

C.A 400 Series

Testers for laboratory use



Ammeter, Voltmeter, Galvanometer with central zero, Wattmeter, Multimeter

These rugged, easy-to-use analogue testers are ideal for both training and laboratory work:

- Single switch
- Safety sockets
- HRC fuses and electronic protection systems
- Double insulation

Laboratory testers...

for teaching experience!

AC/DC ammeter C.A 401

Magneto-electric equipment with rectifier

- 11 DC ranges: 100 μ A to 10 A
- 100 mV DC calibre for shunts
- 7 AC ranges: 10 mA to 10 A

Accuracy

- $\pm 2\%$ for DC
- $\pm 2.5\%$ for 10 A DC range
- $\pm 2.5\%$ for AC
- $\pm 3.5\%$ for 10 A AC range

Frequency response

- Reference range: 45 Hz to 65 Hz
- Operating range: 45 Hz to 400 Hz

Dial

- 2 black DC scales (0 to 100 and 0 to 30)
- 2 red AC scales (0 to 100 and 0 to 30)

Fuses

- 1 A HRC and 10 A HRC



AC/DC voltmeter C.A 402

Magneto-electric equipment with rectifier

- 8 DC ranges: 100 mV to 1,000 V
- 6 AC ranges: 3 V to 1,000 V

Internal resistance

- 20 k Ω / V DC and 6.32 k Ω / V AC

Accuracy

- $\pm 1.5\%$ for DC
- $\pm 2.5\%$ for AC

Frequency response

- Reference range: 45 to 65 Hz
- Operating range: 20 Hz to 400 Hz

Dial

- 2 black scales (0 to 30 and 0 to 100)
- 1 red scale for the 3 V AC range



Galvanometer with central zero C.A 403

Magneto-electric equipment

- 2 ranges: 30 μ A DC and 3 mA AC
- 100 mV DC range for shunts

Accuracy

- $\pm 1.5\%$

Dial

- 2 black scales (0 to 30 and 0 to 100)

Fuse

- 315 mA HRC



Single-phase AC/DC wattmeter C.A 404

Ferrodynamic equipment

- 4 voltage ranges: 60 V to 480 V
- 2 current ranges: 1 A and 5 A

Accuracy

- $\pm 1\%$ for AC and $\pm 2.5\%$ for DC

Frequency response

- Reference range: 45 Hz to 65 Hz
- Operating range: 0 Hz to 500 Hz

Dial

- 1 black scale (0 to 120)

Fuse

- 1.25 A HRC



Single and three-phase AC/DC wattmeter C.A 405

Ferrodynamic equipment

- 6 DC or single-phase AC voltage ranges: 60 V to 480 V
- 4 balanced three-phase AC voltage ranges: 60 V $\sqrt{3}$ to 240 V $\sqrt{3}$
- 1 current range: 5 A

Accuracy

- $\pm 1\%$ for single-phase AC
- $\pm 2\%$ for balanced three-phase AC
- $\pm 2.5\%$ for DC

Frequency response

- Reference range: 45 to 65 Hz
- Operating range: 15 Hz to 500 Hz

Dial

- 1 black scale (0 to 120)
- 1 red scale (0 to 90)

Fuse

- 6.3 A HRC



Multimeter C.A 406

Magneto-electric equipment

- 8 DC voltage ranges: 100 mV to 1,000 V, accuracy: $\pm 1.5\%$
- 6 AC voltage ranges: 3 V to 1,000 V, accuracy: $\pm 2.5\%$
- 4 DC current ranges: 1 mA to 1 A, 1 x 50 μ A range (same switch position as the 100 mV DC range), accuracy: $\pm 2\%$
- 5 AC current ranges: 0.3 mA to 3 A, 1 x 150 μ A AC range (same switch position as the 3 V AC range), accuracy: $\pm 2.5\%$ and $\pm 3\%$ for the 3 A AC range
- 3 resistance ranges: 0.5 Ω - 1 k Ω to 1 M Ω , accuracy: $\pm 5\%$

Internal resistance

- 20 k Ω / V DC and 6.32 k Ω / V AC

Frequency response

- Reference range: 45 to 65 Hz
- Operating range: 20 Hz to 400 Hz

Dial

- 2 black scales (0 to 30 and 0 to 100)
- 1 green expanded Ω scale (0 to 1,000)
- 1 red A AC scale (0 to 30)
- 1 red 3 V AC scale (0 to 3)
- 1 red decibel scale (-10 dB to + 12 dB)

Fuses

- 3.15 A HRC and 160 mA HRC



Multimeter C.A 406 kit

For active training: a multimeter delivered as a kit for the professionals of tomorrow.

This build-it-yourself version of the C.A 406 is specially designed for students in technical and vocational education, as well as for fans of electronics as a leisure activity.

- Same specifications as the C.A 406 multimeter
- Easy-to-assemble and attractive
- Minimal tooling required: soldering iron, pliers and screwdriver
- Delivered with particularly detailed illustrated assembly instructions




Laboratory testers... for teaching experience!

Common specifications of the C.A 400 Series

Dial

- Equipped with an anti-parallax mirror
- Scale length: 80 mm

Casing

- Self-extinguishing polycarbonate
- Double insulation 
- IP40 protection (as per IEC 60529 standard)
- Safety terminals. Lead must be disconnected to open the casing
- Fold-way stand for use in tilted position
- Dimensions and weight:
165 x 105 x 50 mm – 450 g

Climatic conditions for operation

- Temperature: -10° C to +55° C
- Relative humidity: 20 to 90 % RH

Electrical safety

- 600 V CAT III as per IEC/EN 61010-1 Edition 2

To order

Except for the C.A 406, the testers in the C.A 400 Series are delivered without leads. The C.A 406 and C.A 406 kit multimeters are delivered with a set of test-probe leads and a 1.5 V battery (R6). All these testers are delivered with an operating manual.

Testers

C.A 401	P01170301	C.A 405	P01170305
C.A 402	P01170302	C.A 406	P01170501
C.A 403	P01170303	C.A 406 kit...	P01170701
C.A 404	P01170304		



Shockproof sheath

A recommended accessory for the whole C.A 400 Series. The test probes can be stowed on the side of the sheath.

Shockproof sheath P01298016

Spare fuses (set of 10)

1 A HRC 380 V 50 kA fuse	P03297507
10 A HRC 380 V 50 kA fuse	P03297510
315 mA HRC 380 V 50 kA fuse	P03297509
1.25 A HRC 380 V 50 kA fuse	P01297015
6.3 A HRC 380 V 100 kA fuse	P01297016
3.15 A HRC 380 V 50 kA fuse	P01100726
160 mA 380 V 50 kA fuse	P03297508

Fuse dimensions: 6.3 x 32 mm

SAFETY ACCESSORIES

A wide range of accessories* are available to extend the scope of your multimeter or give it new functions:

crocodile clips, wire grips, voltage probes, current clamps, temperature sensors, etc.



Documentation available on request.

* compliant with the IEC 61010-031 standard

For information and ordering

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