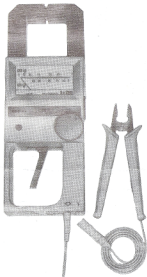


INSTRUCTIONS FOR USE

# PK 230



# PK 230

## CLIP-ON PHASE-METER

The clip-on phase-meter type PK 230 is used for power-factor measurement in a single-phase network with voltage of 220 V in current ranges 10–1000 A. The instrument is suitable especially for assembly, maintenance and repair shops, when electrical equipment and power-consuming appliances are handled. The measured circuit need not be disconnected during measurement, as the measured conductor is encompassed by the jaws of the clip-on transformer.

### MEASUREMENT

The test cords terminated with a special plug and socket are inserted into holes in the bottom part of the handle, in which banana pins are located. The voltage input is marked by an arrow and output by the letter V. The other end of the test cords – the crocodile clamp – is connected to the conductor with phase voltage. The measured conductor is encircled by the jaws. The position of the conductor inside the jaws has only slight influence on the accuracy of the instrument. The jaws must be fully closed and should not touch the conductor. If the pointer of the instrument shows below zero, the selector switch marked with position 1 and 2 is changed over to the following position. The selector switch has two positions serving for reversing of polarity and eliminating the need of interchanging the polarity of the voltage supply. The instrument dial contains two straight-line scales. The upper scale is calibrated directly in  $\cos \varphi$  values. The bottom scale is derived from the upper one and indicates  $\sin \varphi$  value. The loading character can be determined from the change of pointer position during the measurement after pressing the push-button of the instrument. If on pressing the push-button the pointer deflection is greater than that shown during the measurement the load is capacitive, if it is smaller, the load is inductive. The loading character is indicated on the name-plate by arrows. The measurement can be carried out even in inaccessible places where the dial reading is difficult, as the deflection can be arrested at any point on the scale by the shift push-button on the side of the instrument.

### ATTENTION

After each measurement of power factor at higher current values and prior to further measurement of a lower range it is essential to open and close the jaws several times (min. 3X) after taking the instrument off the conductor. Thus remanent magnetism, if any, is removed and an additional error is avoided. Nonobservance of this rule reduces the accuracy of the instrument beyond its accuracy class. The measured current conductor must be a single strand, i.e. when a single-phase circuit is measured the jaws must not encircle both conductors, nor in a three phase measurement all three or four conductors. The measured conductor can be insulated and enclosed in a metal conduit. The clip-on phase-meter type PK 230 can be employed at ambient temperature ranging from  $-20$  to  $+40^{\circ}\text{C}$  and relative humidity of 45 to 75 %. The instrument is calibrated at the temperature of  $+20^{\circ}\text{C}$ . The environment must be free from corroding gases and vapours. Avoid dropping the instrument. The contact surfaces of the jaws must be protected against damage and from time to time should be covered with a thin layer of anti-corrosion grease.

### The important note!

The instrument is to check in the basic horizontal position while the conductor is placed in the centre of the jaws. The change of indication caused by influence of position must not exceed the value stated by the class of accuracy by influence of position.

Do not put off and store the instruments with locked pointer.

### TECHNICAL DATA

Range of measurement	$\cos \varphi$ from 0 to 1 C and L single-phase 220 V network, current ranges from 10 to 1000 A
Class of accuracy	5
AC current voltage frequency	50–60 c/s
Test voltage	2000 V
Max. dimension of the conductor circular rectangular	50 mm 50 X 60 mm

Two test cords with crocodile clamps and sockets are supplied with the instrument in a protective bag.

Eagle International,  
Warranty Department,  
Unit 5, Royal London Estate,  
29-35 North Acton Road,  
London NW10 6PE



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Model No \_\_\_\_\_ Date \_\_\_\_\_

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