Technical data

Display
Large 18 mm, 4 digits LCD

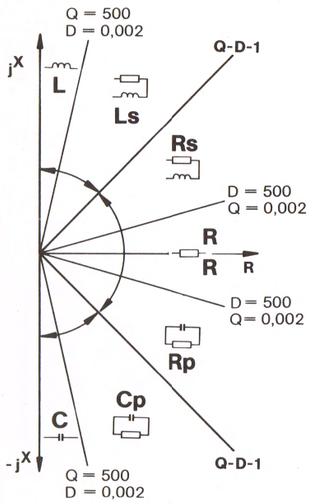
Dimension Indications
– Ω, kΩ, MΩ, pF, nF, µF, mF, µH, mH, H, kH

Out of Range Indication
– 4 middle digit segments flashing

Equivalent circuits
– 7 Equivalent circuits

	D > 500	
	D < 0,002,	Q > 500
	Q > 500,	no display of the secondary parameter

	D or Q	parameter selection
	≦ 500	RCL AUTO, Cp, Rp, D, Z
	≦ 500	Cs, Rs
	≦ 500	RCL AUTO, Ls, Rs, Q, D, Z
	≦ 500	Lp, Rp



Measuring Ranges
– Resistance Rp, Rs, Z
0,000 Ω ... 200 MΩ
– Capacitance Cp, Cs
0,0 pF ... 100 mF
– Inductance Lp, Ls
0,0 µH ... 32 kH
– Quality Factor Q
0,002 ... 500
– Dissipation Factor D
0,002 ... 500

Maximum Resolution per Range
– Resistance
1 mΩ
– Capacitance
0,1 pF
– Inductance
0,1 µH
– Quality/ Dissipation Factor
0,001

Measuring Accuracy
Basic Error ± 0,25 % ± 1 digit

Measuring Frequency
1 kHz ± 0,025 %

DUT Stress
≦ 5 mA, ≦ 2 V
(linked to a 2 Vrms Source with an internal resistance of 400 Ω)

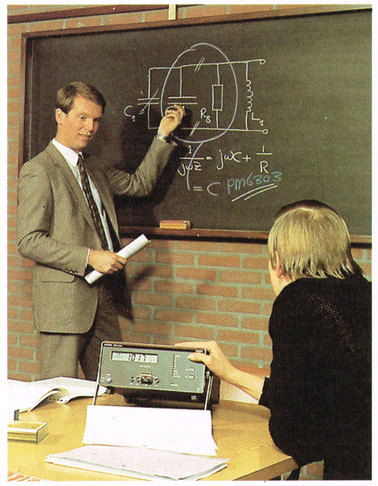
Type of Connectors
4 mm sockets

– 2 sockets for measuring voltage (HI) Drive and Sense connection
– 2 sockets for measuring current (LO) Drive and Sense connection
– 1 socket guard connection

Measurement update rate
approx. 2 measurements per second

Zero Capacitance Adjustment
Co Trim by means of screwdriver adjustment on front panel. Maximum adjustable capacitance: 5 pF

Power Requirements
Voltage: 110, 128, 220, 238 V ± 10 %
Frequency: 50 ... 100 Hz ± 5 %
Power-Consumption: 13 W



The PM 6303 is an ideal instrument for use in educational-institutes.

Environmental Capabilities
Ambient Temperatures
Reference Value: + 23 °C ± 1 °C
Operation: + 5 °C ... + 40 °C
Storage and Transport: – 40 °C ... + 70 °C

Dimensions
(w x h x d) 310 x 140 x 310 mm
(12,2 x 5,15 x 12,2 inch)

Weight
4,8 kg (10,6 lb)

Accessories Supplied
Two-Terminal Fixture
Operating Manual
Fuse 250 mAT

Optional Accessories
PM 9541 Four-Wire Test Cable
PM 9542 RCL test adapter

Service manual

9498.452.02511
Data subject to alterations
Printed in Germany

PM 6303

The automatic RCL meter for fast and high precision measurements



PHILIPS
Test & Measuring Instruments

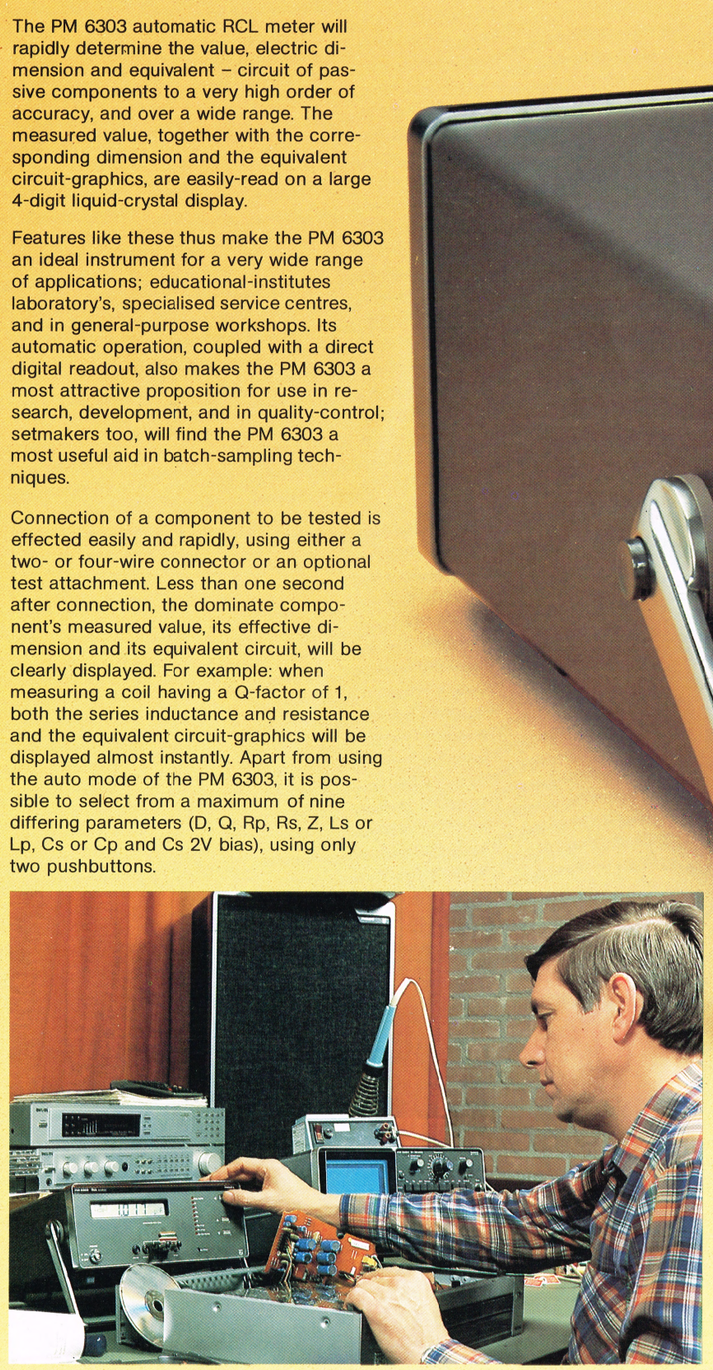
PHILIPS

PM 6303 – auto-ranging and accuracy determining

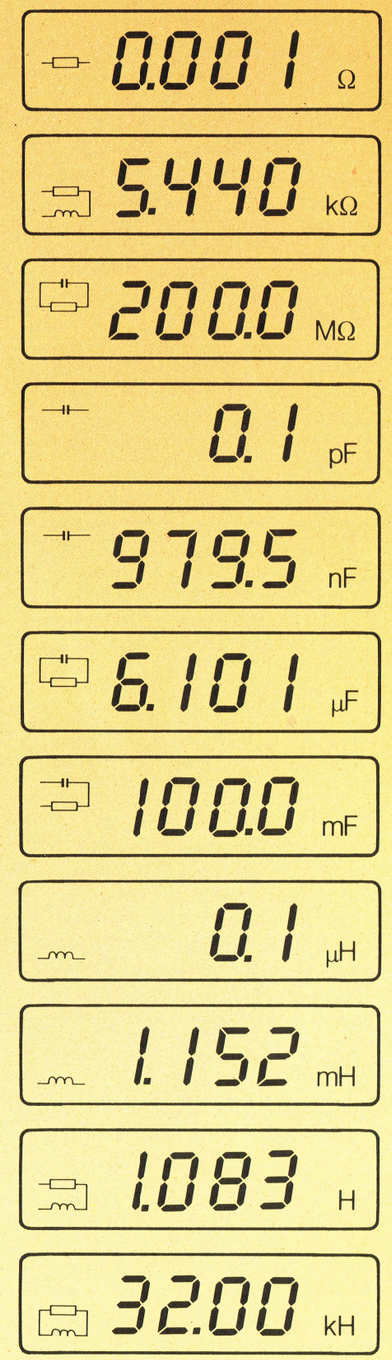
The PM 6303 automatic RCL meter will rapidly determine the value, electric dimension and equivalent – circuit of passive components to a very high order of accuracy, and over a wide range. The measured value, together with the corresponding dimension and the equivalent circuit-graphics, are easily-read on a large 4-digit liquid-crystal display.

Features like these thus make the PM 6303 an ideal instrument for a very wide range of applications; educational-institutes laboratory's, specialised service centres, and in general-purpose workshops. Its automatic operation, coupled with a direct digital readout, also makes the PM 6303 a most attractive proposition for use in research, development, and in quality-control; setmakers too, will find the PM 6303 a most useful aid in batch-sampling techniques.

Connection of a component to be tested is effected easily and rapidly, using either a two- or four-wire connector or an optional test attachment. Less than one second after connection, the dominate component's measured value, its effective dimension and its equivalent circuit, will be clearly displayed. For example: when measuring a coil having a Q-factor of 1, both the series inductance and resistance and the equivalent circuit-graphics will be displayed almost instantly. Apart from using the auto mode of the PM 6303, it is possible to select from a maximum of nine differing parameters (D, Q, Rp, Rs, Z, Ls or Lp, Cs or Cp and Cs 2V bias), using only two pushbuttons.







Connection
- 2 sockets for measuring voltage (HI) Drive and Sense connection
- 2 sockets for measuring current (LO) Drive and Sence connection
- 1 socket guard connection

Parameter Selection
- 2 pushbuttons for stepping from item to item in the parameter menu.
- 1 pushbutton to reset to RCL AUTO mode in which the dominant component is measured.

Parameters
- Dominating component R, C or L (autoselection)
- Q
- D
- Rp
- Rs
- Z
- Cp, Lp
- Cs, Ls
- Cp Biased (internally generated dc voltage)