



Electrical Fundamentals by Labtech

REFERENCE SHEET - Launch Code: AP120

Landing page

Course topic areas

Select one topic of interest

V.1.7

ELECTRICALS Fundamentals

Overview

See Course content list which consists of Learning Element and Learning Objectives

Operation Guide

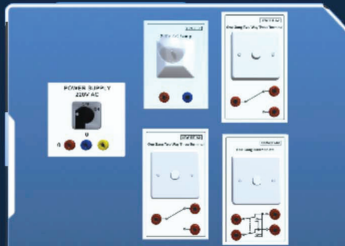
Learn about the application on-screen menu and features

Overview

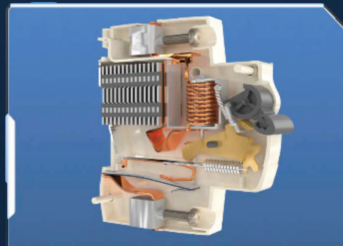
Operation Guide

About

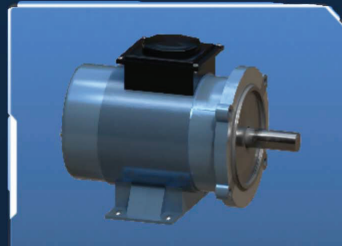
The Labtech ELECTRICALS Fundamentals series is a learning journey to understand the basics of electrical. It is aimed at building the knowledge and skillset that will need to develop employability skills for this exciting and important area. The course will cover the fundamentals of the processes, the science involved, and then proceed to develop an understanding of key components and systems.



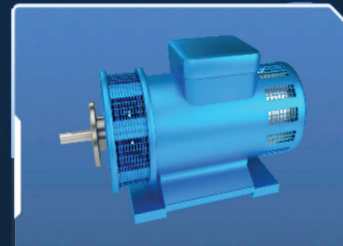
RESIDENTIAL SWITCH



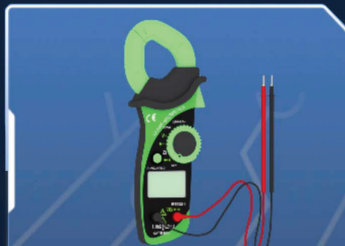
MCB



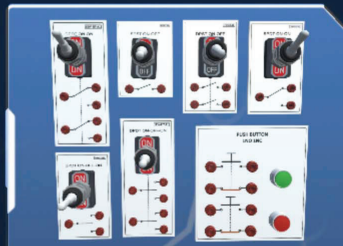
DC GENERATOR



AC SYNCHRONOUS GENERATOR



DIGITAL CLAMP METER



COMMERCIAL MECHANICAL SWITCHES



DIGITAL MULTIMETER



ANALOG MULTIMETER



Exit

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The screenshot shows the Labtech Digital Clamp Meter interface. At the top, there are navigation tabs for 'DIGITAL CLAMP METER' and 'Component Identification'. A central image of a green clamp meter is highlighted with an orange box, labeled 'Component Area'. To the left, a list of component names is shown, with 'Course Title' and 'Learning Element Title' highlighted in orange. Below the list, a 'Reposition' button is highlighted with an orange box and labeled 'Reset position'. On the right, a 'Background Theory' section is visible, containing the Labtech logo and a text block titled 'WHAT IS CLAMP METER'. The text describes a clamp meter as an electrical test tool that combines a basic digital multimeter with a current sensor. It explains that clamps measure current, while probes measure voltage, and that the jaws of the clamp are made of ferrite iron to detect and measure the magnetic field generated by current. A 'NEXT' button is located at the bottom right of the interface.



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LAB TECH
DIGITAL CLAMP METER
Formative Assessment

QUESTION 1 of 20

A clamp meter is an electrical test tool that :

- Combines a basic digital multimeter with a current sensor.
- Clamps measure current.
- Probes measure voltage.
- Has a hinged jaw integrated into an electrical meter.

Formative Assessment

Question Area

Answer Choice

LAB TECH
DIGITAL CLAMP METER
Operational Simulation
(Principle of Digital Clamp Meter)

Technical Simulation

Description of simulation

Simulation area

General Descriptions

The Clamp Meter measures AC Current when you are clamping on wire that carries the electrical current.

Inside the jaw's cover, you will find ferrite iron assembly that are engineered to capture the magnetic field induction emitted by the current flowing in the wire.

The meter uses electronic circuit to convert the magnetic induction into measurable electrical signal that will be used by another electronic circuit that is responsible to convert the electrical signal to a reading on the display panel for us to see.

The reading shows the amperage (Ampere) of the current that flows in

1 Observe the 4 lights (electrical load) that consumed AC current when turned ON

2 Wires where you can clamp the meter jaw

3 Digital Clamp Meter

Reset
Play