# **POWER FACTOR CORRECTION TRAINING PANEL COMPLETE WITH RLC LOADING UNITS**

# EM-600306





SCIENSCOPE

**EDU-LABS** 

The unit is specially developed for use in electrical teaching laboratory for the purposed of demonstrating the basic concept and the operating principle of power factor correction system.

# **FEATURES**

- All Required components are systematically and didactically arranged on a sloping study panel with all internal components and circuit schematically represented by screen-printed mimic diagrams.
- Actual industrials system but specially adapted for teaching and demonstration purposes.
- Compact and self-contained unit available in a bench-top and mobile version.
- Circuit construction is achieved by patching together the desired components.
- All internal components and circuits are terminated as 4mm safety-type terminal sockets.
- Internal circuits are fully protected against overload and short-circuit faults.

# **TECHNICAL SPECIFICATIONS**

- Input: 240/415VAC, 20A, 3 phase, 50Hz.
- Output: 240/415VAC, 20A, 3 phase, 50Hz to be connected to resistive, inductive and capacitive loading units.

# **POWER FACTOR CORRECTION PANEL**

# EDU-LABS EM-60-01-06 POWER FACTOR CORRECTION TRAINER

- 3 x 22mm Pilot Lamp (R/Y/B) Main Phase 0 Lamp
- 1 x Power Factor Regulator/Controller 6 steps
- 6 x Capacitor Banks of assorted ratings 1KVAr
- 1 x Circuit Breaker 32A TP
- 6 x Circuit Breaker 16A TP
- 6 x Magnetic Contactors 240V
- 6 x Indicating lights 240V
- 1 x 32/5A Class 3, 5VA C/T Coil

# **POWER MANAGEMENT SOFTWARE**

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- PC management software; web browse data 0
- True-RMS measuring parameters 0
- ANSI and IEC 0.2 accuracy class
- Power quality analysis 0
- 4 guadrant energy 0

- 1 x Three Phase Power Quality Meter
  - Display Type: HD LCD Display
  - Real-Time Measurement
    - Phase voltage: V1, V2, V3, Vlnavg Line voltage: V12, V23, V31, Vllavg Current: I1, I2, I3, Iavg
    - In Active power: per phase and total active power
    - Reactive power: per phase and total reactive power
    - Apparent power: per phase and total apparent power
    - Power factor: per phase and total power factor
  - Energy And Demand
  - Power Quality Analysis
  - Voltage unbalance, Current unbalance, Voltage THD (Total harmonic distortion), Odd-even harmonic distortion Voltage individual harmonics, Crest factor Current THD, Odd-even harmonic distortion Current individual harmonics, K factor
  - Communication
  - Ethernet 10/100M network port
  - RS485 communication port
  - MODBUS RTU communication protocol
  - PowerMeter Management Software Interface

# EM-30-13-16-PMS

- Data logging
- Measure individual harmonics from 2<sup>nd</sup> to 49<sup>th</sup>
- TOU, 4 Tariffs, 6 Seasons, 6 Schedules
- Trend Logging 0
  - -Phase voltage, Line voltage, Current, Active power, Reactive power, Apparent power, Power factor, Frequency Threephase, unbalance, Active energy, Reactive energy, Apparent energy, Phase
  - Settable Logging Interval
    - Logging from 1 min to 60 min, interval settable
  - Software Accessibility
    - 4 Tariffs (DataLog) Sharp, peak, flat, valley in different season and schedule (TOU)





# RESISTIVE LOAD UNIT EM-30-07-01 (2KW)



Single-Three phase Resistive Load 7 steps variable per phase

- Max Power: 3 X 700Watt
- Voltage: 240/415 Volt
- Unit Type: Top Table

#### **Main Characteristics**

- Can be connected in Series, Parallel, Star and Delta configurations.
- Can be connected to AC Single and 3 Phase sources.
- Controlled by 3 x 3 circuit breaker switches for 7 steps selection.

#### CAPACITIVE LOAD UNIT EM-30-07-03 (2KVA)



Single-Three phase Resistive Load 7 steps variable per phase

- Max Power: 3 X 700VA
- Voltage: 240/415 Volt
- Unit Type: Top Table

# **Main Characteristics**

- Can be connected in Series, Parallel, Star and Delta configurations.
- Can be connected to AC Single and 3 Phase sources.
- Controlled by 3 x 3 circuit breaker switches for 7 steps selection.

# INDUCTIVE LOAD UNIT EM-30-07-02 (2KVA)



Single-Three phase Inductive Load 7 steps variable per phase

- $\circ$   $\,$  Max Power: 3 X 700VA  $\,$
- Voltage: 240/415 Volt
- Unit Type: Top Table

# **Main Characteristics**

- Can be connected in Series, Parallel, Star and Delta configurations.
- $\circ$   $\,$  Can be connected to AC Single and 3 Phase sources.
- Controlled by 3 x 3 circuit breaker switches for 7 steps selection.

# 4MM SAFETY STACKABLE TEST LEAD SET EM-30-15-02



- The set consists of 25 leads in 5 different coded colors (Red, Yellow, Blue, Black and Green) and lengths chosen to allow the realization of all experiment manual.
- Leads are capable of 15A current safety plugs.
- Safety Terminal Plug : 4mm
  - 250mm x 7 units
  - 500mm x 6 units
  - 1000mm x 6 units
  - 1500mmcm x 6 units

Note: Due to products continuous development process, layout and specification may change without prior notices.