulations and relevant regulations; 2. selects and assembles water and foam fire-extinguishing systems according to the task and the specific nature of the site, taking into account technical compatibility and suitability; 3. organises the installation of water and foam fire-extinguishing systems according to the specific nature of the site and project; checks the performance of work; 4. hands over water and foam fire-extinguishing systems in accordance with the agreement; provides the necessary documents according to legislation and relevant regulations; 5. organises the maintenance of water and foam fire-extinguishing systems in accordance with legislation, relevant regulations and implementation documents; checks the performance of maintenance work; 6. assesses the operation of water and foam fire-extinguishing systems; proposes updates and/or upgrades to systems, if necessary.	
B.2.10 Installation and maintenance of smoke control systems	EstQF Level 5
Performance indicators: 1. complies with the complete solution of the system based on the project, legislation, technical regulations and relevant regulations; 2. selects and assembles the smoke control system according to the task and the specific nature of the site, taking into account technical compatibility and suitability; 3. organises the installation of the smoke control system according to the specific nature of the site and project; checks the performance of work; 4. hands over the smoke control system in accordance with the agreement; provides the necessary documents according to legislation and relevant regulations; 5. organises the maintenance of the smoke control system in accordance with legislation, relevant regulations and implementation documents; checks the performance of maintenance work; 6. assesses the operation of the smoke control system; proposes updates and/or upgrades to the system, if necessary.	
B.2.11 Installation and maintenance of notification systems of buildings	EstQF Level 5
Performance indicators: 1. complies with the complete solution of the system based on the project, legislation, technical regulations and relevant regulations; 2. selects and assembles the fire notification and evacuation management system according to the task and the specific nature of the site, taking into account technical compatibility and suitability; 3. organises the installation of the fire notification and evacuation management system according to the specific nature of the site and project; checks the performance of work; 4. hands over the fire notification and evacuation management system in accordance with the agreement; provides the necessary documents according to legislation and relevant regulations; 5. organises the maintenance of the fire notification and evacuation management system in accordance with legislation, relevant regulations and implementation documents; checks the performance of maintenance work;	

6. assesses the operation of the fire notification and evacuation management system; proposes updates and/or upgrades to the system, if necessary.

B.2.12 Installation and maintenance of emergency lighting

EstQF Level 5

Performance indicators:

1. complies with the complete solution of the system based on the project, legislation, technical regulations and relevant regulations;
2. selects and assembles emergency lighting according to the task and the specific nature of the site, taking into account technical compatibility and suitability;
3. organises the installation of emergency lighting according to the specific nature of the site and project; checks the performance of work;
4. hands over the emergency lighting in accordance with the agreement; provides the necessary documents according to legislation and relevant regulations;
5. organises the maintenance of emergency lighting in accordance with legislation, relevant regulations and implementation documents; checks the performance of maintenance work;
6. assesses the operation of emergency lighting; proposes updates and/or upgrades to the system, if necessary.

RECURRING COMPETENCES

B.2.13 Recurring competences of Security and Fire Protection Systems Installer, EstQF Level 5

EstQF Level 5

Performance indicators:

1. uses Estonian at the B2 level (see Annex 1 'Language skills level descriptions');
2. uses a computer in their work according to the base modules of computer use skills Computer basics, Internet basics, Word processing, Spreadsheets, standard modules Presentation, Databases, Image processing, IT security and Cooperation on the Internet (see Annex 2 'Computer skills') and the programmes and software/tools needed to configure a programme;
3. complies with relevant regulations.

Assessment method(s):

Recurring competences are evaluated as part of the assessment of the other competences listed in the occupational qualification standard.

Part C GENERAL INFORMATION AND ANNEXES

C.1 Information concerning compilation and certification of occupational qualification standard and reference to classification of occupations

1. ID of occupational qualification standard in register of occupational qualifications	26-16012018-02/8k
2. Occupational qualification standard compiled by:	Vassil Hartšuk, Päästeamet Ülo Kala, Eltron AS Marina Koit, Henert Grupp OÜ Kaupo Kuusik, Eesti Turvaettevõtete Liit Martin Lambing, Siseministeerium Tarmo Nigols, G4S Eesti AS Erik Pikknurm, Antifire Tuleohutuslahendused OÜ Jüri Teder, G4S Eesti AS Tamur Vaher, Päästeamet
3. Occupational qualification standard approved by:	Property and Personal Protection
4. No. of decision of Sectoral Council	9
5. Date of decision of Sectoral Council	16.01.2018
6. Occupational qualification standard valid until	31.03.2021

7. Occupational qualification standard version no.	8
8. Reference to International Standard Classification of Occupations (ISCO 08)	3114 Electronics Engineering Technicians
9. Reference to European Qualifications Framework (EQF)	5
C.2 Occupational title in foreign language	
English:	Security and Fire Protection Systems Installer, EstQF Level 5
C.3 Annexes	
Lisa 1 Language skills level descriptions	
Lisa 2 Computer Skills	