

Technical characteristics

- With an isotropic internal probe for measurement of the magnetic field.
- The frequency bands, dynamic ranges, scales, and measurement precisions vary with the isotropic magnetic or electric field probe used.
- Back-lit liquid crystal display (LCD) 160 x 140 pixels.
- Stored evaluation standards: 6 standard, including ICNIRP (Example: BGV B11 Exp.1, 2h/d, Exp.2, DIN/VDE 0848, others optional)

- Surveillance by automatic recording with time interval between 1 and 999 s
- Memory: 1 MB
- Communication: RS232 serial port - Rate from 4,800 to 57,600 Bauds
- Analog outputs (3 channels) standardized: 1 V full scale - 0 to 30 kHz direct: output voltages of the probe
- Operating temperature: 0 to +50°C
- Power supply: by rechargeable internal battery

To receive a calibration and/or repair quote-RMA from R.A.E. Services Inc. Click here>> www.raeservices.com/services/quote.htm



C.A 42

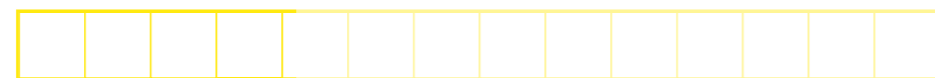
LF fieldmeter

To order a C.A 42

in the configuration and with the accessories of your choice, fill in all the boxes of the codification line

Delivered with protective sheath, 230 V line power charger, RS232 cord, Trigger cord, rechargeable battery pack, carrying bag, and LOG42 PC application software.

Without = 0
With = 1



C.A 42 - P01.1670.03

- Quantity 0/1
- Oscilloscope option 0/1
- Frequency analysis option 0/1
- Measurement recording option 0/1
- Carrying accessories 0/P/S/G

0 = none
P = small case
S = bag
G = large case

Probes

- magnetic MF400 0/1
- magnetic MF400 H 0/1
- magnetic MF05 0/1
- electric EF400 0/1

- Spare battery 0/1
- Line power charger 0/1
- Aluminum tripod 0/1
- Trigger cord 0/1
- RS232 cord 0/1

Accessories

Protection and transport

- Small case P01.1673.07
- Large case P01.1673.08
- Bag P01.1673.09

Magnetic probes

- MF 400 P01.1673.02
- MF 400 H P01.1673.03
- MF 05 P01.1673.04
- EF 400 P01.1673.05

Electric probe

- EF 400 P01.1673.05

- Spare battery P01.1673.06
- Line power charger P01.1673.13
- Aluminum tripod P01.1673.10

Option : oscilloscope
frequency analysis
measurement recording

- Trigger cord P01.1673.11
- RS232 cord P01.1673.12



Control electromagnetic exposure in your environment

DC to 400 kHz - 1 V/m to 30 kV/m - 10 nT to 1 T*



- Isotropic probes
- 1 internal
- 4 external
- Peak, RMS, mean values, Vx, Vy, Vz
- Measurements compared to standards
- Surveillance mode by automatic recording
- Oscilloscope function
- FFT frequency analysis

906 211 092 - 06/04 - Characteristics subject to modifications according to technological developments - Komako

FRANCE
Chauvin Arnoux
190, rue Championnet
75876 PARIS Cedex 18
Tel: +33 1 44 85 44 86
Fax: +33 1 46 27 95 59
export@chauvin-arnoux.fr
www.chauvin-arnoux.fr

UNITED KINGDOM
Chauvin Arnoux Ltd
Waldeck House - Waldeck Road
MAIDENHEAD SL6 8BR
Tel: +44 1628 788 888
Fax: +44 1628 628 099
info@chauvin-arnoux.co.uk
www.chauvin-arnoux.co.uk

LEBANON
Chauvin Arnoux Middle East
P.O. BOX 60-154
1 241 2020 JAL EL DIB (BEIRUT)
Tel: +961 1 890 425
Fax: +961 1 890 424
camie@chauvin-arnoux.com
www.chauvin-arnoux.com



NIST, ISO, IEC, ANSI, NCSL, MIL-STD by www.raeservices.com

* according to the probe

The C.A 42 is an LF electric and magnetic fieldmeter designed to receive a calibration and/or repair quote-RMA from R.A.E. Services Inc. any electrical device in accordance with EMC requirements. It also checks the field levels present at a site in the context of international standards governing the protection of individuals in a private capacity or at their places of work.



The C.A 42 also represents the variations of the electric or magnetic fields vs. time (oscilloscope function), or the harmonic and non-harmonic frequency distribution by calculation of the FFT.

Oscilloscope function option

- Representation of variations of the mean, RMS, or peak values in one of the 3 axes (x, y, or z) vs. time
- Adjustable time base
- Synchronization: level and polarity of triggering adjustable
- "Hold" function with the use of an adjustable cursor
- Zoom: increase of resolution by a factor between 20 and 40

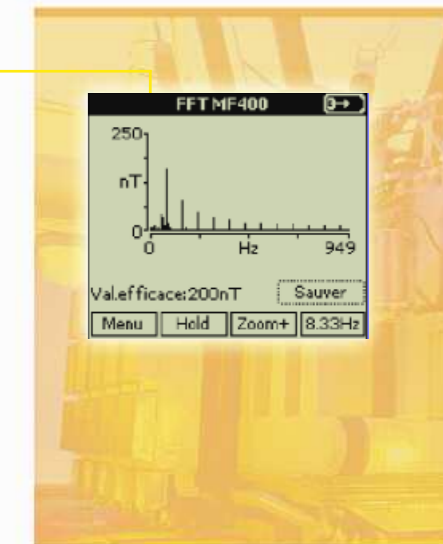
Clientele

- Suppliers and users of electric power:
 - Electricity manufacturers and users of electrical equipment and household appliances,
 - Railways, Automobile, etc.
- Inspection organizations



Frequency analysis (FFT) option

- Representation of the harmonic and non-harmonic components of the observed field, in mean, RMS, or peak value in one of the 3 axes (x, y, or z)
- FFT calculated on 2048 points
- Bandwidth to 3 dB down: 91 kHz (according to the probe)
- "Hold" function with the use of an adjustable cursor
- Zoom: increase of resolution by a factor of 8



Very simple to use, this fieldmeter has an internal isotropic magnetic measurement probe. Four other isotropic probes are available as accessories: the EF 400 electric field probe (1 V/m to 30 kV/m) and three magnetic field probes, MF 05, MF 400, and MF 400H (10 nT to 1T), one of which measures the earth's magnetic field (MF 05).

Fields of application

- EMC: fields radiated by electrical equipment
- Protection of the individual: check of the values specified by international standards (ICNIRP, etc.),

The C.A 42 fieldmeter is specially designed to measure electric and magnetic fields in the low-frequency range (from DC to 400kHz) and compare the measured values to the requirements of European directives and world standards (IEC, EN, DIN, UTE, VDE, BGV, ICNIRP, etc.).

The measurements made by the device are displayed either as absolute values (V/m or T and their multiples and sub-multiples), or as relative values (%) compared to the reference values prescribed by the standards.

They apply to the public and private domains as well as to the industrial testing of the electromagnetic conformity of electrical apparatus.

The function of surveillance of the long-term evolution of the fields is performed by recording in automatic mode; the interval of time between measurements can be configured from 1 to 999 s.

www.raeservices.com Calibration & Repair



Name	C.A 42	MF 400	MF 400 H	MF 05	EF 400
Isotropic probes	Internal	P01.1673.02	P01.1673.03	P01.1673.04	P01.1673.05
Measurement	Magnetic field	Magnetic field	Magnetic field	Magnetic field	Magnetic field
Equivalent area (e)		100 cm ²	100 cm ²		
Frequency band to 3 dB down (without filter)	10 Hz to 30 kHz	10 Hz to 400 kHz (2)	10 Hz to 400 kHz (2)	0 to 500 Hz	5 Hz to 400 kHz (5)
Measurement dynamic range	200 nT to 40 mT	10 nT to 20 mT	100 nT to 200 mT	1 µT to 1 T	1 V/m to 30 kV/m
Measurement scales		200 nT / 2 / 20 / 200 µT / 2 / 20 mT	2 µT / 20 / 200 µT / 2 mT / 20 / 200 mT	200 µT, 10 mT and 1T	300 V/m, 3 and 30 kV/m
Precision	±5% (1) ±4 digits	±3% (3) ±4 digits	±3% (3) ±4 digits	±3% (4)	(6)
Band-pass filters	From 16,67 to 2000 Hz depending of the probe				
Wide-band filters	According to the standard				
Power supply	Ni-MH batteries	none	none	none	Ni-MH or Ni-CD Batteries
Batterie live	6 h (without back-lighting)	-	-	-	6 to 8 h
Dimensions	266 x 144 x 60 mm	425 x 35 x 118 mm	425 x 35 x 118 mm	316 x 35 mm	Sphere - Diameter 8mm
Length of cable	-	1 m	1 m	1 m	Optical fibre
Mass	950 g	400 g	400 g	260 g	300 g

(1) frequency response ±1%; linearity ±1% et ±3,5% for internal probe ; isotropy ±1% and ±3% for MF 05 and EF 400

(2) with wide-band filter : 2 kHz to 400 kHz with high-pass filter

(3) Band 1 - RMS 10 Hz to 3,2 kHz
Band 2 - RMS 2 kHz HP
Band 3 - RMS wide-band

(4) in permanent use

(5) in permanent recording mode with a measurement interval of 1mm

(6) In conformity with the requirements of standards DIN VDE 0848