Everything needed for making IEE 16th tests in a single instrument

C.A 6114

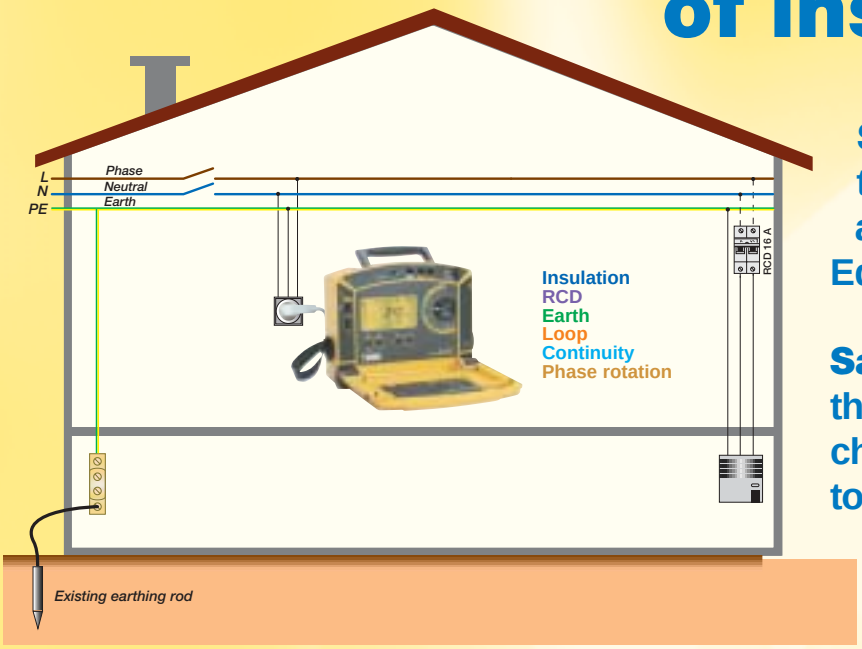
Multifunction electrical installation tester

- **Insulation**
- **RCD**
- **Earth**
- **Loop**
- **Continuity**
- **Phase rotation**

- Rapid and user-friendly: easy-to-use keys, giant backlit LCD screen, simple and reliable connections
- Total user safety: the installation is checked automatically before each measurement
- Excellent measurement stability, even in disturbed industrial environments

CHAUVIN ARNOUX

Qualify the electrical safety of installations



Simple, safe and effective, the C.A 6114 is a must for making all tests required by the IEE 16th Edition Wiring Regulations.

Safety first: the instrument automatically checks the state of the installation to which it is connected and prevents the measurement if there is a problem.

A measurement cable terminated by a mains plug makes it possible to perform all measurements from a single power plug.

INSULATION (IEC/EN 61557-2)
The de-energized measurement

Why measure insulation?

- To check that no conductor has suffered mechanical damage
- To check that all conductors are isolated from earth

Voltage of installation	Test voltage	Insulation to be found
< 50 V	250 V	≥ 250 kΩ
50 V to 500 V	500 V	≥ 500 kΩ
> 500 V	1000 V	≥ 1 MΩ

With the C.A 6114:

- Bipolar insulation measurement
- Nominal voltage: 100-250-500 V DC
- Range: 0.05 to 300 / 600 MΩ
- Resolution: 1 kΩ to 1 MΩ
- Accuracy: +/- (6% measurement + 1 count)
- Nominal current: > 1 mA DC
- Short-circuit current: < 12 mA DC

EARTH (IEC/EN 61557-5)

Why and how is ground measured?

- By the single auxiliary rod method (TT & impedant IT networks).
- The RA must be as low as possible to allow fault currents to flow to earth.

With the C.A 6114:

- Power supply: 95 to 145 V; 175 to 300 V AC
- Frequency: 15.3 to 17.5 Hz; 45 to 65 Hz
- Range: 0.15 Ω to 10 kΩ
- Resolution: 0.01 to 10 Ω
- Accuracy: +/- (10% measurement + 3 counts)

DIFFERENTIALS (IEC/EN 61557-6)

Why test differentials?

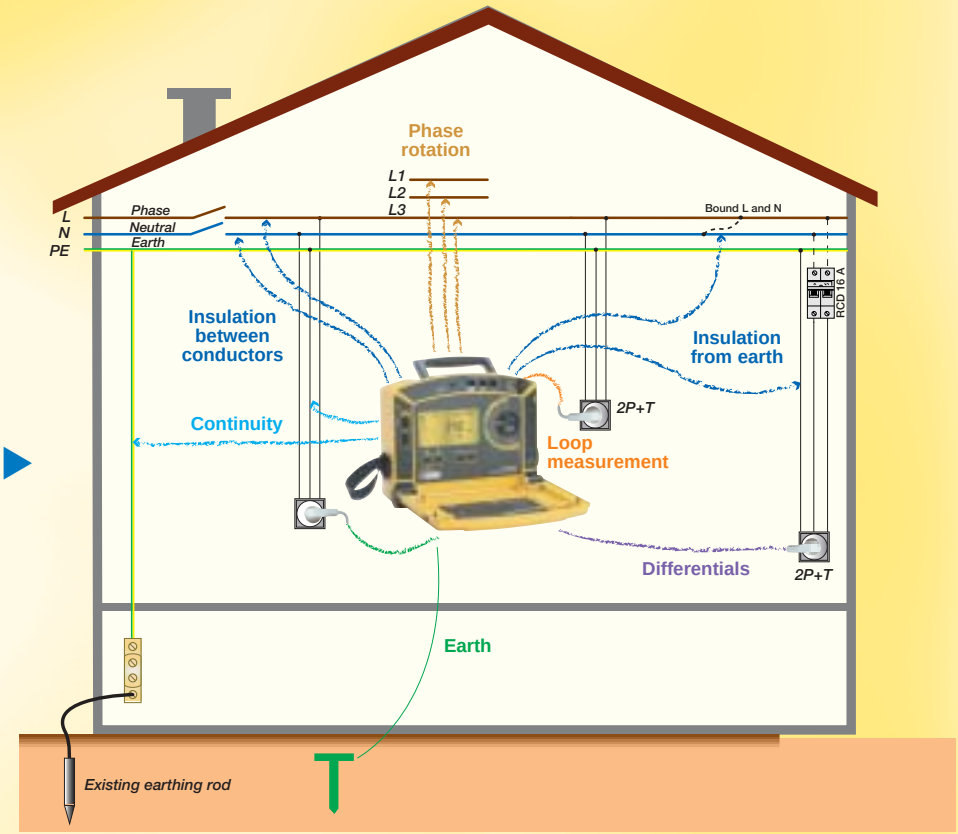
To check that they trip

- At $I_{test} = I_{\Delta N}$
- In preventive maintenance, in less than 300 ms, at a current between $\frac{I_{\Delta N}}{2}$ and $I_{\Delta N}$.

With the C.A 6114:

- L-N-PE voltage: 95 to 145 V / 175 to 300 V AC
- Frequency: 15.3 to 17.5 Hz / 45 to 65 Hz
- $I_{\Delta N}$: 10-30-100-300-500 mA
- Trip failure test at 1/2 $I_{\Delta N}$; duration: 1,000 ms
- Tripping time measurement : at $I_{\Delta N}$, $2I_{\Delta N}$ (selective), $5I_{\Delta N}$, 150 mA, and 250 mA
  Duration: 500 ms, resolution: 0.1 ms; accuracy: ±2 ms
- Tripping/current time measurement: ramp from 0.5 to 1.033 $I_{\Delta N}$, in 3% steps
  Duration of each step: 200 ms
- Contact voltage: 1.5 to 100 V AC

A tripod (L, N, PE) measuring cable completed by crocodile clips or test probes makes it possible to perform each measurement individually, directly on the conductors.



LOOP (IEC/EN 61557-3)

Why measure loop?

- To measure the earth by excess, without using rods
- To calculate short-circuit current to make certain the safety device is proportional
- To check fault voltage (with probe connected)

With the C.A 6114:

- L-PE/L-L/L-N loops
- L-N-PE voltage: 95 to 145 V / 175 to 300 V / 330 to 440 V AC
- Frequency: 15.3 to 17.5 Hz / 45 to 65 Hz
- Range: 0.08 Ω to 200 Ω (resistance & impedance)
- Resolution: 0.001 to 0.1 Ω
- Accuracy: +/- (5% measurement + 3 counts)
- Short-circuit current calculation: 0.5 A to 30 kA
- Patented “ALT” system: does not trip 30 mA RCD.

CONTINUITY (IEC/EN 61557-4) *(I ≥ 200 mA)*

Why check continuity?

- A PE conductor in good condition and properly connected to the earth bar will drain faults to earth.

With the C.A 6114:

- Test voltage: 18 V DC
- Rated I > 200 mA up to 10 Ω
- Range: 0.16 Ω to 2 kΩ
- Audible continuity signal
- Resolution : 0.01 to 1 Ω
- Accuracy: +/- (5% measurement + 4 counts)

PHASE ROTATION (IEC/EN 61557-7)

How are the different phases in a three-phase network identified?

- By a clear indication of their rotation direction.

With the C.A 6114:

- Rotation direction symbol on the display unit
- Tension: 20 to 440 V AC
- Frequency: 15.3 to 450 Hz

VOLTAGE / FREQUENCY

- Voltage range: 10 to 440 V AC/DC
- Resolution: 1 V; accuracy: +/- (1% measurement + 1 count)
- Frequency range: 15.3 to 450 Hz
- Resolution: 0.1…1 Hz; accuracy: +/- (0.1% measurement + 1 count)

GENERAL CHARACTERISTICS

- In conformity with IEC 1010-1 Cat. III 300 V
- Double insulation
- 800-measurement memory
- RS 232 interface
- Programmable thresholds for each function
- Test lead compensation
- NiMH battery + internal charger
- Dimensions: 295 x 230 x 108 mm; weight: 2.1 kg

The right accessories...

Simple application software

C.A 611X UTILITY software for Windows™ ensures the retrieval of all data stored in the instrument and the rapid creation of protocols (summary tables of measurements). In addition, this software allows complete setup of the instrument from a PC: modification of programmed thresholds, selection of language, user's coordinates, etc.

A must for all of your surveys!

A remote control probe to facilitate your measurements, even in difficult conditions!

With the probe, measurements can be made directly, using the yellow button on the probe, which has the same function as the TEST key of the C.A 6114. The probe is connected to the RS232 connector and has a terminal to connect any of the 3 test leads (L, N, or PE). A button on the back lights up the measuring point, very useful for de-energized measurements, such as in insulation testing.

A serial printer for an immediate report

The results of the various measurements recorded by the instrument can be printed on site, on a ticket in A6 format.

The measurement ticket: a trace, on site, for your customers!

TO ORDER

- **C.A 6114 Tester P01.1454.32**
  Delivered with a small carrying bag containing a 2.5-m cable for measuring or charging with 2P+GND power plug, a 2.5-m measuring cable with 3 separate cords, 3 test probes (red, yellow, white) and 3 crocodile clips, and a 3 m green lead with a test probe.

ACCESSORIES

- **"EARTH" option P01.1019.99**
  rigid shoulder carrying case with a fitted space for the instrument, containing 30 m of cable on a reel + a earthing rod
- **Remote control probe P01.1019.42**
- **C.A 611X UTILITY software P01.1019.02**
  delivered with DB9F/DB25Fx2 cable + DB9M/DB9M gender changer
- **No. 5 serial printer P01.1029.03**
  delivered with DB9F/DB9M cable + DB9M/DB9M adapter
- **Adapter for parallel printer P01.1019.04**
  delivered with DB9F/DB25Fx2 cable + DB9M/DB9M gender changer

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