

073106T4ELC

ELECTRONICS ENGINEERING LEVEL 6

ENG/OS/ET/CR/03/6

Install Electrical Machines Control Systems

July/August 2025



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

PRACTICAL ASSESSMENT

Time: 4 HOURS

INSTRUCTIONS TO CANDIDATE:

1. Figure 1 shows a layout of a three-phase induction motor starter. You are required to perform the following tasks

TASK 1: Draw the wiring diagram of the control and power circuits for motor to operate in forward reverse.

TASK 2: Perform the installation. *(Let the assessor verify the circuit before powering)*

TASK 3: Connect the power supply and then test for operation and perform the following tests:

- a) Continuity test.
- b) Open circuit tests
- c) Functionality test

TASK 4: Prepare an installation report.

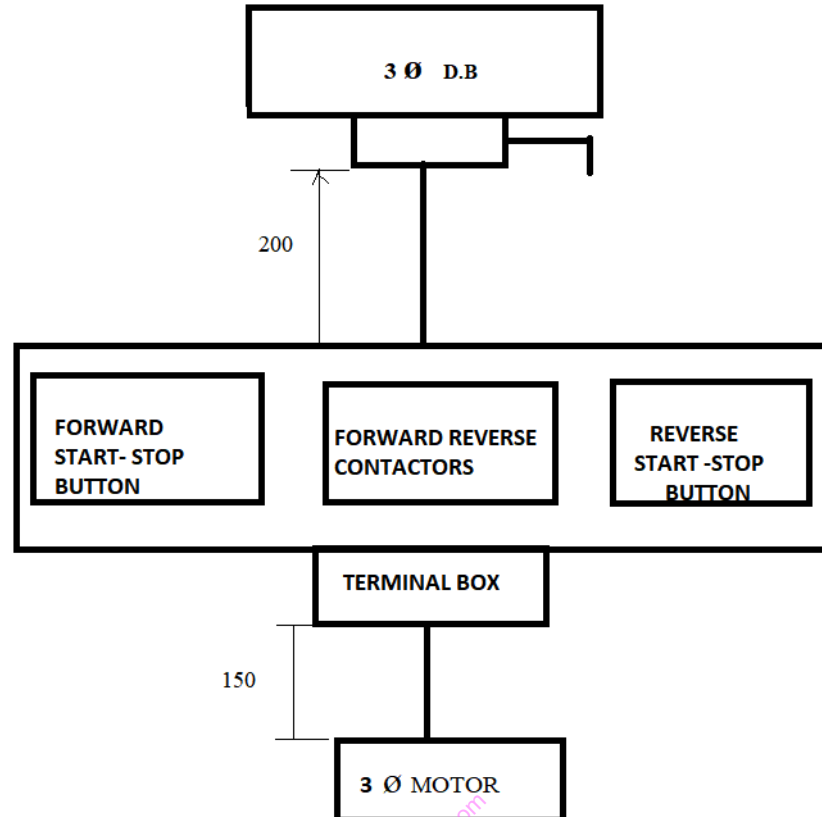


Figure 1

2. You have been provided with the following resources for the practical tasks:

- i. 3-phase distribution board
- ii. 3- phase isolator
- iii. 3-phase induction motor
- iv. 2.5mm² PVC sheathed cable TWE
- v. 2.5mm² PVC insulated singles cable, Black
- vi. 2.5mm² PVC insulated singles cable, Red
- vii. 2.5mm² PVC insulated singles cable, yellow-green
- viii. 1.5mm² PVC insulated singles cable, Red
- ix. PVC flexible conduit
- x. Gypsum screws ³/₄
- xi. 10mm/12mm cable clips
- xii. Contactors
- xiii. Contactors rails
- xiv. Start-stop button

- xv. Multimeter
- xvi. Indicator lamp stop (red)
- xvii. Indicator lamp start (green)
- xviii. Indicator lamp run (yellow)

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