



TEST EQUIPMENT RENTAL SERVICES

When you rent Test Equipment from TDC, we want you to know that you will have a dedicated personal service from start to finish. Our Customer Service team is here to support you throughout your rental period.

TDC are independent specialists promoting all high quality manufacturers and instrument types. Equipment can be delivered Next Day or Same Day to suit your requirements.

When you are finished, simply contact us to arrange your equipment collection or alternatively you can despatch it back to us – we make it easy.

RENTING FROM TDC JUST MAKES SENSE

By using TDC Test Equipment Rental Solutions, you benefit from our extensive rental inventory that is second to none. We constantly refresh our equipment range with branded equipment manufacturers such as Megger, FLUKE, Chauvin Arnoux, OMICRON, FLIR, b2 HVA, Agilent Technologies, Dranetz BMI, Fujikura, JDSU, Ametek Jofra, GE DRUCK, RAE Systems, TSI Airflow, Rohde & Schwarz, NORBAR, PANAMETRICS, Tektronix and many more.

You can utilise our rental equipment to suit your own requirements, from one week to as many months as you need. You only pay for what you use down to the day. Renting with TDC is straightforward and easy. Our expert Sales and Applications Engineers will find the best solution to suit your application.

Delivery & Collection is arranged by us - we make it hassle free and easy.

TDC 6 POINT RENTAL GUARANTEE - OUR REPUTATION MATTERS



1 SAME DAY DISPATCH

Many of our customers operate to very strict deadlines. Providing the order is placed and confirmed before 3pm, your equipment will be despatched the same day.



2 QUALITY

All Equipment is checked prior to dispatch to ensure it is servicable and in safe working order. Certification checks are standard.



3 SUPPORT

We will provide you with enough information to make an informed choice of the correct equipment required for your application.



4 PRICE

We offer a simple price match promise. We'll match any genuine competitor quote.



5 CUSTOMER SERVICE

We can promise that throughout your rental period, we will do our utmost to provide you with the best customer service. All information we provide is in good faith and free of charge. We will provide a quote for any consultancy or professional advice that may be required.



6 REPUTATION

We know we are only as good as our last job. We don't just want regular customers - we want to build loyal customers.



For all enquiries, please contact: Gordon Thow (Test Equipment Rental Manager)

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 **CHAUVIN®
ARNOUX**
CHAUVIN ARNOUX GROUP



TEST EQUIPMENT RENTAL SERVICES

CA6505 Digital Megohmmeter

Datasheet

The insulation experts at 5 kV

- **Large measurement range from 10 k Ω to 10 T Ω**
- **Large backlit LCD screen, with digital display and bargraph**
- **Fixed test voltages and programmable test voltages from 40 V to 5,100 V**
- **Quantitative and qualitative insulation analysis**
- **Automatic calculation of the DAR / PI / DD quality ratios**
- **Step voltage mode**
- **Calculation of the result R at a reference temperature**

Megohmmeters

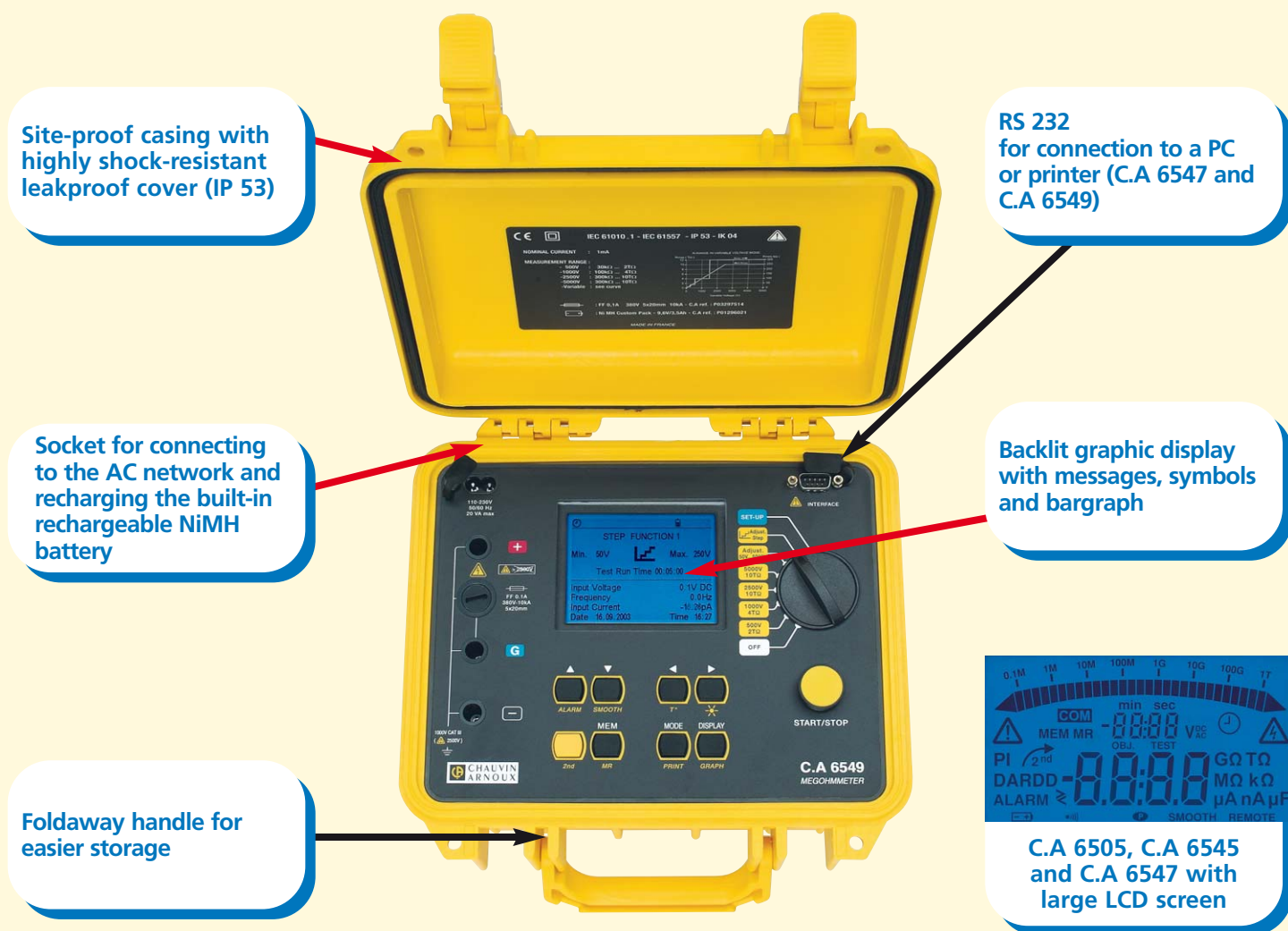


INDUSTRY

**Testing and maintenance
of industrial equipment**

Performance in the field...

In their site-proof casing suitable for the severest measurement conditions, the C.A 6505, C.A 6545, C.A 6547 and C.A 6549 megohmmeters offer you the best in insulation testing in terms of accuracy and expertise. As soon as they are connected, they measure voltages, frequencies, capacitances and residual currents on the installation or equipment to be tested. With their multiple functions, they not only qualify the insulation measured, but also ensure genuine preventive maintenance.



Accessories for all situations



The C.A 6545, C.A 6547 and C.A 6505 megohmmeters are delivered as standard with a bag containing 3 m leads terminated with large, fully-insulated, built-in crocodile clips: 2 measurement leads

and an earth cable for high insulation measurements.

Simplified leads terminated by a 4 mm banana plug are also available as an option for connecting small crocodile clips or test probes.

The C.A 6505 megohmmeter is also delivered in a bag, with 2 measurement leads 2 m long, crocodile clips and 2 guarded safety leads.

In-depth expertise ...

Main applications

- Insulation measurement on cables, motors, generators, transformers...
2 levels of diagnostics:
 - "Go/No go" measurement
 - Qualitative measurement for preventive maintenance:
 - Testing with programmed duration
 - Quality ratios: polarization index (PI) & dielectric absorption ratio (DAR)
 - Insulation testing on heterogeneous or multi-layer cables (dielectric discharge index)
 - Step voltage
- Locking of test voltages: ideal when entrusting the instrument to less experienced users
- Measurement voltage selectable from 40 to 5,100 V to deal with all types of measurement situations
- Possibility of storing the results in the memory and exporting the data by means of software to keep a log of the measurements (C.A 6547 / C.A 6549)

"THEORETICAL" REMINDER

Reduced insulation may be due to slow, gradual deterioration over a long period of time, but also due to sudden damage. The effects of humidity, dirt, corrosion, penetration by chemicals and even vibrations can all cause this sort of deterioration. Its effects are easy to document using the quality ratios (PI-DAR-DD) available on the whole range of 5 Kv insulation testers. Comparison of the insulation values over time provides crucial information for preventive maintenance of machines.

This preventive maintenance is essential at 2 levels:

1. Safety: minimizing the risk of short-circuits
2. Cost: avoiding the failure of important equipment leading to high costs in terms of production down-time, production losses and repairs.



POLARIZATION INDEX (PI) & DIELECTRIC ABSORPTION RATIO (DAR)

Insulation is sensitive to temperature and humidity variations. In addition, measurement is affected by the appearance of disturbance currents. To overcome these effects, long-term measurements must be performed and the PI and DAR coefficients must be calculated. They will then allow qualification of the insulants and their ageing.



DIELECTRIC DISCHARGE INDEX (DD)

This test measures the dielectric absorption of a heterogeneous or multi-layer insulant and will reveal the presence of impurities or a faulty layer.

$$DD = \frac{\text{Current measured after 1 min (mA)}}{\text{Test voltage (V) x Capacitance measured (F)}}$$



Var 50-5,000 V SETTING

To deal with the whole range of measurement situations (electrical equipment, telecom installations, etc.) and measure as accurately as possible, all 3 instruments offer the possibility of selecting the test voltage by means of the Var 50-5,000 V setting on the rotary switch. The voltage can be adjusted between 40 V and 1,000 V in 10 V increments and between 1,000 V and 5,100 V in 100 V increments.



PROGRAMMABLE ALARMS

A high or low alarm threshold can be memorized. If there is an overrun, a visual warning is triggered and a buzzer sounds.



STORAGE (C.A 6547 and C.A 6549)

The C.A 6547 and C.A 6549 have an internal memory for storing several thousand measurements. Storage is performed with two indices, OBJ (object) and TEST (test), which store the results in an ordered way.



STEP VOLTAGE (C.A 6549)

The resistance of a faulty insulant gradually decreases as the test voltage rises. This test, which involves increasing the test voltage in steps, can be used to assess the quality of the insulant by observing the curve R(Utest) and the result in ppm/V which provides a quantitative evaluation of the curve's slope.



TEST WITH PROGRAMMABLE DURATION

Insulation measurements sometimes take a long time to stabilize because of transient disturbance currents. By carrying out long-term measurements and analysing the trend curve of the insulation according to the test voltage application time, you can obtain a better assessment of insulant quality.



GRAPH R(t)

If a programmed-duration test is carried out, the instruments automatically store the samples concerning the insulation tested, at the rate chosen by the user. The curve R(t) can be plotted by hand on the basis of the results, or on screen via the DATAVIEWER software. With the C.A 6549, it is also possible to view the curve directly on the graphic screen.



SMOOTH FUNCTION

When the measurements are unstable, the Smooth function can be used to smooth the display of the insulation values so that they are easier to read and can be interpreted more quickly.



PRINTER (C.A 6547 and C.A 6549)

A compact serial printer can be connected for direct printouts on site. It is also possible to use a desktop parallel printer with a series/parallel adapter available as an accessory.



REFERENCE TEMPERATURE (C.A 6549)

The value of an insulation resistance varies according to the measurement temperature.

For accurate, reliable monitoring, it is always a good idea to express a measurement result in terms of a reference temperature. By simply pressing a button, the calculation can be performed automatically by the instrument.



DATAVIEW SOFTWARE

This software recovers the stored data, plots the trend curve R(t), prints the customized test protocols and creates files for spreadsheet software.

DataView can also configure and control the instrument via an RS232 link!

SPECIFICATIONS

C.A 6505		C.A 6545		C.A 6547		C.A 6549	
Metrology							
INSULATION		Fixed test voltages: 500 / 1,000 / 2,500 / 5,000 V Adjustable test voltage: 40 V to 5,100 V in 10 or 100 V increments Ranges: 500 V: 10 kΩ to 2 TΩ 1,000 V: 10 kΩ to 4 TΩ 2,500 V: 10 kΩ to 10 TΩ 5,000 V: 10 kΩ to 10 TΩ					
VOLTAGE		1 to 5,100 V (15 Hz to 500 Hz or DC)					
CAPACITANCE		0.001 to 49.99 F					
LEAKAGE CURRENT		0.000 nA to 3,000 A					
Functions							
Display		Giant LCD				Graphic	
Backlighting		YES					
Programmable alarms		NO		YES			
Smoothing of display		NO		YES			
Prog. test duration		YES					
Calculation of ratios		DAR - PI		DAR - PI and DD			
Step voltage mode		NO				5 steps	
Calc. of R at reference T°		NO				YES	
Locking of test voltage		YES					
R(t)		NO		Recording of samples			Directly on the display
Storage		NO			128 kB		
RS 232		NO			Two-way		
Printing of measurements		NO			Serial or parallel printer		
PC software		NO			DataView®		
Power supply		Rechargeable NiMH battery					
Battery life		30 days with 10 DARs and 5 Pls / day					
Electrical safety		IEC 61010-1 (Cat. III 1,000 V or Cat. I 2,500 V) and 61557					
Dimensions		270 x 250 x 180 mm					
Weight		4.3 kg					

TO ORDER

• C.A 6505 Megohmmeter P01139704

Delivered with a carrying bag containing:

- 2 simplified measurement leads 2 m long, equipped with an HV plug at each end (red / blue)
- 1 guarded safety lead 2 m long, equipped with an HV plug at one end and an HV plug with rear connection at the other end (black)
- 1 guarded safety lead 0.35 m long, equipped with an HV plug at one end and an HV plug with rear connection at the other end (blue)
- 3 crocodile clips (red, blue and black)
- 1 mains power cable 1.80 m long
- 1 operating manual in 5 languages

C.A 6545 Megohmmeter P01139701

Delivered with a carrying bag containing:

- 2 safety leads 3 m long with HV plug and HV crocodile clip (red/blue)
- 1 guarded safety plug 3 m long with an HV plug with rear connection and an HV crocodile clip (black)
- 1 lead with rear connection (blue) 0.35 m long
- 1 mains power cable 2 m long
- 1 simplified operating manual
- 1 operating manual in 5 languages

C.A 6547 Megohmmeter P01139702

C.A 6549 Megohmmeter P01139703

Delivered with a carrying bag containing:

- 2 safety leads 3 m long with HV plug and HV crocodile clip (red/blue)
- 1 guarded safety plug 3 m long with an HV plug with rear connection and an HV crocodile clip (black)
- 1 lead with rear connection (blue) 0.35 m long
- 1 mains power cable 2 m long,
- 1 communication lead,
- 1 simplified operating manual
- 1 operating manual in 5 languages



For assistance and ordering

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Elec & Mech Product Supply



Calibration and Rental Services



Quality Coatings



Transformers



Control Panels



Compressors



Auxiliary Power Systems

To differentiate our organisation in order to achieve continuous, sustainable growth, TDC endeavours to fully understand and exceed the expectations of our customers, and to work proactively to deliver **Engineering Excellence.**



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