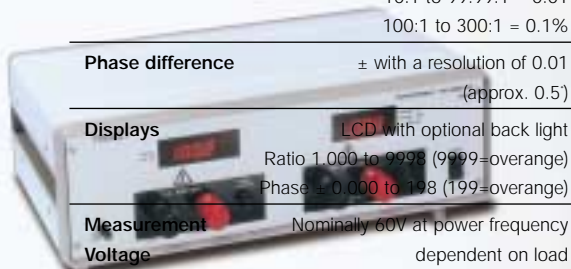


Portable Transformer Ratiometer Type 4167P

The Tinsley Transformer Ratiometer Type 4167P is a mains and battery powered instrument allowing operation when mains power is not available. The transformer is energised via the instrument's internal power oscillator and therefore the transformer under test does not require a mains supply. The instrument is housed in a rugged PVC case making it suitable for "onsite" use.

Specification 4167P

Ratio Range	1:1 to 300:1
Accuracy	1:1 to 9.99:1 = 0.1% 10:1 to 99.99:1 = 0.1% 100:1 to 149.9:1 = 0.2% 150:1 to 300:1 = 0.5%
Resolution	The ratio is displayed in one of 4 ranges: 1 to 9.99:1 = 0.001 10:1 to 99.99:1 = 0.01 100:1 to 300:1 = 0.1%
Phase difference	± with a resolution of 0.01 (approx. 0.5°)
Displays	LCD with optional back light Ratio 1.000 to 9998 (9999=overrange) Phase ± 0.000 to 198 (199=overrange)
Measurement Voltage	Nominally 60V at power frequency dependent on load
Input Protection	Front panel fuses and internal surge absorbers
Power Supply	AC mains 50 – 60 Hz Universal input of 90 – 260 Volts AC
VA Rating	Approximately 20VA
Dimensions	470 x 150 x 280mm
Nett Weight	Approximately 8kg



Transformer Ratiometer Type 4167D

The Transformer Ratiometer Type 4167D measures the transformation ratio of large transformers and also gives an indication of the small phase difference between the primary and secondary windings. The ratio and phase difference or ratio and energising voltage are displayed on two digital LED displays.

In normal use the High Voltage winding of the transformer is energised by the user at a.c. line voltage and connected to the Ratiometer HV terminals. The Low Voltage winding is connected to the LV terminals of the Ratiometer.

The displays of ratio and phase are then entirely automatic with no switching or other operation required by the user.

Specification 4167D

Ratio Range	1:1 to 1000.1:1
Accuracy	0.1% ± digit up to 300:1 0.25% ± digit up to 600:1 0.5% ± digit up to 1000:1
Resolution	The ratio displayed in one of 3 ranges 1.000 to 9.999, 10.00 to 99.99 and 100.0 to 999.9
Phase difference	± with a resolution of 0.001 (approx 0.05°)
Displays	LED digits (large segments type) Ratio 1.000 to 9998 (9999 = overrange) Phase ± 0.000 to 198 (199 = overrange) HV voltage 90 260 volts
Measurement Voltage	HV input 90 to 260 volts (40 to 70 Hz) LV input 0.01 to 260 volts
Input Protection	Front panel fuses and internal surge absorbers
Interface	IEEE 488.2/488.1 RS232 300 to 9600 baud RS422 or RS485 300 to 9600 baud
Power Supply	AC mains 50 - 60 Hz Universal input of 90 - 260 volts AC
VA Rating	Approximately 20VA
Dimensions	470 x 150 x 280 mm
Nett Weight	Approximately 8 kg



Transformer Core Tester & Platform 5846

The Type 5846 Transformer Core Tester is used to check that a transformer core will perform to specification.

Characteristics of a batch of cores may be rapidly checked by displaying the RMS magnetising force for any chosen flux density and the volts per turn and magnetising current at that point. E & I Stacks, C Cores and Toroids can be measured.

Permeability can be determined by dividing B by H.

Specification 5846

Digital Display	Magnetising Force : amps per metre or Oersteds. Flux Density ; Telsa or Kilogauss. RMS Magnetising Current : Ampere. Turns : Volts per turn.
Ranges	Magnetising Force ; 0 - 1000 A/M or 0 - 12.5 Oersteds in three ranges. Path Lengths ; 50 to 1000 mm Flux Density : 0 - 2 Telsa, or 0 - 20 Kilogauss. Area; 0.5 to 100 sq.cm.
Accuracy	Accuracy just before saturation is 5% Absolute accuracy depends on the material being tested.
Repeatability	2%
Osilloscope Display	An Osilloscope may be used to display an uncalibrated hysteresis loop to give an indication of the working point on the BH curve.
Core Tester	Size ; 500 x 385 x 210 mm Weight ; 20 kg
Platform	Size : 360 x 195 x 190 mm

Shorted Turns Tester Type 5863

The Type 5863 Shorted Turns Tester has been designed to meet the ever increasing demand for accuracy and reliability in component manufacture. The instrument is easy to use and will detect the presence of one or more shorted turns in a wound coil which can be of any shape, number of turns or windings.

The coil is simply placed over one of the rods mounted on the instrument and the meter reading will give a clear and immediate indication of shorted turns if they are present.

The test coil cannot be damaged as no voltage is applied to the winding. This instrument can be supplied with either 3mm or 6mm probes.

Specification 5863

Instrument Size	220 x 275 x 260 mm
Instrument Weight	2.3 kg

5846/5863

