

STUDY OF POWER FACTOR RECTIFICATION



ref. QUICK-LPLUS

ref. QUICK-L without frame and console

Set of modules for studying the power factor rectification of an electrical installation.

The modules are cabled using safety leads $\varnothing 4\text{mm}$.

Compatible load 230V-5A Max.



Sockets on the back of the console for connecting the modules

EDUCATIONAL OBJECTIVES

- Study of the power factor.
- Study of the powers.
- Demonstrate the advantage of rectifying power factor on the kWh cost

TEACHING RESOURCES STUDENT & TEACHER

Proposed Practical Works

- Study of an industrial lighting installation using a fluorescent tube: readings of current, power and voltage in each energy transmission line.
- Creation of the Fresnel diagram using active and reactive powers.
- Study of pure inductance in order to determine the capacitor battery to be installed.
- Study of resonance, max/min current.

Comprises

- 1 Module – Distribution of single-phase voltage 230VAC-50Hz
- 3 Modules – Digital ammeters 5A
- 1 Module – Digital voltmeter single-phase 230VAC
- 3 Modules – Digital multifunction displays 230VAC-5A.
Displays of P/U/I/Power factor.
- 3 Modules – Reactive power 230VAC-5A.
- 1 Module for load connection
- 1 Module – battery of 10 capacitors 0.1 to 41 μF with jumpers.
- 1 Module – safety inductance, variable from 0.1 to 1.4H - 2A
- 1 Module – Fluorescent tube 230VAC-18W
- 1 set of safety leads for carrying out the different practical works.
- 1 frame with wheels (H x W x D): 1610 x 940 x 500mm equipped with rack for cords (30 fingers)
- 1 single-phase power console:
 - 1 thermal magnetic circuit breaker (16A)
 - 1 Emergency stop push button with key
 - 1 Push button + LED indicator
 - 1 230V single-phase output on 4mm safety terminals
 - 2 230Vac sockets (2P + E) + 12 230Vac sockets (2P + E), at the back