



## C.A 6165

### Multi-function equipment tester



#### Test the electrical safety of your electric equipment manually or automatically

- Capacitive colour touch screen
- Automatic test sequences
- Storage of the tests on memory card up to 32 GB
- 5 kVAC/ 6 kVDC HV dielectric test, 25 A continuity, 1,000 V isolation
- Substitute direct leakage current, PE, differential leakage current and touch leakage current
- External and internal discharge time up to 10 s / 550 V peak
- P, Q, S, Pf, Cos  $\phi$ , THDU, THDI, U and I functional test
- Inputs/outputs to pedal, indicator lamps, PC
- Compatible with TT, TN and IT networks, 230 V / 115 V



IP 50		MICRO SD			
IEC 60204	IEC 61439	IEC 60335	IEC 60950	IEC 50191	VDE 0701/0702

Measure up



The **C.A 6165** multi-function electrical equipment tester can be used to perform **all the measurements** needed to test the electrical safety of portable electric equipment, machines and switchboards. This makes it ideal for electrical safety testing and certification of equipment in the context of end-of-line production conformity checking, periodic inspections or maintenance.

**In terms of applications**, it will be used frequently by:

- ◆ Electrical equipment manufacturers for conformity checking ("CE" marking)
- ◆ Switchboard specialist for checking the low-voltage cabinets
- ◆ Industrial maintenance firms needing to check the conformity of a fleet or installation
- ◆ After-Sales Service companies repairing and checking the conformity of equipment with anomalies
- ◆ Certification organizations for periodic inspections
- ◆ Technical education

Ethernet, USB, SD Card and Bluetooth communication

RS232 connections

Inputs

Mains power supply

Fuses

On /Off switch with built-in LED

TC1 test connectors for external test adapters

Keypad

Test connector (230 V)

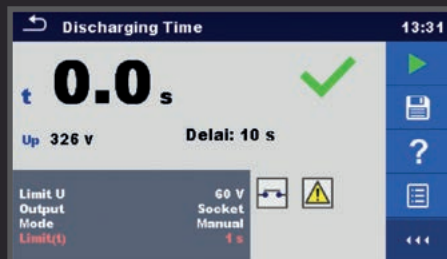
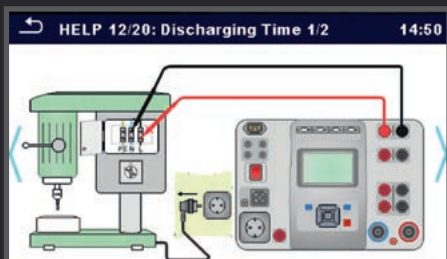
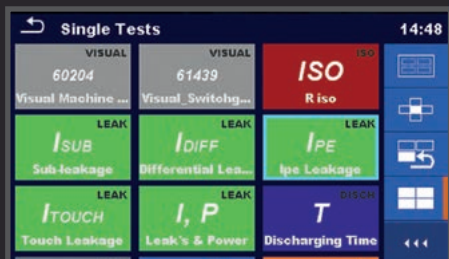
Probe connector



Direct access to the various tests

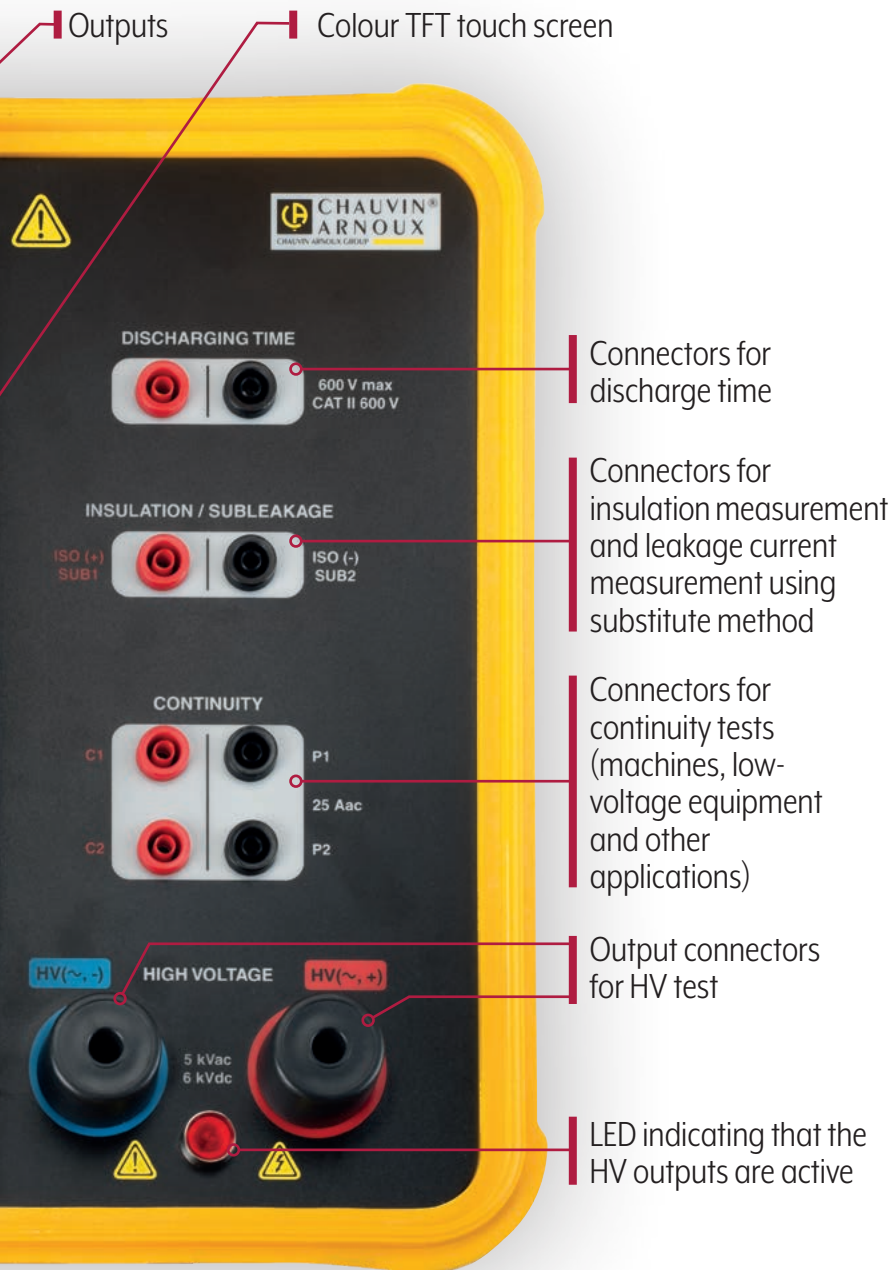
Connection diagrams

Results screens

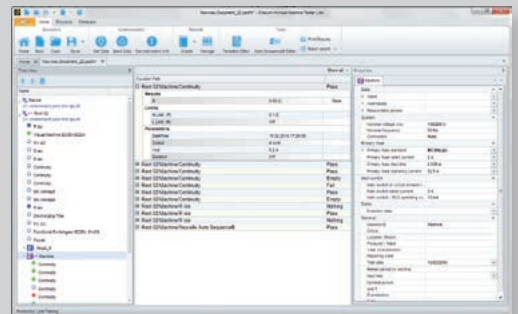


All the **measurements** and **tests** required for this conformity checking are available:

- ◆ 200 mA, 4 A, 10 A and 25 A continuity
- ◆ TRMS leakage and load currents
- ◆ Voltage / Frequency
- ◆ Leakage current by substitute method
- ◆ Differential leakage current
- ◆ Touch leakage current
- ◆ Earth leakage current (PE)
- ◆ Functional test with consumption measurement
- ◆ AC and DC dielectric tests
- ◆ Discharge time
- ◆ Functional and visual inspection
- ◆ 50 V / 100 V / 250 V / 500 V and 1,000 V insulation resistance
- ◆ Power values (active, apparent & reactive) & THD



## MtLink software

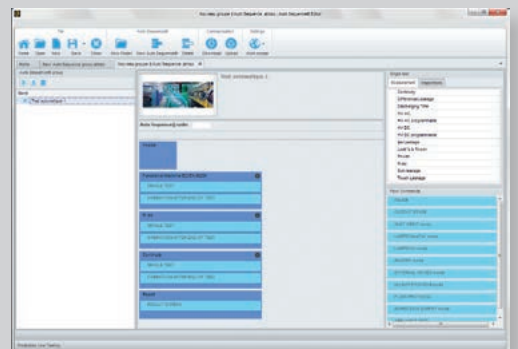


For simple report generation according to the applicable standards.

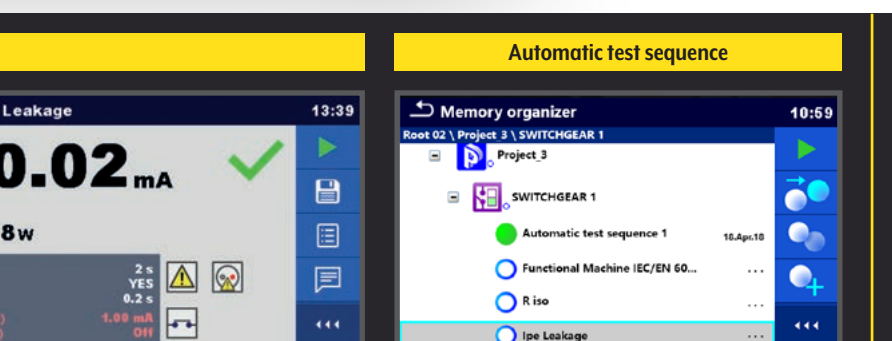
The analysis part is simplified by the PC software delivered as standard, enabling you to:

- Download the test results onto a PC for archiving in a database and report generation.
- Download test plans from the PC into the instrument to perform predefined tests.
- Define automatic test sequences.

## Auto-sequence



## Print your measurement reports



## C.A 6165 Technical Specifications

High voltage				
AC / AC Programmable	Range	0 V to 1999 V		2 kV to 5.99 kV
	Resolution/Accuracy	1 V / $\pm 3\%$ R		10 V / $\pm 3\%$ R
DC / DC Programmable	Range	0 V to 1,999 V		2 kV to 6.99 kV
	Resolution/Accuracy	1 V / $\pm 3\%$ R		10 V / $\pm 3\%$ R
Courant	Range	AC: I apparent & resistive 0 mA to 99.9mA - I capacitive: -99.9 mA to + 99.9 mA - DC: 0.01 mA to 9.99 mA		
	Resolution/Accuracy	AC: I apparent: 0.1 mA / $\pm 3\%$ R $\pm 3$ cts, indicative for I capacitive & I resistive - DC: 0.01 mA / $\pm (5\% R + 3$ cts)		
0.2 A ; 4 A ; 10 A or 25 A continuity, voltage drop (10 A)				
	Range	0 to 19.99 $\Omega$	20 to 99.9 $\Omega$	100 to 199.9 $\Omega$
	Resolution	0.01 $\Omega$	0.1 $\Omega$	0.1 $\Omega$
	Accuracy	$\pm (2\% R + 2$ cts)	$\pm 3\%$ R	$\pm 5\%$ R
	Voltage drop (10A)	0.00V to 99.9V		
Insulation				
	Voltage	50 V / 100 V		250 V / 500 V / 1,000 V
	Range	0 to 19.99 M $\Omega$	20 M $\Omega$ to 99.9 M $\Omega$	0 to 19.99 M $\Omega$
	Resolution	0.01 M $\Omega$	0.1 M $\Omega$	0.01 M $\Omega$
	Accuracy	$\pm (5\% R + 2$ cts)	$\pm 20\%$ R	$\pm (3\% R + 2$ cts)
Leakage current				
	Method	Substitute	I PE	Differential
	Range	0.00 to 19.99 mA	0.00 to 19.99 mA	0.00 to 19.99 mA
	Resolution	10 $\mu$ A	0.01 mA	0.01 mA
	Accuracy	$\pm (5\% R + 3$ cts)	$\pm (3\% R + 3$ cts)	$\pm (3\% R + 5$ cts)
34 V, 60 V and 120 V discharge time				
	Time	Range : 0 to 9.9 s	Resolution : 0.1 s	Accuracy : $\pm (5\% R + 2$ cts)
	Up voltage	Range : 0 to 550 V	Resolution : 1 V	Accuracy : $\pm (5\% R + 3$ cts)
Power values				
		Active (P)	Apparent (S)	Reactive (Q)
	Range/Resolution	0 to 3.70 kW / 0.01 W to 10 W	0 to 3.70 kVA / 0.01 VA to 10 VA	0 to 3.70 kVar / 0.01 VAr to 10 VAr
	Accuracy	$\pm (5\% R + 5$ cts)	$\pm (5\% R + 10$ cts)	$\pm (5\% R + 10$ cts)
	Other	PF, Cos $\phi$ , THDi, THDu ; (5% R + 5 D)		
	Voltage	0.0 V to 199 V / 0.1V / $\pm (3\% R + 10$ cts)		200 to 264 V / 1 V / $\pm 3\%$ R
	Current	0 to 999 mA / 1 mA / $\pm (3\% R + 5$ cts)		1.00 to 16.00 A / 10 mA / $\pm 3\%$ R
General specifications				
	Display	Colour TFT screen, 480 x 272 pixels		
	Storage	microSD card		
	Communication interfaces	RS232, USB, Ethernet, Bluetooth, Inputs / Outputs (2 x DB9)		
	Power supply	110 V / 230 V - 50 Hz / 60 Hz ; Max. consumption: 600 W / 4.5 kW if charged on mains test socket		
	Dimensions / weight	435 x 292 x 155 mm / 17 kg		
	Environment	Operating temperature: 0 $^{\circ}$ C to +40 $^{\circ}$ C; Storage: -10 $^{\circ}$ C to + 60 $^{\circ}$ C		
	Protection	IP40 open / IP50 closed		
	Electrical safety	300 V CAT II / 600 V CAT II (DISCHI / DISCH2)		

### State at delivery

- A C.A 6165 delivered with
- 2 x HV test guns with HV cables 2 m long
- 1 x Certificate with measurement report
- 1 x RS232 cable
- 1 x USB cable
- 1 x CD-Rom containing the User's Manuals and the MTLINK software
- 1 x EURO mains power cable
- 1 x standard carrying bag
- 2 x double continuity cables 2.5 m long
- 1 x set of red/black insulation cables 2.5 m long
- 1 x single red continuity cable 1.5 m long
- 2 x black crocodile clips
- 3 x red crocodile clips
- 2 x red and black 1kV CAT IV test probes
- 1 x EURO discharge cable
- 1 x safety datasheet for finished products
- 1 x FR/GB Quick Startup Guide in booklet format (DE/ES/IT on CD-Rom)



### Optional accessories

- Remote-control pedal
- 2-colour indicator lamps
- 4-colour indicator lamps
- Power adapter for indicator lamps

### References

C.A 6165 .....	P01145851
Control pedal .....	P01102177
2-colour indicator lamp .....	P01102178
4-colour indicator lamp .....	P01102179
Power adapter for lamps .....	P01102180

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