CARACTERISTIQUES

- Mode de test parallèle/série
- Mode de tri pour QC
- Sélection automatique
- Affichage graphique à barres à 46 segments
- Enregistrement statique
- Etalonnage automatique

Compteur LCR portable RS Pro LCR-1703 20 mF, 200 MΩ, 20 kH

RS code commande : 123-3254

Les produits homologués par RS vous apportent des pièces de qualité professionnelle dans toutes les catégories de produits. Notre gamme de produits a été testée par des ingénieurs et fournit une qualité comparable aux plus grandes marques sans avoir à payer un prix élevé.

Description du produit

Le smart-mètre LCR1703 portable de RS Pro est doté d'une technologie de sélection automatique innovante. Son interface USB offre la commodité d'une alimentation c.c. externe et d'une connexion à un PC pour l'acquisition de données. L'écran rétroéclairé marche/arrêt automatique offre à l'utilisateur une visibilité continue tout en prolongeant la durée de vie de la batterie. Cet instrument est à prix compétitif, techniquement Advanced, extrêmement efficace, mince et tactile, avec une poignée ergonomique et confortable. Fourni également avec pinces crocodiles, barre de court-circuitage, kit de suspension magnétique, pince de test CMS à 4 fils, cordon d'alimentation c.c., cordon USB, logiciel sur CD, batterie (installée) et manuel.

Caractéristiques

Numéro de modèle	LCR-1703
Type	Portable
Type de composants	Inductances, condensateurs, résistances
Paramètres de mesure	L/C/R/D/barrettes / ESR
Mode de test	Série/parallèle
Fréquence de test	100 Hz à 300 kHz
Impédance de sortie	20 Ω / 200 Ω / 2 kΩ / 20 kΩ / 200 kΩ / 2 MΩ/20 MΩ/200 MΩ sélectionnable
Précision de base	0.2%
Coefficient de température	0,15 x (précision spécifiée) / °C, < 18 °C, > 28 °C .
Type d'affichage	Affichage de graphique à barres rétroéclairé automatique
Mise en gamme automatique	Oui
Maintien des données	Oui
Temps de mise hors tension automatique	Oui
- Indicateur de pile faible	Oui
Indication de surcharge	Oui
Interface	USB
Disponibilité de l'étalonnage	Etalonnage automatique

Plage d'affichage

Paramètre	Gamme
R, X, |Z|	20 Ω à 200 MΩ
L	20 000 uH à 20 000 kH
C	20 000 pF à 20 000 mF
D	2 000 à 2 000
Q	2 000 à 2 000
DCR	200 Ω à 200 MΩ

Mesure de signal de test

C.a.	
Niveaux	600 mVrms
Précision du niveau	±10%
Impédance de sortie	200Ω
Fréquence	100 Hz à 100 kHz
Résolution	0,01 Hz (100 Hz à 120 Hz)
	0.1Hz (1KHz)
	1Hz (10kHz)
	10Hz (100.0kHz)
Précision de fréquence	± 0.01%
c.c.	
Plage de niveau	1 V c.c.
Précision du niveau	± 10%
Impédance de sortie	200Ω

Mesure d'inductance

Gamme	100/120Hz	1KHz	10KHz
20.000uH	N/A	N/A	N/A
200.00uH	N/A	N/A	0.5% + 5
2000.0uH	N/A	0.5% + 5	0.2% + 5
20.000mH	0.5% + 5	0.2% + 5	0.2% + 5
200.00mH	0.2% + 5	0.2% + 5	0.2% + 5
2000.0mH	0.2% + 5	0.2% + 5	2.0% + 5
20.000H	0.2% + 5	0.2% + 5	5.0% + 5
200.00H	0.2% + 5	0.5% + 5	N/A
2000.0H	0.5% + 5	1.0% + 5	N/A
20.000KH	1.0% + 5	N/A	N/A

Mesure de capacité

Gamme	100/120Hz	1KHz	10KHz
200.00pf	N/A	N/A	0.5% + 5
2000.0pF	0.5% + 5	0.5% + 5	0.2% + 5
20.000nF	0.2% + 5	0.2% + 5	0.2% + 5
200.00nF	0.2% + 5	0.2% + 5	0.2% + 5
2000.0nF	0.2% + 5	0.2% + 5	0.5% + 5
2000.0µF	0.2% + 5	0.5% + 5	2.0% + 5
20.000µF	0.5% + 5	1.0% + 5	5.0% + 5
200.00µF	1.0% + 5	2.0% + 5	N/A
20.000mF	2.0% + 5	N/A	N/A

Mesure de résistance

Gamme	100/120Hz	1KHz	10KHz
20.000Ω	N/A	0.5% + 5	0.5% +5
200 Ω	0.2% + 5	0.2% + 5	0.2% +5
2.0000kΩ	0.2% + 5	0.2% + 5	0.2% +5
20.000kΩ	0.2% + 5	0.2% + 5	0.2% +5
200.00kΩ	0.2% + 5	0.2% + 5	0.2% +5
2.0000MΩ	0.2% + 5	0.2% + 5	2.0% +5
20.000MΩ	0.5% + 5	2.0% + 5	5.0% + 5
200.00MΩ	1.0% + 5	5.0% + 5	N/A

Mesure de résistance c.c.

Gamme	Résolution	Précision
200.00Ω	10mΩ	0.2% +5
2.0000kΩ	100mΩ	0.2% +5
20.000kΩ	1Ω	0.2% +5
200.00kΩ	10Ω	0.2% +5
2.0000MΩ	100Ω	0.2% +5
20.000MΩ	1kΩ	0.5% +5
200.00MΩ	10 kΩ	1.0% +5

Spécifications

Source d'alimentation	Batterie
Batterie incluse	Oui
Type de pile	AA
Autonomie de la batterie	80 heures

Spécifications mécaniques

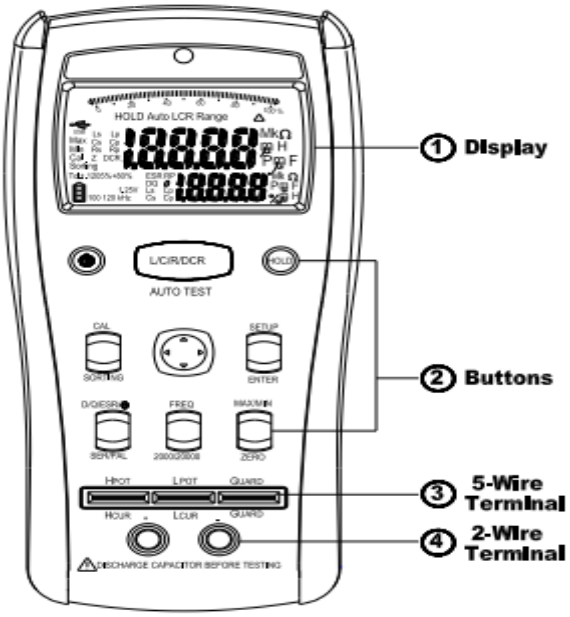
Dimensions	95 mm x 51,2 mm x 200 mm
Longueur	95mm
Largeur	51.2mm
Hauteur	200mm
Poids	605g

Spécifications de l'environnement de

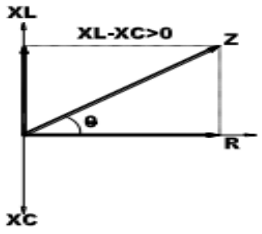
Humidité de fonctionnement	Jusqu'à 80 % R.H.
Humidité de stockage	0 à 80 % HR
Température d'utilisation	0 à 50 °C.
Plage de températures de stockage	-20 à 60 °C.
Niveau de pollution	Degré de pollution 2

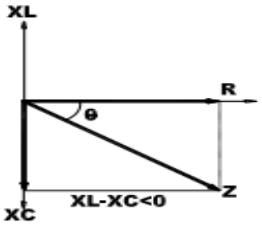
Homologations

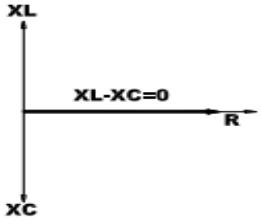
Conformité/certifications	En 61010-1, CEI 61010-1, EN 61326-1
Les déclarations	Certificat de conformité RoHS



Phase Drawing







General:

Sampling Rate:	1.25 times/sec
Overload Indication:	"OL" or "-OL"
Low Battery Indication:	
Auto Power Off:	Approx. 10 minutes after last operation
Operating Temperature:	Non-condensing < 10°C 11 °C ~ 30 °C (<80% RH) 30 °C ~ 40 °C (<75% RH) 40 °C ~ 50 °C (<45%RH)
Storage Temperature:	-20°C to 60°C, 0% RH to 80% RH (batteries not fitted)
Temperature Coefficient:	0.15 x (Specified accuracy) / °C, < 18°C, > 28°C .
Safety:	Complies with EN 61010-1, IEC 61010-1, EN 61326-1
Power Requirement:	4 x 1.5V IEC LR6 or AA size
External Power requirement:	DC 5V (USB or AC adapter)
Battery Life:	80 hours
Size:	95mm(W) x 207mm(L) x 52mm(D)
Weight:	Approx. 630g (with battery)
Accessories:	Alligator Clips, Shorting bar, Magnetic Hanging Kit, 4Wires SMD clip, DC Power Cord, USB Cable, Software CD, Battery (installed) and Manual

RS Pro série LCR-6000 offre un choix de 5 modèles avec différentes fréquences de test : 2 kHz, LCR-6002, 117-6718 ; 20 kHz, LCR-6020, 117-6717 ; 100 kHz, LCR-6100, 117-6716 ; 200 kHz, LCR-6200, 117-6715 ; 300 kHz, LCR-6300, 117-6714)

A. Consecutive Frequency and Convenient Zero Function

Consecutive and Adjustable Frequency
Freely Input Frequency Within Provided Frequency Range

Selectable Fixture Zeroing Methods
Full Frequency Range Zero or Spot Zero

The LCR-6000 series, within the provided frequency range, features consecutive and adjustable frequency capability which allows users to conduct measurement and analysis on components with the most genuine frequency requirements. For OPEN/SHORT fixture compensation function, the LCR-6000 series is equipped with full frequency range zero and spot zero selections. After executing full frequency range zero, users, under the conditions of not turning off the power and not changing test fixture, can freely change test frequency for the LCR-6000 series to execute component measurements that tremendously saves time in repeatedly zeroing test fixture after changing frequency.

B. Rich and Diverse Information Display

MEAS Display
Parameter Setting and Four Measurement Parameters

ENLARGE Display
Enlarge Measurement Results and Include PASS/FAIL Judgment

The measurement result display of the LCR-6000 series not only reveals major and secondary measurement parameters but also includes two monitoring parameters. Therefore, four DUT related parameters can be simultaneously shown on the display screen to save time if repeated measurements are required. With respect to display screen, the LCR-6000 series features diverse display to meet users' observation requirements. For instance, MEAS display shows setting parameters and measurement results at the same time; ENLARGE display focuses on measurement results and PASS/FAIL judgment is available, which is conducive to assist engineers to swiftly obtain the validity of measurement results.

C. Diverse Ancillary Measurement Functions

Automatic Level Control
Ideal for Measuring Components With Voltage Requirements

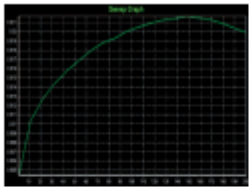
Internal Bias (±2.5V Adjustable)
Ideal for Capacitive Components' Characteristic Tests

D.C. Resistance Measurement
Ideal for inductive components' D.C. Characteristics Verification

To satisfy the diverse measurement application requirements for different components and materials, the LCR-6000 series collocates with many auxiliary measurement functions. For capacitor measurement, Automatic Level Control (ALC) is mainly for component which requires a constant or rated test voltage such as multi-layer ceramic capacitor (MLCC). An internal D.C. bias voltage (±2.5V, internal) is allowing simulating A.C. and D.C. coexistence to learn capacitance variation. For inductor measurement, the D.C. resistance measurement function is to validate D.C. resistance characteristics. Additional, the LCZ function is to quickly identify components ' characteristics. When the function is activated, the LCR-6000 series will automatically determine DUTs' characteristics and reveal the optimum parameters to show the measurement results.

D. 10 Points Listed Tests and PC Software

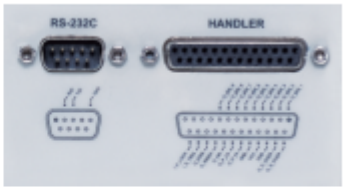
Listed Tests
Variation Criteria Based Upon Frequency or Voltage/Current



On Software - Characteristic Curve
Provide More Delicate Characteristic Variation Trend

The LCR-6000 series provides the 10 points listed test function, which allows users to define a set of DUT measurement parameters (such as Cs-Rs) and to set 10 test criteria of category (either by frequency or by voltage or by current) but different values to conduct measurements. Through this function, users can rapidly and clearly obtain DUT's characteristic variation trend to determine the adaptability of DUT's practical applications. The measurement results can be recorded directly in the internal memory and be transferred to the PC through USB. The LCR-6000 series also provides free PC software (maximum 1,000 points listed tests) in order to satisfy users' analytical requirements on delicate variation.

E. Standard Interface



Standard Interface

For interface connectivity, the LCR-6000 series comes equipped with Handler interface and RS-232C interface. Handler outputs 10 BIN (9BIN, AUX: 1BIN) sorting results that is best for external connection control, for instance, connecting to a sorting machine to conduct components' sorting operation. RS-232C is suitable for remote control and measurement results retrieval. The PC gives commands to control settings or to read measurement results so as to achieve the requirements of verifying automotive applications.