

071605T4MCT

MECHATRONIC TECHNICIAN LEVEL 5

ENG/OS/MC/CR/01/5/A

Install Mechatronic Systems

July/August 2023

Time: 3 Hours



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

PRACTICE

INSTRUCTIONS TO CANDIDATE

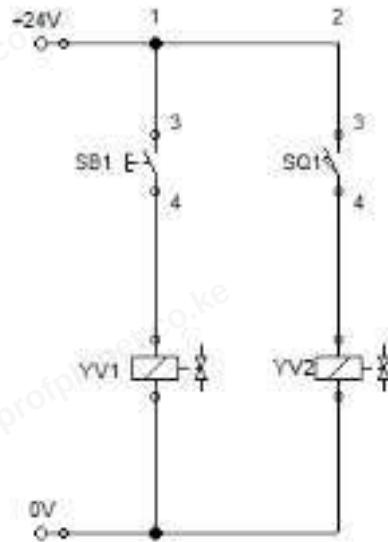
1. Do not write on the question paper.
2. A separate plain paper will be provided for drawing.
3. Return the paper to the assessor at the end of assessment.
4. Do not power the circuit without permission from assessor.

This paper consists of THREE printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

TASK: Install a Pneumatic System

Objective: To install a solenoid valve to control double acting reciprocating loop of double acting cylinder



Figur

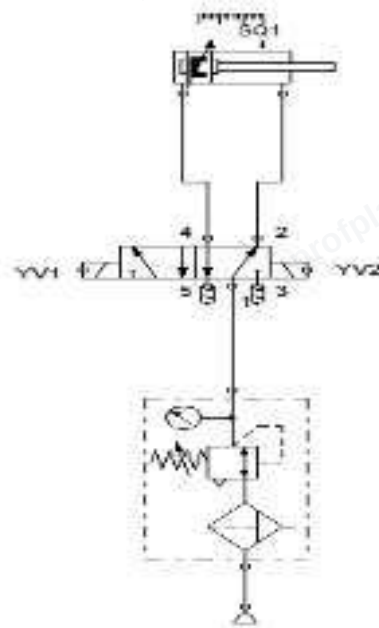


Figure 2

PROCEDURE

1. Study the electrical & pneumatic schematic in Figure 1.
2. Construct the loop according to electrical and pneumatic schematics given in Figure 1 and Figure 2
3. Connect power to the loop and perform the loop action.
4. Install and debug electrical components
5. Test and commission the Electro-pneumatic system.
6. Tune the pneumatic circuit so that it operates at reasonable pressure.
7. Turn off air source and power supply after finishing experiment.
8. Disassemble the components and put them at right place.

RESOURCES

You are provided with the following resour

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|-------|-----------------------------------|---------|
| i. | Advanced Electro Pneumatic Traini | D-DP202 |
| ii. | 5/2 single solenoid valve | |
| iii. | DC power supply module | |
| iv. | Time delay valve | |
| v. | Double acting cylinder | |
| vi. | Air Service unit | |
| vii. | Manifold | |
| viii. | Single pneumatic control valve | |
| ix. | Relay module | |
| x. | Button switch module | |
| xi. | K3 test line | |
| xii. | Micro switch module | |
| xiii. | Testing lead | |
| xiv. | Air pipe | |