

고유/표면/체적 저항측정기

LORESTA-GP

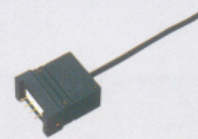
표면 저저항측정기(측정범위 $10^{-3} - 10^7 \Omega$)

Loresta-GP <MCP-T610>

지능형의 다목적 고유저항계로 소프트웨어는 4-pin 프로브를 사용하여 측정범위 이내에서 많은 종류의 샘플에 대한 고유저항계수(RCF)를 계산할 수 있다.



Standard Accessories








ASP Probe
MCP-TP03P



Probe Checker
MCP-TRF1

Optional Probes

ESP type	PSP type	QPP type	BSP type	TFP type
				
For non-uniform samples. Inter-pin distance 5mm, pin points $\varnothing 2$, spring pressure 240g/pin. MCP-TP08P	For small samples. inter-pin distance 1.5mm, pin points 0.26R, spring pressure 70g/pin. MCP-TP06P	For minute samples. Square type. Inter-pin distance 1.5mm, pin points 0.26R, spring pressure 70g/pin. MCP-TPQPP	For large samples. inter-pin distance 2.2mm, pin points 0.37R, spring pressure 210g/pin. MCP-TP05P	For thin films. Inter-pin distance 1.0mm, pin points 0.15R, spring pressure 50g/pin. MCP-TFP

LORESTA-GP <MCP-T610>



용도

기술부, 품질관리부, R&D

적용

전도성 페인트, 납유리, 전도성 플라스틱, 전도성 고무,
전도성 필름, 금속박막, 정전기방지금속, EMI 차폐금속,
전도성 섬유, 전도성 세라믹 등등

특징

측정범위를 $9.999 \times 10^{-3} \sim 10^7$ 까지 확장. 18개 측정파일을 분할할 수 있으며 4-pin 프로브 방식으로 간단하고 정밀하게 금속의 고유저항을 측정한다. 5.7인치의 LCD 모니터로 쉽게 작동. RS-232를 통하여 PC에서 원거리 작동을 할 수 있다. MCP 프로브는 원터치로 작동, $[\Omega]$, $[\Omega/\text{sq}]$, 및 $[\Omega\text{cm}]$ 를 바로 읽을 수 있다. 1000개의 데이터 저장 메모를 가지고 있다.

사양

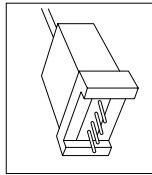
Method of Measurement	4-pin probe, constant-current method										
Measurement range	10^{-3}	10^{-2}	10^{-1}	10^0	10^1	10^2	10^3	10^4	10^5	10^6	10^7
Supplied current	100mA			10mA	1mA	100 μ A	10 μ A	1 μ A	0.1 μ A		
Measurement trueness (\pm % of reading \pm digits)	$\pm 2.0\%$ $\pm 20\text{dgt}$	$\pm 1.0\%$ $\pm 5\text{dgt}$	$\pm 1.0\%$ $\pm 3\text{dgt}$	$\pm 0.5\%$ $\pm 3\text{dgt}$					$\pm 1.0\%$ $\pm 3\text{dgt}$	$\pm 2.0\%$ $\pm 5\text{dgt}$	
Power source	AC85V~264V 47~63Hz 92VA										
Memory back up	Approximately 3 years (uses lithium battery)										
4-pin Probe	MCP probe (ASP,ESP,PSP,BSP,QPP,TFP types)										
4-pin calculating function	For rectangular and circular samples of 0.001mm~9999mm. Rectangular samples : height and width. 0.001mm~9999mm. Circular samples: diameter, 0.1mm~9999mm; thickness, 0.001A~9999mm										
Data output	RS232C										
Dimensions, Weight	W330×D270×H88mm, 3.4kg										
Standard accessories	ASP probe : MCP-HP03P (4-pins, inter-pin distance 5mm, pin points 0.37R) Probe checker : MCP-TRF1 (10 Ω , for ASP probe)										

[R8] Products Lineup for Loresta Series

~An abundant lineup for measuring low resistivity in R&D, production engineering, and quality control~

4-pin Probes

The 4-pin probes make it possible to perform stable, highly precise measurements of low resistivity according to the shape of the sample.



W35 X L20 X H35mm
Inter-pin distance: 5 mm



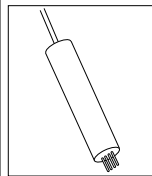
The standard accessory
Inter-pin distance: 5 mm, pin points
 ϕ 0.378, spring pressure: 210 g/pin.
RMH110 (MCP-TP03P)



For non-uniform samples
Inter-pin distance: 5 mm, pin points
 ϕ 0.2, spring pressure: 240 g/pin.
RMH114 (MCP-TP08P)



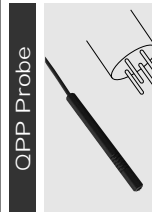
For soft samples
Inter-pin distance: 5 mm, pin points ϕ 2
ball type, spring pressure: 130 g/pin.
RMH116 (MCP-TPLSP)



ϕ 10-12 X L112mm



For small samples and thin films
Inter-pin distance: 1.5 mm, pin points
 ϕ 0.268, spring pressure: 70 g/pin.
RMH112 (MCP-TP06P)



For minute samples
Inter-pin distance: 1.5 mm, pin points
 ϕ 0.268, spring pressure: 70 g/pin.
RMH115 (MCP-TP0PP)



For large samples
Inter-pin distance: 2 mm, pin points
 ϕ 0.378, spring pressure: 210 g/pin.
RMH111 (MCP-TP05P)



For thin films on glass substrate
Inter-pin distance: 1.0 mm, pin points
 ϕ 0.158, spring pressure: 50 g/pin.
RMJ217 (MCP-TFP)



For hard samples
Inter-pin distance: 1.0 mm, pin points
 ϕ 0.048, spring pressure: 250 g/pin.
RMJ202 (MCP-NSCP)

Probe Checkers

For inspecting the main body and 4-pin probes



Inspect with a probe checker before measurement.



4-pin 1.0Ω



4-pin 1.0Ω



4-pin 1.0Ω

For ASP, ESP and LSP Probes
RMH304 (MCP-TRF1)

For PSP Probe
RMH311 (MCP-TRPS)

For TFP and NSCP Probes
RMH312 (MCP-TRTE)

Low Resistivity Meters

Based on the 4-pin probe theory, these high-precision resistivity meters make it possible to maintain high, consistent product quality.



Loresta GP

(Measuring range: $10^{-1} \sim 10^1 \Omega$)
An intelligent, easily operated, multi-purpose model.
For production engineering, quality control, R&D.
RMH012B [120V]
RMH012C [220/240V]
(MCP-T610)



Loresta EP

(Measuring range: $10^{-1} \sim 10^1 \Omega$)
A handy type model has a memory backup (maximum 1,000 data).
For production engineering, quality control.
CE marking is not applied.
RMH009B [120V]
RMH009C [220/240V]
(MCP-T360)

Measuring Stage

A stage for measuring without interference from noise.

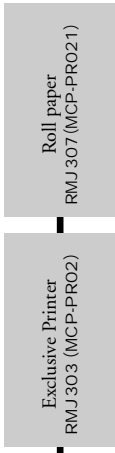


Restable UFL
W300xD200xH10mm
RMJ354 (MCP-ST03)

Out put

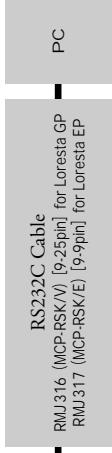
Makes it easy to obtain the results

Convenient, portable printer



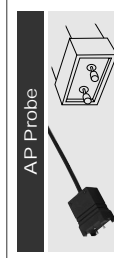
Exclusive Printer
RMJ303 (MCP-PRO2)

Data output and controlled by PC (Loresta GP only)



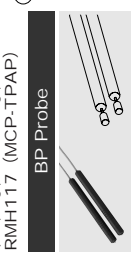
RS232C Cable
RMJ316 (MCP-RSK/V) [9-25pin] for Loresta GP
RMJ317 (MCP-RSK/E) [9-9pin] for Loresta EP

2-pin Probes and checker



AP Probe

The standard type
Inter-pin distance: 10 mm, pin points
 ϕ 0.2, spring pressure: 240 g/pin.
RMH117 (MCP-TPAP)



BP Probe

For large samples
Inter-pin distance: 2 mm, pin points
 ϕ 0.378, spring pressure: 240 g/pin.
RMH118 (MCP-TPBP)



2-pin 1.0Ω

For AP and BP Probes
RMH302
(MCP-TRT1)

※A Probe and B probe cannot be connected directly, 2-pin 4-pin conversion connector is necessary.

Note:

Measurement in the low resistivity range is conducted by the "constant current method", in which a constant current supplied to the sample. Please be aware that if the impressed voltage is low when the current is supplied, measurement will be impossible because the current flow is unstable (e.g., in the case of plastic filled with carbon powder, metallic fiber, etc.).

Loresta GP	Loresta EP
90V	4-5V ($10^{-2} \sim 10^1 \Omega$ range)
10V	10V ($10^0 \sim 10^6 \Omega$ range)