

Certificate

FESTO

Mr. IURII KULIESHKOV successfully participated in the program:

**BASICS OF MECHATRONICS, AUT211C
from 30.01.2023 till 26.05.2023.**

The volume of the program: 180 academic hours (6 credits)

The following topics were successfully completed:

- Conventional designations of electro-pneumatic elements: analysis of documentation, reading of electro-pneumatic diagrams
- The design of pneumatic cylinders: rodless and rotary action and the method of selection.
- Ways of regulating the speed of movement of controlled pneumatic actuators.
- Design of valves: monostable, bistable
- Features of valves with pilot control
- Diagnostics of valves: electrical and pneumatic part
- Design and features of CPX valve terminals
- Valve terminals input modules for connecting sensors
- Valve terminals output modules for element control
- Construction of CPX valve terminals valves. Configuration and setting features.
- Principles of use and selection of sensors.
- Basic rules and definitions of sensor technology.
- Selection of sensors depending on materials and production conditions.
- Basic characteristics of sensors, types of output signals.
- Proximity sensors: magnetic, inductive, capacitive, optical.
- Pressure and vacuum sensors.
- Connecting sensors, circuit technology.
- Characteristics and structure of controllers, software overview
- Schemes of connecting pneumatic elements and sensors to controllers.
- Reading the functions of distributors and sensors in the controller programs.
- Practical exercises, assembly, debugging and testing of technological circuits on Festo learning stands.
- Faults elimination

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