

# FLIR T530

## INFRARED CAMERA

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### What does it do?

The Infrared camera is used as a preventive maintenance tool which detects problems before they occur.

### Why we use it?

- Preventive maintenance on load- no need to disconnect the load
- Quick to find all the un-seen issues which can cause issues and cost more money in repair
- Application: Distribution Panel, Circuit Breakers, Bus-Bars, Main Switchgear, MCC, Transformers, Generators, UPSs, etc..

# FLUKE 435

## POWER QUALITY AND ENERGY ANALYZER

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### What does it do?

The Fluke 435 Power Quality and Analyzer can measure multiple parameters simultaneously and display it in formats that quickly describe overall power quality health. Data can be accessed as simple digital values, trend graphs (for fast insight into changes over time), waveforms, or phasor diagrams. The data can also be analyzed and organized into tabular formats.

### Why we use it?

- Load studies – verify electrical system capacity before adding Loads
- Energy assessments – quantify energy consumption before, and after improvements, to justify energy saving devices
- Harmonics measurements – uncover harmonic issues that can damage or disrupt critical equipment
- Voltage event capture – monitor for dips and swells that cause spurious resets or nuisance circuit breaker tripping

# DLRO DIGITAL MICROHMMETER

MEGGER DLRO 10X



## What does it do?

Testing the contact resistance for bus-bars, breakers and all connection

## Why we use it?

- To protect the breakers internal connections
- To verify that no leakage will occur during operation
- To minimize the heat prevent any arc if the contact not well closed

# FLUKE 1630-2

## EARTH GROUND CLAMP METER

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### What does it do?

The FLUKE 1630-2 is designed to measure the earth ground loop resistance without breaking the circuit

### Why we use it?

- The clamp-on ground testing technique simplifies ground loop testing and enables non-intrusive leakage current measurement. Easy to use in small places and harsh environments. The earth ground loop testing and continuity testing can be completed without breaking the circuit.

# KYORITSU 4105A

## DIGITAL EARTH TESTER



### What does it do?

The Kyoritsu 4105 A is designed to measure the earth resistance using earth spikes 2-3 metres

### Why we use it?

- The digital earth tester is used to test the individual earth pits either new or existing one for maintenance

# Megger MIT515 INSULATION TESTER



## What does it do?

The Megger MIT515 is designed to measure the insulation resistance from 250V up to 5000VDC,

## Why we use it?

- To measure the insulation resistance of equipment and cables up to 5000VDC, Perform Diagnosis Function of PI and DAR

# FLUKE 1653B

## MULTIFUNCTION INSTALLATION TESTER

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### What does it do?

The 1653B Installation Tester verifies the safety of electrical installations in domestic, commercial and industrial applications. It can ensure that fixed wiring is safe and correctly installed to meet the requirements of IEC 60364, HD 384 and all relevant local standards.

### Why we use it?

- Continuity
- Insulation Resistance
- Loop Impedance
- PSC (L-N/L-L) – PFC (L-PE)
- RCD TESTING

# FLUKE 6500

## APPLIANCES TESTER



### What does it do?

The Fluke 6500 PAT testers verify the electrical safety and operation of portable appliances in accordance with relevant guidelines and regulations.

### Why we use it?

- Earth Bond Test (Rpe) , Insulation Test (Riso), Touch Current Test, Substitute Leakage Current Test, Load/Leakage Test: Load Power, Load/Leakage Test: Leakage Current.

# MEGGER TTR-20

## TRANSFORMER TURNS RATIO

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### What does it do?

The Megger TTR-20 is used to measure the turns ratio, excitation current and polarity of windings in single- and three-phase distribution and power transformers (tested phase by phase), potential & current transformers, and tapped transformers

### Why we use it?

- To ensure continued proper operation, transformers are tested to verify that their electrical properties have not changed from design specifications.
- It is used to determine the no-load accuracy of CTs and PTs

# EYOYO 50 METER CAMERA

## 50 METER PIPELINE INSPECTION CAMERA

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### What does it do?

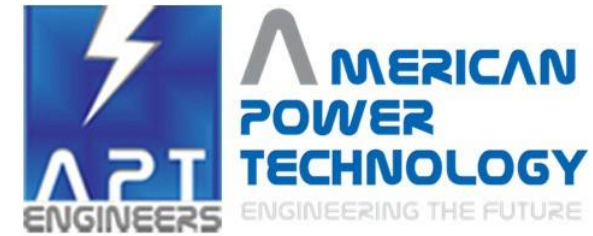
The Eyoyo is pipe pipeline inspection camera 50 meters long. Endoscope video for piping system with 7 inch LCD monitor, DVR recorder, and snake camera.

### Why we use it?

The Eyoyo camera can be used to inspect inside the conduits and to find the issues before damaging floors. Can be used inside electrical pipes, drainpipe & wall sewer pipeline inspection camera can be used under floors, inside walls, attics, sewer, gutters and roof eaves

# HV DIAGNOSTICS HVA-45-TD

## VLF 45KV HIPOT WITH TAN DELTA



### What does it do?

The HV DIAGNOSTICS is a 45KV VLF HIPOT with Tan Delta Test Set designed for performing diagnostic testing for up to 35kV rated cables and full acceptance testing of cables 25kV and lower

### Why we use it?

- To test the MV cables insulation as a new installation or for a routine maintenance procedures
- To test cable Tan delta (Tan  $\delta$ , TD) testing, also called dissipation factor or loss angle, is used for measuring the degree of deterioration of shielded MV/HV cable insulation. The results reveal how contaminated, damaged, or water tree strewn the insulation has become

# MEGGER CB-832

## Circuit Breaker and Overload Relay Test Set



### What does it do? 2000 A Current Injection

The CB-832 test set is a high-current circuit breaker and overload relay test set. Model CB-832 is designed to test the circuit breaker and overload relays by means of primary current injection.

### Why we use it?

Testing thermal, magnetic or solid-state motor overload relays; molded-case circuit breakers; and ground-fault trip devices.

# MEGGER SVERKER 900

## RELAY AND SUBSTATION TEST SYSTEM

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### What does it do? 3 PHASE VOLTAGE & CURRENT INJECTION

designed for basic, manual three phase secondary testing of protection devices. In addition, various primary testing can be performed, since the current and voltage sources can be series- and/or parallel connected to allow for up to 105 A AC or 900 V AC output. All three current and four voltage sources can be individually adjusted with respect to amplitude, phase angle and frequency.

### Why we use it?

- Test the tripping values for the relays, or circuit breakers
- To Confirm the correct operation and functionality of the relays

# MEGGER MIT-30

## 30KV HIGH VOLTAGE INSULATION TESTING



### What does it do?

The Megger MIT30 is a 30KV DC high voltage insulation test set. The MIT30 can be used to perform step-voltage and proof tests which, when incorporated into a routine maintenance program, can aid in predicting potential failure before breakdown occurs

### Why we use it?

- To test the MV cables insulation as a new installation or for a routine maintenance procedures
- Acceptance and maintenance testing of electrical plant, switchgear, busbars, transformers and motors

# CATU DT-300

## Earth & Ground Resistance Tester

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### What does it do?

Testing the integrity of the earth circuit at the local socket (continuity  $< 2 \Omega$ ), correct polarity (position of the phase and the neutral is indicated)

### Why we use it?

- To check the presence and the ohm reading of the earth at the socket
- Verify the correct polarity of the installed wires (L,N,E) without removing the socket