

PA-2505K

Phantom Load



- **Full-scale range simultaneously selected by current-range selector switch**
- **Eliminate need to change leads**
- **Selectable 50% or 100% power factor**
- **Test single or polyphase watt-hour meters**
- **New compact, heavy-duty metal carrying case**

DESCRIPTION

The rugged PA-2505K Phantom Load operates from a single-phase source and is designed for field-testing single-phase and polyphase watt-hour meters at 50 and 100% power factor.

This unit utilizes a heavy-duty selector switch in conjunction with a variable autotransformer to provide continuous adjustment of the load current — a valuable feature that permits close control of the output for different load circuit impedances or in the event of variations in the source voltage.

The unit is rated for continuous duty with forced-air cooling provided by a built-in fan. Primary and secondary test leads are furnished as standard equipment.

Model PA-2505K is provided in a compact, heavy-duty metal, two-compartment carrying case. The case features a soft grip handle and ample space for reference standard and test leads.

APPLICATIONS

The PA-2505K Phantom Load is used to provide a controlled source of current for testing watt-hour meters. The test current and the rated operating voltage of the meter are simultaneously applied to the meter under test and to a calibrated watt-hour meter, commonly called a watt-hour standard. To determine the accuracy of the meter under test, its operation is compared to that of the watt-hour standard.

FEATURES AND BENEFITS

- The appropriate full-scale range is simultaneously selected by the current range selector switch.
- Once all leads have been connected, a single switch simultaneously selects the desired test current and automatically routes it through the appropriate input of the reference standard. This not only eliminates the need to change leads, but also the possibility of accidentally overloading the current coil of the reference standard.
- A reactor is incorporated in the unit so 50% power factor capability is provided even when only a single-phase power source is available. A power factor of 50 or 100% is selected by a toggle switch on the front panel.

SPECIFICATIONS

Input

Primary Voltages (specify one group)

69/120/240/277/480 V, 1 ϕ , 50/60 Hz **OR**
73/127/220/380/415 V, 1 ϕ , 50/60 Hz fused input circuit

Output

Current Ranges (switch-selected)

Full Load: 0 to 2.5/5/15/50 A at 50% **OR** 100% pf
Light Load: 0 to 0.25/0.5/1.5/5 A at 100% pf

Current Control: A variable autotransformer provides continuous control of the output load current from zero to the maximum of each range.

Ammeter Circuit: A 3.5-in. (89-mm) ammeter with knife-edge pointer and $\pm 5\%$ full-scale accuracy indicates output load current.

Output Current Connections: Five output terminals are provided to eliminate the need to change lead connections between the phantom load and the reference watt-hour standard. Four of the output terminals (50, 15, 5 and 1.5 A) are permanently connected to the corresponding input terminals of the reference standard, and the meter under test is then connected in series with the remaining + terminal of the phantom load and the + terminal of the reference standard.

Power Factor: Power factor is maintained above 97% at 100% setting and between 43% and 57% at 50% setting.

Leads

Extra-flexible current and potential test leads and convenient terminals are provided. Leads supplied include those for connecting a reference standard.

Dimensions

20.4 W x 8.1 D x 11.6 H in.
(519 W x 206 D x 295 H mm)

Weight

29.2 lb (13.3 kg)

OPTIONAL ACCESSORIES

Reference Standard

A solid-state reference standard is also available as an optional item. The Model MA-10 is a rugged, portable, solid-state watt-hour standard specifically designed to test watt-hour meters using the comparison method in the field or the laboratory. See MA-10 Datasheet for complete specifications.



PA-2505K shown with included accessories.

ORDERING INFORMATION

Item (Qty)	Cat. No.	Item (Qty)	Cat. No.
Phantom Load with carrying case	PA-2505K-69	Optional Accessories Model MA-10-01 etc, reference standards. See Megger Model MA-10 datasheet.	
Phantom Load with carrying case	PA-2505K-73		
Included Accessories			
Accessory leads			
Current, 10 ft (3 m), black [1]	FL508		
Current, 10 ft (3 m), red [1]	FL509		
Current, 2 ft (0.6 m) [2]	FL510		
Voltage, 2 ft (0.6 m) [2]	FL511		
Remote reset switch (6 ft) [1]	RM-1S		
Fuses			
0.75 A, 600 V, KTK [2]	2837		
3 A, 250 V, MDA [5]	951		
Instruction manual [1]	5516		

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