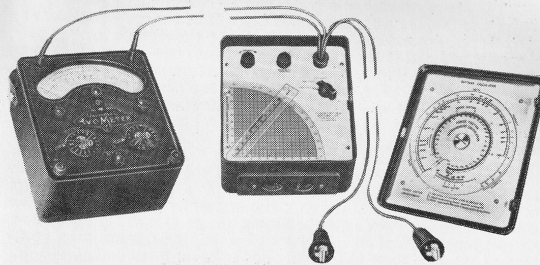


### THE MODEL 40 POWER FACTOR AND WATTAGE UNIT



*The illustration shows a Power Factor and Wattage Unit connected up to a Model 40 Mk. II Avometer ready for use.*

This device will only operate with a Model 40 Avometer fitted with "P.F." sockets at the top of the panel, and is intended for use on 100-450 V., 25-2,000 c/s a.c. supplies. The complete unit is approximately the same size as the Avometer.

Readings can be taken on the Avometer used in association with the Unit, from which power factor and a.c. power can be determined in single phase, or balanced 2 or 3 phase circuits, provided the current remains constant for two or three seconds, and is of the normal sinusoidal wave form. Unbalanced 2 or 3 phase power can be determined as the sum of the powers in the separate phases. If necessary, external current transformers having small phase angle errors may be included to extend the current range of the Avometer. The Company can supply a suitable range of transformers up to 480 A. Since practically all apparatus which necessitates the use of a power factor indicator works at a lagging power factor, no discriminator is included.

The principle involved is to measure the current in one phase of the circuit under test and then to neutralise its power component in the case of single phase, or its reactive component in the case of balanced 2 or 3 phase circuits. The relationship between the first and