1. TITLE OF THE PROFESSION

07145003 PLC programozó

2. TRANSLATED TITLE OF THE PROFESSION

PLC programmer

(THIS TRANSLATION HAS NO LEGAL STATUS)

3. PROFILE OF SKILLS AND COMPETENCES

- The PLC programmer designs PLC programmes for equipment, processes, technologies and target machines, writes, modifies, and tests programmes in graphic and text programming languages.;
- documents and archives the completed, modified programme. Configures, adjust the parameters of and operates industrial bus systems and networks;
- diagnoses the operation of the system and monitors the inputs and outputs;
- uses the PLC in troubleshooting processes and documents their activities;
- the programmes they created must meet professional, safety and occupational health and safety requirements;
- inspects the operation of safety systems;
- uses Hungarian and foreign language documentation;
- confidently uses IT devices.

4. CLASSIFICATION OF THE VOCATIONAL TRAINING ACCORDING TO THE ISCED FIELDS OF EDUCATION AND TRAINING (ISCED-F)

0714 Electronics and automation

(*) Explanatory notes:

[1] In the original language. | [2] The translation of the designation is provided for information purposes only. | [3] Fill it out if necessary. The certificate supplement provides additional information on the qualification but have no legal value in itself. The format of the description is in conformity with Decision (EU) 2018/646 of the European Parliament and of the Council of 18 April 2018 on a common framework for the provision of better services for skills and qualifications (Europass) and repealing Decision No 2241/2004/EC.

©European Union, 2002-2020 | europass.cedefop.europa.eu ©

5. OFFICIAL BASIS OF THE CERTIFICATE

Name and status of the authority issuing the certificate	**Name and status of the national/regional authority providing accreditation/recognition of the certificate**
	Ministry for Innovation and Technology

| **Level of the certificate (national or international)**

NQF level: 5

EQF level: 5

Digital Competence Framework level: 6 | **Grading scale / Pass requirements**

Five -grade: 5   excellent
                4   good
                3   satisfactory
                2   pass
                1   fail |

Certificate number: CXK A

Serial number: 123456

Certificate issue date:
2023.12.07

Designation of the theoretical and practical subjects of the vocational qualification examination and their grades according to a five-grade scale

written		
PLC programming knowledge	100%	5
project exercise		
PLC programming practice	100%	5
Result of the qualification examination	100%	5

Access to next level of education/training To higher education	**International agreements**

Other information concerning the vocational training process

Legal basis

Government Decree 12/2020 (II. 7.) on the Implementation of the Vocational Education and Training Act,
Government Decree 319/2020 (VII. 1.) on the amendment of Government Decree 12/2020 (II. 7.) on the Implementation of the Vocational Education and Training Act,
Government Decree 11/2020 (II. 7.) on the Implementation of the Act on Adult Education,
Government Decree 292/2023 (VII. 6.) on the amendments to government decrees due to the ex-post impact assessment of the transformation in vocational education and training.

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE	
Description of the sectoral basic training and the theoretical and practical vocational training	Distribution of programme elements in percentage
Total duration of the education/training	600 hours

Entry requirements:

- Educational attainment: secondary school-leaving examination
- Medical fitness requirement: Necessary

Further information:

WRITTEN EXAMINATION EXERCISES
Question-based test tasks compiled from a predetermined, public task bank from the following topics: PLC structure and grouping; PLC network types, topology; PLC hardware knowledge; Types of input and output signals; Types and structure of input and output modules; Conversion between number systems; Types and grouping of PLC programming languages; Conversion between PLC programming languages; interpretation of the process and the creation of a flowchart based on a predetermined technological description.

PROJECT EXERCISES
Presentation of project work. Elective subjects for the project prepared during studies: troubleshooting, signal monitoring (reading the PLC error memory, discovering and correcting the error generated by the instructor), or module expansion (e.g.: modifying the I/O card, network device and the corresponding program). Length of the project work description: minimum 10 - maximum 15 pages. Document the work process with photographs! The candidate electronically forwards the description to the examination organiser, no less than 15 days before the examination, who then forwards it to the examination board. - Present the completed project work through a presentation of 5-8 slides or with a short video, with self-reflection and answering the examination board's questions. Process management with PLC, writing a control program requiring no more than 40 inputs and outputs and HMI management. Preparing the hardware configuration, setting the necessary parameters, writing a program that provides correct and safe operation, commissioning the PLC, establishing network communication. Uploading the control program to the production equipment/simulator. Prior to the test run, checking the parameters of the operation, making corrections, and documenting the process. Professional discussion with the examination committee.

You can find more information on the Programme and System Requirements in the following link: https://ikk.hu
This certificate supplement was elaborated in accordance with the programme requirements registered by the minister responsible for VET.

National Reference Point: National Office of Vocational Education and Training and Adult Learning: https://nrk.nive.hu

Head of Examination Organiser:
Issue date: 2023.12.07

SEAL