



ASRAS CO.,LTD  
 1694, 1694/1 Prachasongkhro Road  
 Dingdaeng, Dindaeng, Bangkok 10400  
 Tel. 02-277-9969, Fax 02-277-0995  
 E-mail : sales@asras.co.th  
 Website : www.asras.co.th



# CA 6422 & CA 6424

## 2P & 3P Earth/Ground Testers



**To keep your installation safe, measure your earth connection!**



- 2P resistance/3P earth resistance measurement up to 50 kΩ for highly resistive terrain
- Automatic stabilization of the measurement
- Help with placing the stakes – average and 52%/62%/72% deviation
- Leakage current measurement from 0.5 mA
- Battery recharging via the mains, USB socket or vehicle cigarette lighter



*Measure up*



# CA 6422 & CA 6424

## ERGONOMICS

- A rugged, waterproof casing for intensive, all-terrain use
- Connections with text and coloured markings to avoid any risk of errors
- Detection if a hazardous voltage is present, thus prohibiting measurement
- The CA 6422 & CA 6424 are designed for work in total safety

3 measurement inputs  
3P earth: H, S, E

Current measurement:  
G72 clamp input for CA 6424

Battery charger  
input for CA 6424



2P resistance measurement:  
 $\Omega$  + COM

Voltage measurement:  
V + COM

G72 clamp  
for CA 6424



Direct access  
to all the  
functions, even  
when wearing  
gloves

Hazardous voltage LED

Function keys

Operating help  
indications



Cable  
compensation

On/Off button

The **NOISE** symbol flashes if a noise voltage is present, indicating that the measurement is subject to noise. If the noise level reaches a dangerous value, the symbol  flashes and measurement is impossible.

Wide backlit LCD screen

Measurement selection

Test activation. Backlit button  
visible in all circumstances

52%

62%

# CA 6422 & CA 6424

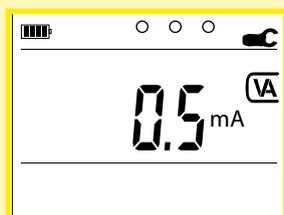
## OPTIMIZED USE

As soon as it is powered up, the instrument automatically performs a resistance measurement in 2P mode. A short press on the TEST button starts measurements in one-shot 3P mode. A long press on TEST can be used to activate the permanent 3P mode. Internal filtering automatically stabilizes the measurement. As soon as it has stabilized, the result is frozen on the display. A LED indicates the presence of a hazardous voltage which prohibits measurement. If the NOISE symbol flashes, it means that a noise voltage is present. In the event of a noise-filled environment, automatic switching from a frequency of 128 Hz to 256 Hz helps to improve measurement accuracy.

## MEASUREMENTS

### Current measurements

As soon as it is connected to the CA 6424, the (optional) G72 clamp is recognized automatically. The CA 6424 then switches to current measurement mode (0.5 mA to 60.00 A).



### Voltage measurements

The CA 6424 displays the value of the voltage between the V and COM terminals.

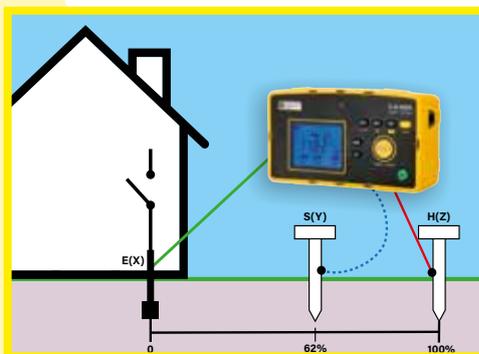


### 2P earth measurements

The automatic startup in 2P resistance mode immediately enables you to test the integrity of the H stake.



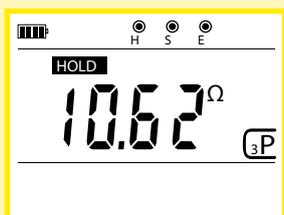
CA 6422



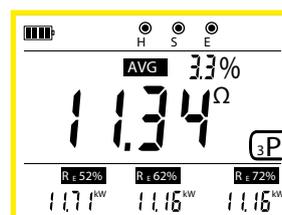
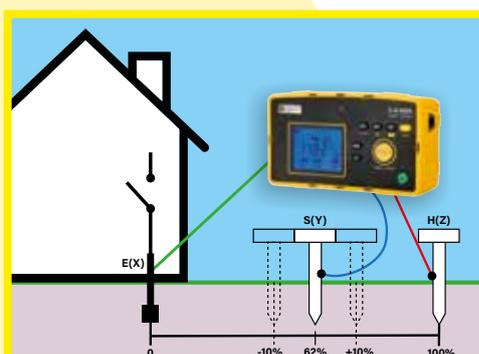
CA 6424

### 3P earth measurements

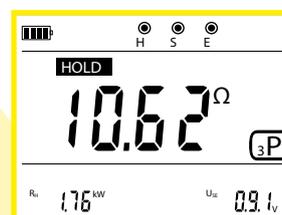
The 3P earth mode memorizes the 52%, 62% and 72% measurement values and calculates the difference in % in relation to the average. If the difference is too great, the percentage value displayed on screen flashes. The CA 6424 can display the resistance of the stake RH and the voltage USE.



CA 6422



CA 6424



CA 6424

72%

	CA 6422	CA 6424
<b>Voltage</b>		
Range	-	0.1-600 V
Resolution	-	0.1 V
Accuracy	-	± (1%R + 1 ct)
<b>2P resistance</b>		
Range	0.05-99.99 Ω / 80.0-999.9 Ω / 0.800-9.999 kΩ / 8.00-50.00 kΩ	
Resolution	0.01 Ω / 1 Ω / 10 Ω / 100 Ω	
Accuracy	± (2%R + 10 cts) / ± (2%R + 2 cts) / ± (2%R + 1 ct) / ± (2%R + 1 ct)	
Cable compensation	-	up to 5 Ω
<b>3P earth resistance</b>		
Range	0.5 Ω - 2.000 kΩ	0.5 Ω - 50.00 kΩ
Resolution	0.01 Ω / 0.1 Ω / 1 Ω	0.01 Ω / 0.1 Ω / 1 Ω / 10 Ω
Accuracy	± (1%R + 10 cts) / ± (1%R + 2 cts) / ± (1%R + 1 ct)	
Measurement frequency	128 Hz or 256 Hz	
No-load voltage	±10 V peak	
Measurement mode	One-shot or permanent	
Data storage	-	Registers: RE @ 62%; RE @ 52%; RE @ 72%
Calculation of average	-	Calculation of the average and the % deviation in relation to the average
<b>RH stake resistance measurement</b>		
Range	-	0.05-9.999 kΩ / 8 - 49.99 kΩ
Resolution	-	1 Ω / 10 Ω
Accuracy	-	± (10%R + 1 ct)
<b>U<sub>SE</sub> voltage measurement</b>		
Range	-	0.10 - 99.99 VAC / 80.0 - 600 VAC
Resolution	-	0.01 V / 0.1 V
Accuracy	-	± (2%R + 2 cts)
<b>Current measurement (via optional G72 clamp)</b>		
Range	-	0.5 - 999.9 mA / 0.800-9.999 A / 8.00-60.00 A
Resolution	-	0.1 / 1 / 10 mA
Accuracy	-	± (1%R + 4 cts) / ± (1%R + 2 cts)
<b>General specifications</b>		
Display	Backlit custom 206-segment LCD	
Measurement mode	R 2P (Ω), R 3P (Ω)	V, I, R 2P (Ω), R 3P (Ω)
Power supply	6 x LR 6 or AA batteries	6 x NiMH rechargeable batteries, charging time approx.. 6 hrs
Charger	-	Internal via mains/USB adapter supplied
Automatic power-off	-	Deactivatable
Battery life	> 2,000 x 3P earth measurements at 100 Ω	> 1,500 x 3P earth measurements at 100 Ω
Dimensions / weight	223 x 126 x 70 mm / 1 kg	
Environment	Operation: -10 to +50°C / Storage: -40 to +70°C (without batteries/accumulators)	
Protection	Up to 600 V on any of the input terminals	
IP / IK index	IP 65 as per IEC 60529 / IK 04 as per IEC 50102	
Drop test	1 metre as per IEC 61010-1	
Standards / electrical safety	EMC: IEC 61326-1; IEC 61010-2-030 / 600 V CAT IV	
Compliance with IEC 61557	IEC 61557-1 and IEC 61557-5	

## STATE AT DELIVERY AND REFERENCES

**CA 6422** P01127012  
Instrument delivered with 6 x LR6 type AAA batteries, 1 quick start guide, 1 safety datasheet, 1 test report with measurement results, WEB link/QR Code for downloading the manuals.

**CA 6424** P01127014  
1 carrying bag, 6 NiMH batteries, 1 USB 2A power supply, 1 USB micro-razor power cable, 1 multilingual quick start guide, 1 safety datasheet, 1 battery datasheet, 1 test report with measurement results, WEB link/QR Code for downloading the manuals.

## ACCESSORIES AND REPLACEMENT PARTS



Carrying bag  
G72 current clamp  
4-point hands-free strap  
15m earth kit  
50m earth kit  
Wrist strap

P01298006  
P01120872  
HX0302  
P01102017  
P01102021  
HX0122

**FRANCE**  
**Chauvin Arnoux**  
190, rue Championnet  
75876 PARIS Cedex 18  
Tél. : +33 1 44 85 44 85  
Fax : +33 1 46 27 73 89  
info@chauvin-arnoux.fr  
www.chauvin-arnoux.fr

**UNITED KINGDOM**  
**Chauvin Arnoux Ltd**  
Unit 1 Nelson Ct, Flagship Sq, Shaw Cross Business Pk  
Dewsbury, West Yorkshire - WF12 7TH  
Tel: +44 1924 460 494  
Fax: +44 1924 455 328  
info@chauvin-arnoux.co.uk  
www.chauvin-arnoux.com

**Middle East**  
Chauvin Arnoux Middle East  
P.O. BOX 60-154  
1241 2020 JAL EL DIB - LEBANON  
Tel: +961 1 890 425  
Fax: +961 1 890 424  
camie@chauvin-arnoux.com  
www.chauvin-arnoux.com

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