

1. TITLE OF THE CERTIFICATE (ES)

Certificado de Profesionalidad de nivel 3 en
ELEM0110 DESARROLLO DE PROYECTOS DE SISTEMAS DE AUTOMATIZACIÓN INDUSTRIAL

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Professional Certificate Level 3 in
ELEM0110 PROJECT DEVELOPMENT OF INDUSTRIAL AUTOMATION SYSTEMS
(This translation has no legal status)

3. PROFILE OF SKILLS AND COMPETENCES

The holder of this certificate will have acquired the **general competence** to develop projects for electrical power installations, regulation and control, robots, manipulators, communications and transmission equipment for industrial automation systems, based on conditions given, fulfilling quality criteria, safety conditions, environmental protection and applicable legislation. This general competence is divided into the following **skills units** (UC):

- Develop projects for control systems for sequential processes in industrial automation systems (UC1568_3).
- Develop projects for measurement and regulation systems in industrial automation systems (UC1569_3).
- Develop projects for communication networks in industrial automation systems (UC1570_3).

The professional skills are acquired through the **learning outcomes** defined within the related Training Modules (MF):

- Development of projects for control systems for sequential processes in industrial automation systems (MF1568_3).
- Development of projects for measurement and regulation systems in industrial automation systems (MF1569_3).
- Development of projects for communication networks in industrial automation systems (MF1570_3).
- Practical training at the workplace project development of industrial automation systems (MP0380)

(See legal basis for all learning outcomes information acquired by the holder of this Certificate in each MF).

As a reference the learning outcomes include in the Practical training at the workplace that complete and reinforce the learning outcomes acquired in the other training modules, are:

- Prepare general layout plans, detailed plans and electrical diagrams for industrial automation systems, based on drawings and diagrams developed with a computer assisted design programme.
- Prepare works units for an industrial automation system based on the general list of equipment and elements of the installation and taking into account standard rates, or unit prices found in catalogues.
- Prepare control programmes for industrial automation systems.
- Prepare technical specifications for testing of industrial automation systems and draft relevant documentation.
- Take part in the company's working processes, following the rules and instructions established at the workplace.

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THIS CERTIFICATE

The holder of this certificate may work in companies devoted to installing industrial automated equipment and systems, under the Low Voltage Regulation (LVR), undertaking installation projects, in the areas of installation and maintenance of industrial automation systems. The holder may also work in all those business-production activities involving automated industrial processes, in the definition and development of projects for measurement and regulation and industrial communication networks. The most pertinent occupations and positions are:

- Designer of control systems for industrial automation systems.
- Designer of systems for measurement and regulation of industrial automation systems.
- Designer of communication networks in industrial automation systems.
- Programmer-controller of industrial robots.
- Technician for the design of electrical control systems.
- Designer of circuits and integrated systems in industrial automation.

5. OFFICIAL BASIS OF THE CERTIFICATE

Name and status of the national/regional authority providing accreditation/recognition of the certificate

The Ministry of Employment and Social Security or the corresponding autonomous regional administration within the scope of its competence, in the name of the King. The certificate is valid throughout Spain.

Level of the certificate

The Professional Certificate Level 3 of the National Repertoire of Professional Certificates corresponds to level 4 of the International Standard Classification of Education (ISCED-P 2011).

The European Qualification Framework (EQF) level:

Grading scale/Pass requirements

The grading scale and pass level of the training modules are expressed on a scale of 0 to 10. The minimum score for a pass is 5 in every training module including a pass in the practical training at the workplace module.

The grading system is as follows:

- FAIL: 0 to 4.9
- PASS-SATISFACTORY: 5 to 6.9
- PASS-GOOD: 7 to 8.9
- PASS-EXCELLENT: 9 to 10

Access to next level of education/training

This Professional Certificate Level 3 gives access to Professional Certificate Level 3 within the same professional area and family.

For validation purposes, the educational authorities will recognise the professional module or modules of the VET diplomas corresponding to the skills units included in the training modules of this certificate.

Legal basis

Royal Decree 1523/2011 of 31 October, establishing ten professional certificates in the professional family Electricity and Electronics, which are included in the National Repertoire of Professional Certificates. (Appendix IX Code: ELEM0110)

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

This certificate may be acquired by:

1. Training: Completion with a pass grade of the face-to-face or online training programme.
2. Recognition of the professional skills acquired through professional experience or non-formal training (prior learning): Completion of a process of skills evaluation and accreditation in all the skills units making up the professional certificate.
3. Dual training: Completion of a training and apprenticeship contract, which may range from 1 year (or 6 months, if stipulated as such in the collective agreement) to 3 years, during which effective working time is combined with time dedicated to training under the training programme for the professional certificate.

The training method (number 1 above) requires successful completion of the training modules and the practical training at the workplace:

Description of vocational training received	Percentage of total programme (%)	Duration (hours)
Training modules	87	550
Practical training at the workplace	13	80
Total duration of training leading to the certificate		630

Entry/access requirements:

- *Bachiller* Diploma (upper secondary education); or
- Professional Certificate Level 2 in the same professional area.
- If neither of the above or higher certifications are held, a pass in the key skills tests.

Additional information: Professional certificates are instruments for official accreditation of the professional qualifications in the National Catalogue of Professional Qualifications for all economic activities, within the scope of the labour administration. The National Repertoire of Professional Certificates is divided into three qualification levels (Level 1, Level 2 and Level 3), and by sectors into 26 professional families and 102 professional areas. More information is available at: www.sepe.es

National Europass Centre: www.oapee.es

(*) **Explanatory note:** This document is designed to provide additional information about the specified certificate, but has no legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications; Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates; and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information is available at: <http://europass.cedefop.eu.int>

Information on Professional Certificates of the Map of Qualifications and Vocational Training in Spain

