



## Professional Electrical Test Meters

SAGAB  BY ELMA

## About CIE-Group

CIE-Group is one of the electrical test industry's longest established suppliers and is the exclusive UK distributor for the Sagab, Volt Stick, Elma and Tenmars test instrument brands.

This year celebrating our 50th Anniversary of supplying the professional electrical wholesale, integrator and utilities markets, CIE-Group are pleased to present a whole host of high quality, cost-effective and innovative test solutions in this latest product catalogue.



## Also the UK's leading AV & PA technology provider..

Did you know that CIE-Group is also the UK's leading provider of audio visual, public address and CCTV products to the professional integration markets?

Representing more than 20 leading brands and offering a range of over 3000 products, CIE-Group offers installers all the support and advice they need to deliver the best audio/video/security solutions for their customers.

From simply providing detailed product information, training and advice, to assisting customers with site surveys and product demonstrations, or 'ready to install' full rack system design & build services, CIE-Group pride ourselves on supporting our customers - and your end clients - in achieving the very best results from the full range of products and services we provide.



View the full CIE-Group product range now at:

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## Symbol Glossary

To highlight any technologies, connectivity or compliance relative to each product, you'll find a series of symbols at the top of each product page.

Please use the below key as an explanation of each symbol...



ATEX approved System



LED Flashlight



CAT IV 600V/CAT III 1000V Approved



CAT III 1000V AC Approved



CAT II 1000V Approved



True RMS



2mm & 4mm Integrated Tip



Low Impedance



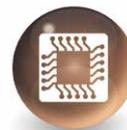
Ingress Protection Rating



PC Connection



USB - Universal Serial Bus



Media Storage Capacity



RS232 Connection



Windows Software

## • Volt Stick VSPU1 – Proving Unit

– 230v instant voltage tester with unique forked tip

The new VSPU1 has been specifically developed to provide confident functionality testing of the Volt Stick 230v product range (Volt Stick 230Y, 230B, SOUND and LV50 models).

This self-powered Proving Unit internally generates a 220 ~ 240v electrical field when the tip of a Volt Stick is inserted into the Unit's test portal.

Where regular checking of test instrument functionality is a requirement (such as Health & Safety regulations, tools & equipment management, etc), or simply for user confidence; the Volt Stick Proving Unit is a simple, effective, built-for-purpose solution.

### Applications:

- Immediate functionality proving of Volt Stick 230v product range
- Simple, effective and lightweight unit
- Sealed, battery-powered unit
- Also provides easy storage for a single Volt Stick unit
- Compatible with Volt Stick 230Y, 230B, SOUND & LV50 models

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### Specifications:

Model:	Volt Stick VSPU1
Compatible with	Volt Stick 230Y, 230B, SOUND, LV50
Electrical Field Output	220 ~ 240v
Response Time	Immediate
Battery	Battery powered, sealed unit. 5 year battery life
Dimensions	185(L) x 41(W) x 41(H) mm
Weight	20g



## • Volt Stick 230Y/230B – Voltage Indicator

– an instant tester for safely checking the presence of an AC voltage

The original and still the best, Volt Stick is the leading instrument for safely checking for the presence of an AC voltage, without making any disconnections in cables, wall sockets, fuses, circuit breakers, junction boxes, etc. No current flow is needed for correct operation. The red indicator in the tip will illuminate on detection of AC voltage simply by applying the tip close to any connection point, or moving it along any insulated cable. All Volt Stick models are fully approved to IEC 61010-1, CAT 1 11 1000v AC and CE.

### Applications:

- High accuracy eliminates any false test results
- Indicates a live conductor within a Multi-Core Cable carrying between 200 ~ 1000v AC
- Locates breaks in cables
- Detecting blown fuses inside plugs/fuse boxes
- Identifies live cables in junction boxes, etc
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Checks functionality of circuit breakers & switches
- Checks a circuit has been isolated before it is worked on

## • Volt Stick EX230 – ATEX Voltage Indicator

– The IECEx & ATEX-Approved version of the Volt Stick 230 (see 230Y/B features above)

### Specifications:

Model:	Volt Stick 230Y/230B
Voltage Range	200 ~ 1000v AC
Sensitivity	Indicator will illuminate at 4mm distance from a 2.5mm conductor carrying 230v
Response Time	Immediate
Protection	IP64
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III 1000v AC
Battery	2 x Standard AAA alkaline batteries (included)
Dimensions	145(L) x 18(O) mm
Weight	35g (including batteries)



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## • Volt Stick SOUND – Voltage Indicator with Sounder

– an instant tester for checking the presence of 230v AC voltage with Sounder



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The Volt Stick SOUND features a detection buzzer for even greater clarification. Also ideal for 'detection 'round corners', in bright daylight and in awkward out of sight areas. High visibility green tube for ease of identification if dropped or hidden in the toolbox.

### Applications:

- High accuracy eliminates any false test results
- Indicates a live conductor within a Multi-Core Cable carrying between 200 ~ 1000v AC
- Locates breaks in cables
- Detecting blown fuses inside plugs/fuse boxes
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Identifies live cables in junction boxes, etc
- Checks the functionality of circuit breakers and switches
- Checks a circuit has been isolated before it is worked on

### Specifications:

Model:	Volt Stick SOUND
Voltage Range	200 ~ 1000v AC
Sensitivity	Functions @ 4mm distance from 2.5mm <sup>2</sup> conductor carrying 230v AC
Response Time	Immediate
Protection	IP64
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III 1000v AC
Battery	2 x Standard AAA alkaline batteries (included)
Dimensions	145(L) x 18(Ø) mm
Weight	40g (including batteries)



The buzzer sounds when this Volt Stick detects an AC voltage



## • Elma Volt Stick Bright – Voltage Indicator with integrated flashlight

– an instant non-contact AC Voltage Detector with on-board flashlight & 2 sensitivity ranges



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The latest addition to the Volt Stick range, the Volt Stick Bright non-contact voltage tester now features bright LED flashlight, LED & Sound Indicator and switchable sensitivity ranges (230v and 24v).

This new addition to the market-leading Volt Stick range also includes self-test circuitry to ensure 100% reliability.

### Features:

- Switchable sensitivity ranges - 230v and 24v
- Integrated white LED flashlight at test tip end of device
- Fast microprocessor functionality
- LED & Sound Indicator when voltage is detected
- 'Always Active' - no ON/OFF switching required
- On-board automatic battery test function
- On-board full function self-testing
- Universal, international flat tip
- Improved battery tray

### Specifications:

Model:	Volt Stick SOUND
Voltage range 1	200 ~ 1000v AC
Sensitivity	Approx. 4 mm from a cable @ 230v AC 50Hz
Voltage range 2	20 ~ 1000v AC
Sensitivity	Approx. 20 mm from a cable @ 230v AC 50Hz
Frequency range	45 ~ 65 Hz
Altitude	<2000m above sea level
Humidity	80% @ 30°C, 50% @ 40°C RH
Temperature	-10 ~ +50°C
Overvoltage category	CAT IV 600V / CAT III 1000V
Battery	2 pcs. LR03 batteries (incl.)
Dimensions	153(L) x 20(Ø) mm
Weight	40g including batteries

New Voltstick Bright features LED flashlight and loud sounder!



## • Volt Stick PRO230 – Voltage Indicator

– 230v instant voltage tester with unique shielded forked tip



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The Volt Stick PRO230 features a unique 'shielded' forktip for highly selective and accurate testing for presence of AC voltage in single core wires (not multicore wires). Ideal for professional, close proximity testing and installation work.

### Features:

- Unique forked tip gives unsurpassed selectivity and reduces the risk of spurious indications
- Live cables can easily be detected in equipment cabinets, fuse boxes, etc
- Extremely safe when measuring in junction boxes
- Powerful red light in the tip to indicate voltage
- Fully insulated for safe use
- Includes Adaptor for larger cable testing (single core)
- Fully approved to IEC 61010-1, CATIII 1000vAC
- CE approved

## • Volt Stick PRO12 – Voltage Indicator

– 12v instant voltage tester with unique forked tip (See features for the PRO230)

- Voltage Range: 12 ~ 1000v AC
- Sensitivity: Functions upon contact with cable carrying 12v AC

### Specifications:

Model:	Volt Stick PRO230
Voltage Range	230 ~ 1000v AC
Sensitivity	Functions upon contact with cable carrying 230v AC
Response Time	Immediate
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-10° ~ +50°C
Overvoltage	CAT III 1000v AC
Battery	2 x AAA (LR03) batteries (included)
Dimensions	145(L) x 18(Ø) mm
Weight	40g (including batteries)



Unique forked tip for selective/accurate testing on single core cables



## • Volt Stick LV50 – ATEX Voltage Indicator

– the 'safety' Volt Stick piece-of-mind checker for a safe working environment



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This high sensitivity version (testing down to 50v) is also intrinsically-safe, making it an essential 'life-saver' testing tool for utilities engineers as well as for use in hazardous areas such as chemical plants, oil refineries, off shore rigs and explosive environments.

Used as a safety device to make sure metallic surfaces, pipework and cables are safe from potentially lethal voltages, the LV50 has already been specified by many leading utilities suppliers as mandatory kit for all engineers.

### Applications:

- IECEx and ATEX approved voltage indicator for use in explosive environments
- Voltage indicator with safety handguard to avoid unintentional contact with live conductors
- Voltage range 50 ~ 1000v AC
- Insulated for safe use
- Fully approved to IECEx 61010-1, CATIII 1000v AC
- CE approved

### Specifications:

Model:	Volt Stick LV50
Voltage Range	50 ~ 1000v
Sensitivity	Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 50v
Response Time	Immediate
Intrinsically Safe	Yes
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III 1000v AC
Battery	2 x Standard AAA alkaline batteries (included)
Dimensions	145(L) x 18(Ø) mm
Weight	35g (including batteries)



Tests for voltages down to 50v AC

## • Magnet Stick – Magnetic Field Indicator

– safe and simple checking for the presence of magnetism

The Magnet Stick provides safe and simple checking for the presence of magnetism. Upon testing and without metallic contact, the lamp lights immediately where there is a magnetic field (e.g. an activated coil in a solenoid valve). Equipment can be tested without having to switch it off and magnetic coils can often be tested through their protective cover, saving hours of dismantling time.

The Magnet Stick responds to all kinds of magnetic fields from alternating or direct current, to permanent magnets. A powerful red light in the tip indicates presence of a magnetic field.

### Applications:

- Testing operating solenoid valves in pneumatic and hydraulic control equipment
- Testing relays with coils and electrically-controlled solenoid valves in all types of vehicles and machines
- Testing solenoid valves when servicing oil burners
- Fully approved to IECEx 61010-1, CAT III 1000v AC
- CE approved

## • Magnet Stick EX – ATEX Magnetic Field Indicator

– The ATEX-Approved version of the Magnet Stick for use in hazardous areas such as chemical plants, oil refineries, offshore rigs and explosive environments (see standard Magnet Stick above for features).

### Specifications:

Model:	Magnet Stick
Sensitivity	300 Gauss, (0,3mT)v
Response Time	Immediate
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III 1000v AC
Battery	2 x 1.5v AAA (included)
Dimensions	145(L) x 18(Ø) mm
Weight	35g (including batteries)



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## • Elma 900 – Voltage Tester 2-pole

– handy 400v AC/DC voltage detector

The Elma 900 is a handy safety voltage tester with smart design features. The instrument has a clear LED indication of relevant voltages and automatic polarity indication.

The test probes have both 2 and 4mm diameter test tips, which ensures good connection in all types of sockets. The Elma 900 meets IECEx 61010-1 CAT III 400V.

### Features:

- LED voltage indication from 6 ~ 400v AC/DC
- Interchangeable 2 and 4mm test probes
- Meets IECEx 61010-1 CAT III 400V

### Specifications:

Model:	Elma 900
LED Voltage Range	6, 12, 24, 50, 120, 230, 400v AC/DC
LED Resolution	±12, 24, 50, 120, 230, 400v AC/DC
AC Voltage Frequency Range	50/60Hz
Internal Basic Load	Approx. 10W @ 400v
Peak Current	1s < 0,2A / (5s < 3,5mA)
Dimensions	240(H) x 45(W) x 26(D) mm
Weight	125g



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## Elma 1000A – Voltage Tester AC/DC

– tests voltages up to 690v AC/DC



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The new Elma 1000A is a handy, simple to use, safety voltage tester with smart design features. The instrument features clear LED indication of relevant voltages and automatic polarity indication.

### Features:

- AC/DC Voltage measurement up to 690v
- Automatic AC/DC selection
- Clear indication with LEDs
- Practical and robust design
- Complies with IEC 61010-1 CAT III 690V
- IP54 rated



### Specifications:

Model:	Elma 1000A
Voltage Indications	12, 24, 50, 120, 230, 400 and 690v AC/DC
Frequency Range	DC, 50/60Hz
Test current	Less than 3.5mA
Dimensions	165(H) x 20(W) x 16(D) mm
Weight	70g



## Elma 1500B – AC/DC Voltage & Continuity Tester

– tests continuity and voltages up to 690v AC/DC



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The new Elma 1500B is a compact, easy to use, combined test instrument for voltage analysis and phase indication.

The unit features no controls or buttons, switching automatically between the different functions ensuring no user/reading errors.

The Elma 1500B uses standard AAA batteries and, as an added safety feature, will operate the voltage test function without batteries!

### Features:

- DC and AC voltage measurement up to 690v
- Continuity test with optical and acoustical signal up to 200k $\Omega$
- Single-pole phase test
- Internal basic load (also for tripping the RCD)
- Automatic AC/DC detection
- Bright LED indication
- Ergonomic and robust design & construction
- Probe-tip protection
- Measuring Category CAT III/690V
- Constructed in compliance with DIN EN 61243-3, DIN VDE 0682 Part 401 (previously DIN VDE 0680 Part 5), IEC61010



### Specifications:

Model:	Elma 1500B
Voltage Test	12, 24, 50, 120, 230, 400, 690v AC/DC
Frequency	0 ~ 65Hz
Continuity	0 ~ 200k $\Omega$
Voltage	12 ~ 690v
Battery	2 x AAA (included)
Dimensions	205(H) x 67(W) x 27(D) mm
Weight	130g

## Elma 2000X – CAT IV Continuity and Voltage Tester

– GS38 compliant tester with new brighter LEDs and clear sounder



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The new Elma 2000X is a unique, professional voltage tester with a range of clever features including long & highly flexible silicone test leads, fast-attach 'click-on' test probe, changeable test tips (2 and 4mm) and integrated protective cover with storage sockets to prevent loss of test tips.

Designed to meet all of the new international safety standards IEC 61243-3 & IEC 61010-1 and is also GS38 compliant.

The Elma 2000X Voltage Tester provides voltage indication without battery to prevent accidents or false indications. This pro-grade Voltage/Continuity/Phase Rotation Tester also features auto-select of function, ensuring correct operation at all times.

### Features:

- Voltage test, 2 pole with LED (12-690v AC/DC)
- Voltage test, 1 pole, indicating phase
- Phase rotation test, 2 pole
- Continuity with LED and Loud acoustic signal
- Automatic self test function
- Full voltage indication, even without battery
- Automatic on/off function - no buttons
- Built-in, bright white, LED flashlight
- Long lasting silicone test leads
- Double insulation, IP65, GS38 compliant CAT IV 600V

### Specifications:

Model:	Elma 2000X
Voltage Indications	12, 24, 50, 120, 230, 400 and 690v AC/DC
Test current	< 3.5mA
Voltage test 1 pole	100-690v AC
Continuity	0-400kΩ
Phase rotation	2 pole, 200.. 690v 50/60Hz
Operating temperature	-15-55°C
Safety	IEC 61010-1 CAT IV 600V / CAT III 1000V, IEC 61243-3 / 61010 031 / 61557-7, TUV/GS, double insulation
Protection	IP65
Test lead	Silicone
Battery	2 x 1, 5V LR03 (included)
Dimensions	64(W) x 246(H) x 29(D)mm
Weight	190g



*New bright LEDs and clear sounder meets GS38 standards*



## Elma 2100X – CAT IV Voltage & Continuity Test with LCD Display

The new Elma 2100X is a unique, professional voltage tester with digital LCD display.

It has a range of clever features including long & highly flexible silicone test leads, fast-attach 'click-on' test probe, changeable test tips (2 and 4mm) and integrated protective cover with storage sockets to prevent loss of test tips.

Designed to meet all of the new international safety standards IEC 61243-3 & IEC 61010-1 and is also GS38 compliant.

The Elma 2100X Voltage Tester provides voltage indication without batteries to prevent accidents or false indications. This pro-grade Voltage/Continuity/Phase Rotation Tester also features digital LCD display, auto-select of function, ensuring correct operation at all times.



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### Specifications:

Model:	Elma 2100X
Voltage Indication	12, 24, 50, 120, 230, 400 and 690v AC/DC
Test Current	< 3.5mA
Voltage Test 1 pole	100-690v AC
Continuity	0-400kΩ
Phase Rotation	2 pole, 200.. 690v 50/60Hz
Operating Temperature	-15-55°C
Safety	IEC 61010-1 CAT IV 600V / CAT III 1000V, IEC 61243-3 / 61010-031 / 61557-7, TUV/GS, double insulation
Protection	IP65
Test Lead	Silicone
Battery	2 x 1, 5V LR03 (included)
Dimensions	246(H) x 64(W) x 29(D)mm
Weight	190g

### Features:

- Voltage test, 2 pole with LED (12~690v AC/DC)
- Voltage test on LCD display (7~800v AC/DC)
- Voltage test, 1 pole, indicating phase
- Phase rotation test, 2 pole
- Continuity with LED and acoustic signal
- Automatic self test function
- Full voltage indication, even without battery
- Automatic on/off function - no buttons
- Built-in, bright white, LED flashlight
- High quality silicone test leads
- Double insulation, IP65, GS approved CAT IV 600V



## Elma CT200 – 200mA Continuity Tester

– with extremely bright on-board LED torch to illuminate work area



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The Sagab by Elma CT200 is a useful tool for electricians in their day-to-day work, particularly when verifying continuity prior to commissioning of electrical installations.

The CT200 tests continuity with 200mA test current and indicates voltage and resistance levels with LEDs. The extremely bright built-in LED torch function gives several possibilities and ensures that you always have a good work light to hand.

Sagab by Elma CT200 is supplied with carrying case, test leads, crocodile clips and batteries.

### Features:

- Continuity with 200mA test current
- Calibration of resistance in test leads
- Voltage indicator
- Torch function with bright LEDs
- More than 6000 measurements using a single set of batteries
- Magnetic back allows product to stick on to work surfaces

### Specifications:

Model:	Elma CT200
Resistance	0 ~ 20 $\Omega$ (Seven LEDs 0,2-0, 5-1-2-5-10-20W)
Accuracy	$\pm 0,05\Omega \pm 2\%$
Rated Test Current	200mA at 0 $\Omega$
Rated Test Voltage	12v Continuity: Acoustic signal by Resistance < 2 $\Omega$
Voltage	0 ~ 300VAC/DC i (Five LEDs 10, 20, 40, 100, 300v)
IP Rating	IP54
Battery	3 x 1.5v AAA (included)
Dimensions	110(H) x 68(W) x 29(D) mm
Weight	200g (including batteries)

*Very bright work light with magnetic back to attach to metallic surfaces*



## Elma ContiLight – Continuity Tester

– includes built-in LED flashlight



The Elma ContiLight is a Smart Continuity Tester, with a built-in bright LED flashlight. It tests for Continuity with up to a 200mA test current and indicates dangerous voltage up to 400v AC/DC with LED and pulsating audible signals.

Includes fixed test leads.

### Features:

- Continuity Smart Meter
- Built-in LED flashlight
- Tests Continuity up to 200mA
- Indicates live voltage up to 400v AC/DC
- Indication via LED and audible signal
- Supplied with fixed test leads and instructions

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### Specifications:

Model:	Elma ContiLight
Continuity	0 ~ 10k $\Omega$
Test Current	>200mA, 0 ~ 10k $\Omega$ = <10mA
Test Voltage	<9v
Voltage warning	50 ~ 400v AC/DC
Battery	9v 6F22 (included)
Dimensions	130(H) x 72(W) x 30(D) mm
Weight	260g



## • Elma 908 – Pen-type Digital Multimeter

– 7 functions Pen-type digital multimeter



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The Elma 908 is a very handy 7 function Pen-type Digital Multimeter.

The instrument measures AC/DC voltage, current, resistance and tests continuity audibly and by diodes. The Elma 908 has a 3½ digital LCD display with Bargraph, data hold and range hold.

The instrument meets IEC 61010-1 CAT III 600V and CAT II 1000V.

### Features:

- 7 function Pen-type digital multimeter
- Large 3½ digital LCD display with bargraph
- Full function indication
- Diode and audible continuity

7 function Digital Multimeter!



### Specifications:

Model:	Elma 908
Voltage	0 ~ 600v AC/DC
AC/DC Current	0 ~ 340mA AC/DC
Resistance	0 ~ 34MΩ
Continuity	Acoustical signal by Resistance < 35Ω
Diode Test	Open Voltage 3.4v
Display	3½ digit
Battery	2 x 1.5v LR44 (included)
Dimensions	220(H) x 40(W) x 30(D) mm
Weight	215g (including batteries)



## • Elma 90X – CAT IV Multimeter Series

– pocket-size multimeters with built-in Volt Stick and flash light



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Despite their small format, these instruments have very high safety approval, CAT IV 600V and CAT III 1000V. The multimeters are protected against overloading by an electronic fuse. When not in use, the test probes can be stored at the rear of the instrument body.

### Features:

- Built-in non-contact AC voltage detector
- Built-in LED torch
- IEC 61010-1 CAT III 1000V & CAT IV 600V
- Silicone test leads



Built-in Volt Stick and torch!

### Specifications:

Model:	Elma 902	Elma 903	Elma 904
Display	2000 count 3½ digit LCD	4000 count 3½ digit LCD	4000 count 3½ digit LCD
DC Voltage	0,1mv ~ 600v	0,1mv ~ 600v	0,1mv ~ 600v
AC Voltage	1mv ~ 600v	1mv ~ 600v	1mv ~ 600v
DC Current	-	0,1µA ~ 200mA	0,1µA ~ 200mA
AC Current	-	0,1µA ~ 200mA	0,1µA ~ 200mA
Resistance	0,1W ~ 20MW	0,1W ~ 40MW	0,1W ~ 40MW
Capacitance	-	-	1pF ~ 200µF
Frequency	-	-	0,001Hz ~ 10kHz
Symmetry	-	-	0,5 ~ 99%
Auto Range Selection	Yes	Yes	Yes
AC Measurement	Average	Average	Average
Diode Test	Yes	Yes	Yes
Continuity Test	Yes	Yes	Yes
Auto Power Off	Yes	Yes	Yes
Data Hold	Yes	-	-
Record Function	Max value	-	-
AC Measurement Bandwidth	40 ~ 500Hz	40 ~ 500Hz	40 ~ 500Hz
Battery	2 x 1.5v AAA (included)	2 x 1.5v AAA (included)	2 x 1.5v AAA (included)
Dimension	55(W) x 104(H) x 32.5(D) mm	55(W) x 104(H) x 32.5(D) mm	55(W) x 104(H) x 32.5(D) mm
Weight	145g	145g	145g



## Elma 911 – 1000v AC/DC Compact Digital Multimeter

– a compact meter with K-type thermometer

Sagab by Elma 911 is a Compact Multimeter with double molded housing and over-sized high contrast 2000 counts LCD display. The multimeter measures voltage, current, resistance, continuity and temperature.

The instrument meets IEC 61010-1 CAT III 600V and CAT II 1000V. Supplied in carrying case with test leads, battery and K-type temperature probe.

### Features:

- 2000 digital display counts
- Data and max hold mode
- Auto ranging
- Auto power-off and low battery indication
- Special range for current clamp adapter
- Comes with K-type temperature probe
- IEC 61010-1 CATIII 600V & CATII 1000V

### Specifications:

Model:	Elma 911
Voltage	0 ~ 1000V AC/DC
AC/DC Current	Functions @ 4mm distance from 2.5mm <sup>2</sup> conductor carrying 230V AC/DC
Resistance	0 ~ 20MW
Temperature	-20 ~ 1000°C
Continuity	Acoustic signal by Resistance < 100W
Diode Test	Open Voltage 1.5v
Display	2000 counts, 3½ digit
Battery	1 x 9v 6F22 (included)
Dimensions	150(H) x 70(W) x 48(D) mm
Weight	255g (including batteries)



*Reads temperature with included K-type probe*



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## Elma 805 – 1000v AC/DC Standard Multimeter

– professional auto-ranging multimeter

Our new Elma 805 is a high quality, rugged Multimeter featuring automatic range selection, relative measurement, max. & data hold.

The meter measures voltage, current, frequency, resistance, capacitance, diodes and continuity.

### Features:

- Professional grade, rugged test meter
- Measures Voltage, Current, Frequency, Resistance, Capacitance, Diodes and Continuity
- Faulty connection warning
- Highly efficient fuses
- Automatic range selection
- Relative measurement
- Max. & Data hold
- Supplied complete with manual, batteries, test leads and robust rubber protective cover
- Compliant with IEC 61010-1 CAT III 600V

### Specifications:

Model:	Elma 805
DC Voltage	0 ~ 400m ~ 4, 40, 400, 1000v
Accuracy	±0,5% + 3D
AC Voltage	0, 4, 40, 400, 1000v
Accuracy	±1% + 5D
AC/DC Current	0, 400μ, 4000μ, 40m, 400m, 4 ~ 10A
Resistance	0, 400, 4k, 40k, 400k, 4M, 40MΩ
Frequency	30Hz ~ 4MHz
Capacitance	0, 500n, 5μ, 50μ, 500μ, 5000μF
Display	3¾ digits
Max. View	3999
Battery	2 x 1.5v AAA (included)
Dimensions	186(H) x 87(W) x 45(D) mm
Weight	390g

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## ● Elma 918 – 1000v AC/DC True RMS Compact Digital Multimeter

– a compact TRMS multimeter with K-type thermometer



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Sagab by Elma 918 is a compact True RMS Multimeter with double molded housing and oversized high contrast 6000 counts LCD-bargraph display. The multimeter measures voltage, current, resistance, continuity, capacitance, frequency and temperature.

The instrument meets IEC 61010-1 CAT III 600V and CAT II 1000V. Supplied in carrying case with test leads, battery and K-type temperature probe.

### Features:

- True RMS measurements and auto-ranging
- 6000 digital display counts
- Data hold, MAX/MIN recording mode
- Auto power off and low battery indication
- Special range for current clamp adapter
- Includes K-type thermometer
- IEC 61010-1 CATIII 600V & CATII 1000V

### Specifications:

Model:	Elma 918
Voltage	0 ~ 1000v AC/DC
AC/DC Current	0 ~ 10A AC/DC
Resistance	0 ~ 60MΩ
Temperature	-20 ~ 760°C
Capacitance	0 ~ 4000μF
Frequency	0 ~ 10MHz
Continuity	Acoustic signal by Resistance < 100Ω
Diode Test	Open Voltage 1.5v
Display	6000 counts, 3 5/6 digit
Battery	1 x 9v 6F22 (included)
Dimensions	150(H) x 70(W) x 48(D) mm
Weight	255g (including batteries)

True RMS Compact Multimeter and Thermometer



## ● Elma BM829 – 1000v AC/DC True RMS Multimeter with Auto Check

– professional CATIV multimeter with dual backlit display



elma instruments

The new Elma BM829 sets new standards in what you can expect from a professional digital multimeter. With great new features like 'Auto Check' and 'Low Z' and an IEC 61010-1 approval for CAT IV 1000V, the Elma BM829 is unsurpassed.

AutoCheck is an intelligent function which automatically detects and selects AC voltage, DC voltage and continuity test/resistance – simply switch on and measure! Low Z provides voltage measurement with low impedance, ensuring true voltage measurement.

Elma BM829 is equipped with large dual backlit display and a fast analog bargraph. The instrument measures True RMS AC + DC voltage, current, frequency, resistance, capacitance, diode, continuity and temperature.

### Specifications:

Model:	Elma BM829
Voltage	0, 100m, 1000m, 10, 100, 1000v AC/DC
Accuracy	DC: ±0.08% + 2D, AC: ±0.5% + 3D
Bandwidth	20kHz
AC/DC Current	0, 600μ, 6000μ, 60m, 600m, 6, 10A AC/DC
Accuracy	DC: ±0.2% + 4D, AC: ±0.6% + 3D
Resistance	0, 600, 6k, 60k, 600k, 6M 60MΩ (600V)
Capacity	0, 60N, 600N, 6μ, 60μ, 600μ, 6000μ-27mF
Conductance	0.01 ~ 100ns
Frequency	10 ~ 100 kHz
Temperature	-50° to 1000°C (supplied wire sensor -50° to 250°C)
Diode Test	0 ~ 2000mv, 0.4 mA Less than 3.5v DC
Display	4 and 3, 5/6 digit
Max. View	9999 or 5999
Battery	1 x 9v PP3 (included)
Dimensions	208(H) x 103(W) x 64.5(D) mm
Weight	640g

Elma BM829 has a number of additional features including 1 ms crest/peak hold, max/min, relative measurement, data hold, auto shut-off, auto/manual range selection and RS232 port for PC communication.

Using optional Windows software, the BM829 can be connected to a PC for data logging purposes, through which the measured data can be displayed as: Digital display, analog display, curve/graph and table.

### Features:

- True RMS Digital Multimeter
- Measures AC & DC Voltage, Current, Frequency, Resistance, Capacitance, Diode, Continuity and Temperature
- Autocheck intelligent function detects and selects AC or DC voltage
- Low Z function provides voltage with low impedance
- Dual Backlit Display
- Max, Min, Peak & Data Hold
- Relative Measurement
- Auto Shut-Off
- Includes K-type temperature probe



- Manual Range Selection
- RS232 Port for PC connectivity and compliant with IEC 61010-1 CAT IV 1000V
- Highly efficient fuses with control functions
- Supplied complete with manual, temperature sensor (-50 ~ 250°C), battery, test leads and rugged protective rubber jacket

## Elma DT5500A – Insulation Tester with 1000v AC/DC Multimeter

– handy, easy to read, backlit insulation tester



elma instruments

The Elma DT5500A is a new smart Digital Multimeter combined with an Insulation Tester with superior resolution. Extremely robust and fitted with large, easy-to-read illuminated display with smart analog bar chart.

Measuring AC/DC voltage, resistance and reviewing, the Elma DT5500A features optional test voltages 125, 250, 500 and 1000v and lockable test function.

Also features automatic discharge of capacitive voltage and automatically warns of dangerous voltage if attempting to perform an insulation test on live installations.

### Features:

- 2-in-1 Multimeter and Insulation Tester
- Measures AC/DC Voltage, Resistance & Reviewing
- Automatic discharge of capacitive voltage
- Automatic live voltage warning
- Automatic Range Selection
- Min, Max & Data Hold
- Integrated Rubber Protection Casing
- Compliant with IEC CAT III 1000V / CAT IV 600V
- Supplied complete with carry case, test leads, batteries and instructions
- Special range for current clamp adapter
- IEC 61010-1 CATIII 600V & CATII 1000V



### Specifications:

Model:	Elma DT5500A
Test Voltage	125, 250, 500, 1000v
Insulation Resistance	0, 4m, 40m, 400m, 4000mΩ
Resolution	0001MΩ
Test Current	1mA
Voltage	0 ~ 750/1000v AC/DC
Accuracy	AC: ±1% + 30dg, DC: 0.06% + 4DG
Resistance	0 ~ 40 ~ 400Ω
Battery	6 x 1.5v AA (included)
Dimensions	200(H) x 92(W) x 50(D) mm
Weight	700g

## Elma 5800 – Insulation Tester with 1000v AC/DC True RMS Multimeter

– wireless PC connectivity



elma instruments

The Elma 5800 is a combined Insulation Tester and True RMS Multimeter.

This new Multimeter is equipped with wireless PC communication and can be used as a data logger in cases where information needs to be stored over a period of time. Data can then be downloaded to a PC for further storage/analysis.

Featuring a large backlit display, all measurements can be viewed at the same time.

The Elma 5800 measures beyond that of standard multimeter functions by also providing Duty Cycle, temperature and 4 ~ 20mA signals shown as a percentage.

### Specifications:

Model:	Elma 5800
Test Voltage	125, 250, 500, 1000v
Insulation Resistance	0, 4m, 40m, 400m, 4000mΩ
Resolution	0001MΩ
Test Current	1mA
Voltage	0 ~ 1000v AC/DC
Accuracy	AC: ±1% + 30DG, DC: 0.06% + 4DG
AC/DC Current	0 ~ 10A AC/DC
Accuracy	±1.5% + 30DG (AC) / 1 + %3DG (DC)
IP Rating	IP67
Resistance	0 ~ 40MΩ
Temperature	-50° to 12000°C
Accuracy	±1% + 2.5°C
Duty Cycle	0.1 to 99.9%
Battery	6 x 1.5v AA (included)
Dimensions	220(H) x 96(W) 60(D) mm
Weight	630g

### Features:

- Measures Voltage, Current, Resistance, Temperature
- Insulation Tester tests voltage of 1000v and 125/250/500 with a resolution down to 0.001 MΩ
- IP67 rated
- Compliant with EN61326 + EN61010-1 CAT IV 600V
- Supplied complete with test leads, batteries, K-type temperature probe, USB cable, software and user guide



Wireless PC connectivity!

## • Elma DAVO-MEG 1002 & DAVO-MEG 1002B – Insulation Testers

– DAVO-MEG 1002 (Rechargeable) & DAVO-MEG 1002B (9v Battery)



elma instruments

**DAVO-MEG 1002** is a very high quality insulation tester developed and produced with a selectable test voltage at 250, 500 and 1000v for easy operation and fast measurements. The analogue display provides ultra fast readings of insulation value. Furthermore, DAVO-MEG 1002 is able to measure voltage and discharge capacitors after measurement, thus providing the best safety.

The instrument is provided with electronic HOLD of the test button, so that the operator can keep both hands free during measurement.

The **DAVO-MEG 1002B** has the same functions and technical data as the DAVO-MEG 1002, but is provided with changeable battery instead of a rechargeable battery, making it the perfect choice for use in places where charging is not a possibility.

The instrument is provided with bag, battery, test leads and user manual. It fulfills IEC61010-1 CAT III, 300V and meets the most stringent requirements of Heavy Current Regulations IEC 364-6-61, EN 61557 and the German VDE 0413 Regulations.

*Used for insulation tests in the renewable energy industry*



### Specifications:

Model:	Elma DAVO-MEG 1002(B)
Test Voltage	250/500/1000v
Range	0 ~ 300MΩ
Test Current	1mA
Accuracy	±12,5%
Voltmeter	0 ~ 600v AC, 40 ~ 60Hz
Battery	1002: Rechargeable 1002B: 9v Type 6LR61
Dimensions	110(H) x 156(W) x 59(D) mm
Weight	585g

## • Elma TR1000 – Motor Tester

– accurately checks motor installations

A unique motor tester that tests all parameters on motors and generators, the TR1000 measures inductance in motor windings and leakage/insulation failures, both directly connected to the motor or the motor installation.

Measuring of inductance is the only way to measure windings, providing much more accuracy than resistance measuring.

TR1000 is an essential instrument for professional service and troubleshooting and is delivered ready to use with bag, batteries, test leads, crocodile clips and manual.

*Ideal for testing motors on wind farms*



### Specifications:

Model:	Elma TR1000
Motor Size	10W ~ 1000kW
Inductance Voltage	Max 9v
Insulation Voltage	500v
Battery	6 x 1.5v AA (included)
Dimensions	158(H) x 95(W) x 60(D) mm
Weight	800g

## Elma RT606A – Phase Rotation Meter

– for testing 3 phase insulations



elma  instruments

The Elma RT606A is a handy electronic phase rotation tester with bright LEDs displaying rotating field and indicating the individual phases. The instrument complies with IEC 61010-1 CAT III 300V and comes with test leads, 3 insulated alligator clips and 3 test sticks.

### Applications:

- Can be used to determine the Phase Rotation of a 3 Phase Supply to ensure correct installation of power supplies and electric motors.

### Features:

- Measures phase rotation of a 3Phase supply
- Bright LED indicators
- Supplied with test leads, 3x insulated alligator clips and 3x test sticks
- Complies with IEC 61010-1 CAT III 300V



### Specifications:

<b>Model:</b>	<b>Elma RT606A</b>
Operating Voltage	150 ~ 500v
Frequency	50/60Hz
Measuring Current	< 3.5 mA
Dimensions	130(H) x 72(W) x 30(D) mm
Weight	190g

## Elma DT901 – Phase Rotation Meter

– indicates phase rotation with LCD display



elma  instruments

Elma DT901 is a new phase sequence/torque tester with large, clear LCD display instead of conventional LEDs. The display, which is very easy to read, even in sunlight, shows both the individual phases and phase sequence.

Note that this instrument does not show torque at fault connection to eg. two phases and neutral, but only when there are three real phases.

The instrument is equipped with integrated rubber protection and meets IEC 1010-1 CAT III 600V and CAT IV 300V. Includes case, test leads and alligator clips x3.

### Applications:

- For detecting the rotational direction of phases in a 3 phase supply

### Features:

- Measures phase rotation of a 3 Phase supply
- Clear LCD display
- Displays individual phase and phase rotation
- Supplied with test leads, 3x insulated alligator clips and 3x test sticks
- Supplied with soft carry case
- Complies with IEC 61010-1 CAT III 300V



### Specifications:

<b>Model:</b>	<b>Elma DT901</b>
Voltage Range	280 ~ 690v AC
Frequency	15 ~ 400Hz
Dimensions	124(H) x 61(W) x 27(D) mm
Weight	200g



## ● Elma DT902 – Motor & Phase Rotation Meter

– used for correct installation of electrical motors



Elma DT902 is a new smart tool for anyone who works with installation, service and control of 3-phase motors.

The instrument has 3 functions.

- Shows how an electric motor should be connected to rotate in the correct direction
- Phase Sequence Test for displaying rotating field and phase the 3-phase network
- Tachometer shows the direction of rotation of the motor in operation when the motor shaft cannot be seen directly

### Applications:

- For detecting the rotational direction of phases in a 3 phase supply
- Used for the correct installation of electrical Motors
- For Identifying the direction of rotation of a concealed motor

### Features:

- Indicates correct connection for rotation
- Measures phase rotation of a 3 Phase supply
- Tachometer identifies the direction of rotation of concealed motors
- Clear LCD display
- Displays individual phase and phase rotation
- Supplied with Test Leads, 3x insulated alligator clips, 3x test sticks and case
- Complies with IEC 61010-1 CAT III 300V

### Specifications:

Model:	Elma DT902
Operating Voltage	1 ~ 440v AC
Phase Sequence Test	120~440v AC
Frequency	2 ~ 400Hz
Test Current	3.5mA
Battery	9v 6F22 (included)
Dimensions	124(H) x 61(W) x 27(D) mm
Weight	120g



*Can identify the direction of rotation of a concealed motor*



## ● Elma Xtroid – Phase Sequence Rotating Field Tester

– high voltage Phase Rotation Meter



The Elma Xtroid is a new phase sequence/rotating field tester designed to test high voltages up to 1700v AC. The tester is suitable for supply to industrial machinery and windmills.

The display clearly indicates, with powerful LEDs, both the individual phases and rotating field. (Note that this instrument does not show the rotary field by faulty connection, for example two phases and zero, but only when there are three phases connected).

The instrument is equipped with integrated rubber cover and meets IEC 61010-1 CAT IV 1000V. Includes bag, safety test leads and alligator clips x 3.

### Applications:

- Testing high voltage 3 phase installations, to check correct phase rotation

### Features:

- Test voltages up to 1700v AC
- Bright LED indicators
- Supplied with cover, test leads, 3 x alligator clips and case
- Compliant with IEC 61010-1 CAT IV 1000V

### Specifications:

Model:	Elma Xtroid
Voltage Range	100 ~ 1700v AC phase/phase
Frequency	40 ~ 450Hz
Test Current	< 3.5mA
Dimensions	210(H) x 105(W) x 40(D) mm
Weight	350g

*Designed to test high voltages up to 1700v AC!*



## Elma CM01 – 200A AC/DC Mini Clamp Meter

– small handy clamp meter



elma instruments

The new Elma CM01 Digital Mini Clamp Meter has a compact and extremely handy design.

The instrument has superior resolution and features 3½ digit display and analog bargraph.

Equipped with automatic zero adjustment, min/max memory, data hold and measures current AC/DC, resistance & frequency.

### Features:

- Compact, handy design
- Min/Max Memory
- Data Hold
- Current, Resistance, Frequency, Crawling
- Compliant with IEC 61010-1 CAT II and 600V CAT III 300V
- Supplied complete with carry case, test leads, batteries and manual

### Specifications:

Model:	Elma CM01
AC/DC Current	0, 40, 200A
Resolution	0.01 to 0.1A
Accuracy	±1% + 2D
Voltage AC/DC	0 ~ 400v
Resistance	0 ~ 400Ω
Frequency	0 ~ 1000kHz
Display	3½ digits
Max. View	3999
Clamp Length	24mm
Battery	2 x 1.5v LR6 (included)
Dimensions	180(H) x 50(W) x 29(D) mm
Weight	200g



## Elma CM07 – 400A AC/DC True RMS Mini Clamp Meter

– very accurate, compact clamp meter



elma instruments

The Elma CM07 is a True RMS Digital Mini Clamp Meter in a very handy design for easy measurement of both AC and DC currents.

The unit features a superior resolution, 3½ digit display and analog bargraph and is equipped with automatic zero adjustment, relative zero, min/max memory and data hold.

The Elma CM07 also measures AC/DC current and frequency direct.

### Features:

- True RMS Digital Mini Clamp Meter
- Measures AC and DC Current
- Automatic Zero Adjustment
- Relative Zero
- Min, Max and Data Hold
- Compliant with IEC 61010-1 CAT II and 600V CAT III 300V
- Supplied complete with carry case, batteries and manual

### Specifications:

Model:	Elma CM07
AC/DC Current	0, 4, 40, 100, 400A
Resolution	0,001-0,01-0,1A
DC Current	0, 40, 400A
Resolution	0.01 ~ 0.1A
Accuracy	±1.5% + 2D
Frequency	0 ~ 1000kHz
Display	3½ digits
Max. View	3999
Clamp Length	24mm
Battery	2 x 1.5v AA (included)
Dimensions	180(H) x 50(W) x 29(D) mm
Weight	200g



## Elma 2500 – 200A AC Open Jaw Clamp Meter

– handy clamp meter with built-in Volt Stick



elma instruments

The Elma 2500 is a handy Open Jaw Clamp Meter which will measure current up to 200A by passing the open jaw against the cable to be measured.

The instrument measures current, voltage, resistance and continuity.

### Features:

- 3½ Digit Display
- Measures Current, Voltage, Resistance and Continuity
- Automatic Range Detection
- Data Hold
- Diode Test
- 'Volt Sense' non-contact Voltage Tester (AC Voltages)
- Compliant with IEC 1010-1 CAT IV 600V
- Supplied complete with test leads, batteries, bag and manual

### Specifications:

Model:	Elma 2500
AC Current	0 ~ 200A AC
Resolution	0.1A
Accuracy	±3% + 3D
Voltage	0, 200, 750/1000v AC/DC
Resistance	0, 200, 2k, 20k, 2, 20MΩ
Display	3½ digit
Max. View	1999
Clamp Opening	16mm
Battery	2 x 1.5v AAA (included)
Dimensions	193(H) x 54(W) x 31(D) mm
Weight	280g

Built-in Volt Stick



## Elma TM13E – 400A AC/DC Digital Clamp Meter

– a handy all round clamp meter



elma instruments

The Elma TM13E quickly and easily measures both AC/DC current, AC/DC voltage, frequency, resistance and screening.

The TM13E has automatic range selection, data hold, auto shut-off, automatic zero adjustment function, and 3¾ digit display with a quick bar chart.

The instrument comes complete with carrying case, test leads, manual and batteries.

Meets EN 61010-1 CAT III 300V.

### Features:

- 3¾ digital LCD display
- Auto range, auto power-off & data hold
- Test ranges - AC/DC Current, AC/DC Voltage, Frequency, Resistance & Screening

### Specifications:

Model:	Elma TM13E
AC/DC Current	0, 4, 400A
Resolution	0.01 ~ 0.1
Accuracy	±2% + 9D
AC/DC Voltage	0, 400, 600v
Frequency	0, 4, 40, 400k ~ 4M ~ 40MHz
Resistance	0 ~ 4Ω
Display	3¾, 3999
Clamp Width	30mm
Battery	2 x 1.5v LR03 (included)
Dimensions	195(H) x 64(W) x 30(D) mm
Weight	230g



## Elma 932 – 400A AC Clamp Meter

– a handy clamp meter that fits perfectly into tight places



**SAGAB**  
BY ELMA INSTRUMENTS

The Sagab by Elma 932 Clamp Meter is a compact, handy unit - perfect for keeping in the pocket and measurement in tight spaces.

Meter controls are positioned so that the current measurement can be done with one hand, whilst the large, backlit display is easy to read and provides a handy Data Hold function to keep measurements displayed.

The Elma 932 Clamp Meter measures voltage, current, resistance and continuity. Meets IEC 61010-1 CAT III and is supplied with carry case, test leads and battery.

### Features:

- 400A AC Current measurement
- 2000 counts backlit LCD
- Auto Power-off and Low Battery display
- Data and Max Hold mode
- Non-contact AC Voltage detecting function
- Supplied with carry case, test leads and battery



### Specifications:

Model:	Elma 932
AC Current	0 ~ 2 ~ 20 ~ 400A AC
Voltage	0 ~ 600v AC/DC
Resistance	0 ~ 20MΩ
Continuity	Acoustical signal by Resistance
Diode Test	Open Voltage 1.5v
Jaw Opening	30mm
Display	2000 counts, 3½ digit
Battery	1 x 9v 6F22 (included)
Dimensions	197(H) x 70(W) x 40(D) mm
Weight	180g

## Elma 9015 – 600A AC/DC True RMS Clamp Meter & Temperature HVAC

– all round clamp meter with temperature measurement



elma instruments

The new Elma 9015 is a flexible and robust, professional-grade clamp multimeter, which measures True RMS current and voltage in AC/DC.

The Elma 9015 is equipped with a large, backlit display and has both min/max-peak-data hold and relative function.

The instrument measures current AC/DC, voltage AC/DC, current, resistance, frequency, capacitance, duty cycle and temperature.

### Features:

- True RMS AC/DC Clamp Meter
- Large Backlit Display
- Measures Current AC/DC, Voltage AC/DC, Resistance, Frequency, Capacitance, Duty Cycle and Temperature
- Data & Max. Hold
- Peak Data Hold
- Relative Function
- Compliant with EN61010-1 CAT IV 600V
- Supplied complete with test leads, batteries, manual, temperature probe and case

### Specifications:

Model:	Elma 9015
AC/DC Current	0, 60, 600.0A
Accuracy	±2.8% + 12D
Voltage AC/DC	0, 6, 60, 600, 1000v
Accuracy	±3.5% + 5D
Resistance	0 ~ 600, 6 ,60 ,600k ,6M 60MΩ
Frequency	0, 100, 1000, 10K, 60kHz
Capacitance	0, 40n, 400N, 4μ, 40μ, 400, 4000μF
Temperature	-20 ~ 760°C
Display	3 5/6 figures, 6000
Clamp Width	30mm
Battery	2 x 1.5v AAA (included)
Dimensions	215(H) x 74(W) x 43(D) mm
Weight	290g



## • Elma 945 – TRMS Clamp Meter 1000A AC/DC with Temperature

– a professional True RMS Clamp Meter



**SAGAB**   
BY ELMA INSTRUMENTS

The Elma 945 provides accurate AC/DC Current and Voltage readings regardless of waveforms. It can be used in most industrial and commercial applications where non-linear loads distort the Current or Voltage waveform. A large backlit display with bargraph is easy to see and a handy Display Hold keeps measurements on the display.

The clamp multimeter measures voltage, current, resistance, continuity, capacitance, frequency and temperature. The instrument meets IEC 61010-1 CAT III 600V and is supplied in carrying case with test leads, battery and K-type temperature probe.

### Features:

- 1000A TRMS AC/DC current measurement
- DCA Zero function
- 4000 counts backlit LCD display with bargraph
- Auto Power-off and Low Battery display
- Data hold mode and peak function

### Specifications:

Model:	Elma 945
AC/DC Current	0, 40, 400, 1000A AC
Voltage	0 ~ 600v AC/DC
Resistance	0 ~ 40MΩ
Capacitance	0 ~ 40mF
Frequency	4kHz
Temperature	-40 ~ 1000°C
Continuity	Acoustic signal by Resistance < 35Ω
Diode Test	Open Voltage 1.5v
Jaw opening	30mm
Display	4000 counts, 3 1/2 digit
Batteries	1 x 9v 6F22 (included)
Dimensions	229(H) x 80(W) x 49(D) mm
Weight	303g (including battery)

*Current detection  
0-1000A and Voltage  
0-600v AC/DC*



## • Elma BM 117 – 2000A AC Clamp Meter

– large jaw clamp meter



elma  instruments

The new Elma BM 117 is a handy Clamp Meter capable of measuring flow of up to 2000A AC.

The meter measures current, voltage, capacitance, resistance, continuity and is fitted with large display, automatic range selection, touchless pole and data hold.

The Elma BM 117 is equipped with brand new intelligent 'Auto Check' feature, which automatically detects and selects AC voltage, DC voltage and reviewing/resistance.

### Features:

- Measures Current flow of up to 2000A
- Intelligent Auto Check feature detects and selects AC/DC voltage, resistance
- Supplied complete with storage case, test leads, batteries and manual
- Compliant with IEC 61010-1 CAT III 600V

### Specifications:

Model:	Elma BM 117
AC Current	0 ~ 400 AC ~ 2000A
Resolution	0.1 ~ 1A
Accuracy	±1.5% + 5D
Voltage	0, 6, 60, 600v AC/DC
Capacitance	0, 100N, 1000N, 10μ, 100μ, 2000μF
Resistance	0, 600, 6k, 60k, 600k, 6MΩ
Continuity Test	Less than 20Ω audible alarm
Display	3 5/6
Max Display	5999
Clamp Length	45mm
Battery	2 x 1.5v AAA (included)
Dimensions	224(H) x 78(W) x 40(D) mm
Weight	220g

*Measures a  
flow of up to  
2000A AC*



## Elma 965 – Infrared Laser Thermometer

– very small and handy mini IR thermometer

The Elma 965 Mini IR Thermometer provides non-contact temperature measurements. Targeting objects is easy with the bright laser beam. Even in the dark, measurements are easy to read with backlit display.

The thermometer is suitable for rapid measurement, e.g. screening of refrigerator-freezers, measurements on moving parts of machines and components in electronics.

The Elma 965 is supplied with carrying case and battery.

### Features:

- User selectable °C or °F
- Laser Targeting
- Automatic Data Hold
- Auto Power-off
- White Backlit LCD Display
- Overrange indication
- Max/Min record

**SAGAB**   
BY ELMA INSTRUMENTS



### Specifications:

Model:	Elma 965
Temperature Range	-30 ~ 260°C
Resolution	0.1°C
Accuracy	±2.0%, ±2.0°C (0 ~ 260°C)
Display	2000 counts, 3½ digit
Emission Value	0.95 fixed
Distance to Spot	8:1
Battery	1 x 9v 6F22 (included)
Dimensions	160(H) x 80(W) x 41(D) mm
Weight	180g (including battery)

## Elma 610A – Infrared Thermometer with double laserlight, -50°~600°C

– point & shoot easy to use IR thermometer

The new Elma 610A is an incredibly simple to use Infrared Thermometer providing an accurate, non-contact solution to temperature measurement.

With a fast reaction time of only 0.15 seconds, the Elma 610A is suitable for rapid measurement applications such as refrigerator testing, measuring moving parts of machines and electronic components.

The Elma 610A has an illuminated display and is equipped with the latest measurement technology such as smart double laser marker to indicate the size of the range so that the operator gets an indication of the area being measured.

### Features:

- Non-contact temperature measurement
- Fast reaction readings
- Illuminated display
- Twin laser markers
- Supplied with carry case and battery

elma  instruments



### Specifications:

Model:	Elma 610A
Temperature Range	-50° to 600°C
Accuracy	±1.0% or ±2.5°C whichever is greater
Display	3½ digit
Max. View	1999
Emission Value	0.95 fixed
Measurement Conditions	12:1
Battery	1 x 9v PP3 (included)
Dimensions	146(H) x 104(D) x 43(W) mm
Weight	160g

## ● Elma 611B – Infrared Thermometer with double lasersight, -50°~1000°C

– IR thermometer with variable emissivity

The new Elma 611B Infrared Thermometer provides highly accurate, non-contact temperature measurement.

The unit features adjustable emission factor of 0.1 to 1.00 for unique levels of accuracy and control in differing measurement applications.

The Elma 611B features HI / LOW audible alarm function which can be set to provide a fast, simple spot check, based on the maximum or minimum temperature set by the user.

The instrument also features a twin laser sight to indicate the area being measured at any one time.

### Features:

- Non-contact temperature measurement
- Audible Max/Min temperature alarm
- Fast response time (approx 0.15 seconds)
- Capable of increased distance measuring (eg. 30mm measurement area at a distance of 1 metre)
- Supplied with carry case and batteries
- Ideal for applications such as refrigeration testing, process control testing, etc

### Specifications:

Model:	Elma 611B
Temperature Range	-50 ~ 1000°C
Accuracy	±1.0% or ±2.5°C (What is now the leader)
Measurement conditions	30:1
Emission Value	0.01 ~ 1.00
Display	3½ digit
Max display	1999
Battery	1 x 9v PP3 (included)
Dimensions	146(H) x 104(D) x 43(W) mm
Weight	160g



## ● Elma 619 – IR Thermometer with Video/Photo Memory -50°~1600°C, USB

– professional grade IR and K-type thermometer

The Elma 619 is a professional grade Infrared Thermometer which features built-in combined photo and video camera. The internal camera allows permanent documentation of the measured temperatures, whilst simultaneously viewing the object being measured.

The Elma 619's Photo and Video stores Max/Min/Average values for later analysis, with additional data logging for future data analysis.

The instrument measures temperatures from -50°C to 1600°C without contact and can also measure the humidity, dew point and temperature with an external K-Type thermocouple.

All images and video can be stored in internal memory or micro SD card. Data can be transferred to PC via USB without special software.

The instrument has an adjustable emission factor that makes it possible to measure almost any material, with no error display. Elma 619 has a large 2.2" illuminated colour display and a dual laser marker indicates the size of the measurement area. With a measured ratio of 50:1, the Elma 619 is also suitable for measurement of larger areas.



*Video and photo memory*



### Specifications:

Model:	Elma 619
IR Range	-50 ~ 1600°C
Accuracy	20 ~ 500°C: ±1% ±1.0°C
Measuring range Type K	-50 to 1370°C
Accuracy	0 to 1370°C: ±0.5% ±1.5°C
Measuring range air temperature	0 to 50°C
Measuring range humidity	0 to 100% RH
Resolution	0.1°C
Measurement conditions	50:1
Memory	Internal 60Mb
External Micro SD	max. 8Gbyte
Display	Backlit 2.2x "multi-display
Battery	3.7v rechargeable (included)
Dimensions	205(H) x 125(D) x 58(W) mm
Weight	500g

### Features:

- Supplied complete with case, rechargeable battery, USB connectivity cable, K-type Wire Sensor and manual
- Photo, Video and Data storage
- Large, illuminated colour display
- USB connectivity
- Non-contact temperature measurement
- Humidity measurement
- Fast reaction readings



## Elma 612 Food – Infrared Food Thermometer, -30°~200°C

– IR and K-type food thermometer

The Elma 612 Food Thermometer is an ideal infrared thermometer for all food preparation and food processing purposes. With the stricter requirements for internal control in the food industry it is necessary to have a high quality, accurate, fast reacting thermometer and the Elma 612 meets the most stringent requirements in a simple to use measurement device.

With its ergonomic, gun-shaped design, it is easy to use and its large, clear digital display ensures high visibility and readability. The display holds the value of the measurement, thereby reducing the risk of incorrect measurements.

The Elma 612 Infrared Food Thermometer has a system accuracy of  $\pm 1.0^{\circ}\text{C}$  and a temperature measurement range of  $-30^{\circ}\text{C}$  to  $200^{\circ}\text{C}$ , making it possible to measure almost all food types and applications.

### Features:

- Supplied complete with case, wrist-strap, battery and manual
- Non-contact temperature measurement, plus direct contact measurement via external Probe (not supplied)
- Fast reaction readings

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### Specifications:

Model:	Elma 612
IR temperature range	-30 ~ 200°C
Accuracy	$\pm 1^{\circ}\text{C}$ between 0 to 65°C
Resolution	0.5°C
Optics	4:1
Response time	0.5 seconds
Battery	9 Volt 6LR61
Battery Life	Approximately 12 hours
Dimensions	152(H) x 101(D) x 38(W) mm
Weight	300g

Food Thermometer  
with a range of  
-30° to +200°C



## Elma 708 – Mini Digital Thermometer, -50°~250°C

– accuracy measures food temperature

The Elma 708 Mini Digital Thermometer is a compact, simple to use temperature measurement instrument, designed for use in food preparation applications and site-to-site testing (such as multiple outlet visits) where its size and portability are ideal.

Compact and extremely lightweight, the Elma 708 Mini Thermometer has a 'pen-style', pocket-sized design and is supplied complete with battery and instruction manual.

### Features:

- Compact, lightweight and highly portable
- Temperature test range of  $-50^{\circ}\text{C}$  ~  $250^{\circ}\text{C}$
- 3.5 digit LCD display
- Supplied with battery, instruction manual and carry case

elma  instruments

### Specifications:

Model:	Elma 708
Measuring range	-50 ~ 250°C
Accuracy	$\pm 2^{\circ}\text{C}$ (from $-19.9$ ~ $49.9^{\circ}\text{C}$ )
Resolution	0.1°C (from $-19.9$ ~ $199.9^{\circ}\text{C}$ )
Display	3.5 digit LCD
Response	> 5K/s
Sensor	3V, CR 2032
Battery	NTC - 3.7 x 130mm
Dimensions	154(H) x 35(W) mm (incl. protective stand)
Weight	160g



## • Elma DT171 – Humidity & Temperature USB Datalogger, -40°~70°C

– ideal for logging environment conditions



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The Elma DT171 is a lightweight and compact Humidity & Temperature Logger featuring built-in real time clock and able to store 16,000 datasets in its memory.

The digital data logger is easy and quickly programmed via USB communication, selecting the logging interval, number of measurements and program alarms. All measurements can be transferred to a PC for control and documentation.

The Elma DT171 is started up by a simple keystroke and data logging & alarm are indicated by LEDs. Supplied with wall bracket, Windows software, instructions and battery.

### Features:

- Elma DT171 is a smart data logger with built-in sensor for both temperature and humidity. The logger is ideal for a wide range of environment monitoring applications such as coolers, food, transport etc.
- Tests relative Humidity and Temperature
- Relative humidity and temperature readings displayed at the same time
- Simple to use
- Data Hold
- Auto Power-off
- Supplied with battery and instructions

### Specifications:

Model:	Elma DT171
Temperature	-40 ~ 70°C
Accuracy	±1°C (-10 ~ +40°C)
Humidity	0 ~ 100% RH
Accuracy	± 3% RH
Logging Interval	2 seconds to 24 hours
Memory	16,000 sets of measurements
Battery	3.6V lithium, incl.
Dimensions	130(H) x 30(W) x 25(D) mm
Weight	220g



## • Elma 711 – Digital Thermometer with Memory Store, -50°~1350°C

– K-type industrial thermometer

The Elma 711 is a robust, simple to use Digital Thermometer for temperature measurement in a wide range of industrial applications.

This new version now includes memory function, allowing up to 99 temperature measurements to be stored and scrolled through for future reference.

Compact and easy to control with just one hand, the Elma 711 is designed for use with K-type sensors (the most common industrial probe type).

### Features:

- Temperature test range of -50° ~ 1350°C
- Large clear display
- Maximum Temperature Hold
- Supplied with batteries and manual

### Specifications:

Model:	Elma 711
Measurement Range	-50° ~ 1350°C
Accuracy	±0.1% + 1°C
Probe Type	K-Type
Display	3.5 digit LCD
Max. View	1999
Battery	6 x AAA (included)
Dimensions	135(H) x 72(W) x 31(D) mm
Weight	240g

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## Elma 315 – Humidity & Temperature Meter

– easy to use and ideal to monitor conditions

The Elma 315 is a practical and compact test instrument for the measurement of both relative humidity and temperature. It can very quickly determine the relative humidity without the use of cumbersome hx diagrams and tables and is designed to be very easy to use.

There are two display lines so that both the relative humidity and the temperature can be read at the same time.

This professional test meter also includes many additional features such as data hold, min/max, auto Power-off and relative function for zeroing and measurement of changes/deviations.

The Elma 315 is supplied with instructions and battery.

### Features:

- Tests relative Humidity and Temperature
- Relative humidity and temperature readings displayed at the same time
- Simple to use
- Data Hold
- Auto Power-off
- Supplied with battery and instructions

elma  instruments

*Measures both relative humidity and temperature*



### Specifications:

Model:	Elma 315
Humidity	5 ~ 95% RH
Resolution	0.1% RH
Accuracy	3% RH (5-85%)
Temperature	4:1
Accuracy	0.5 seconds
Display	9 Volt 6LR61
Battery	Approximately 12 hours
Dimensions	152(H) x 101(D) x 38(W) mm
Weight	300g



## Elma DT125 – Moisture Meter

– ideal for builders and engineers working with water damage

The Elma DT125 is a new smart instrument for moisture measurement in building materials such as wood, stone, concrete, aerated concrete, gypsum etc. In accordance to the task, it's possible to acquire different probes, both for destructive test with holes in the material and non-destructive surface measurement.

The instrument is indispensable for the builder, moisture technician, engineer and others who work with renovation and water damage control.

The Elma DT125 also measures the air humidity and temperature and features a large illuminated combi display. You can set wet / dry limit, material selection, automatic calibration, min/max and auto power-off function.

The instrument comes with built-in needle electrodes and includes batteries and instruction manual.

Available as accessory is complete suitcase, incl. extra long needle probes, hammer electrode, depth probe, surface probe and handle extensions.

### Features:

- Measures Moisture Levels in building materials
- Wet & Dry Limit
- Min & Max and Auto-off Functions
- Also measures Air Humidity and Temperature
- Case available with extra long probes, hammer electrode, depth probe and handle extensions

elma  instruments

*Ideal for water damage analysis in buildings*



### Specifications:

Model:	DT125
Moisture materials	0.1 to 75.0% (depending on function and material)
Humidity	0-100% RH
Temperature	-40° ~ 70°C
Battery	3 x 3V CR2032 (included)
Dimensions	140(H) x 47(W) x 25(D) mm
Weight	100g (without probe)

## Elma 1352C – Sound Level Meter & Interference Tester with Data Logger

– class 2 sound level meter



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The Elma 1352C is an Audio and Interference Tester which features built-in data logger for up to 32,000 measurements. The instrument complies with IEC 61672-1 class 2 for sound meters.

It has a wide range of features including backlit display with analogue bargraph, min/max hold, auto/manual range selection, analog AC/DC output, calibration check, CA filters, clock and fast/slow response measurement.

The Elma 1352C Sound Level Meter can be easily programmed via PC and can then be used for multiple measurements on several different items without being connected to a PC. After measurements have been taken, the instrument is connected to the PC and, using supplied software, it is possible to display the measured / collected values on the PC screen with digital display as an analog meter, XY graph or list of associated time. The Elma 1352C also allows for the recorded measurement values to be saved as a file which can then be processed in separate software such as Microsoft Excel.

### Specifications:

Model:	Elma 1352C
Measuring Range	30 - 130 dB A/C
Resolution	0.1 dB
Dynamic Range	100dB
Frequency Range	20Hz ~ 8kHz
Frequency Weighting	A or C
Time Weighting	125ms fast / slow 1s
Microphone	1/2
Digital Output	RS 232
Analog Output	AC: 1V FS, impedance 100 ohm DC: 10mV per. dB, impedance 1k ohm
Memory	32000 measurements
Display	4 digits
Bargraph	50 block
Battery	4 x AA (included)
Dimensions	272(H) x 83(W) x 42(D) mm
Weight	280g

The device can also be directly connected to external devices such as a printer for outputting recorded data. Supplied with protective case, batteries, Windows software, USB cable and manual.

### Features:

- Sound Level Meter and Interference Tester
- Analogue Bargraph
- Min/Max Hold
- Auto / Manual Range selection
- Analogue AC/DC output
- Calibration Check
- PC Connectivity
- Software supplied
- Supplied with protective case, batteries, Windows software, USB cable and manual



## Elma DT173 – USB Sound Level Meter

– class 2 sound level meter with data logging



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The new Elma DT173 is a smart Audio Data Logger with built-in microphone and storage capacity for up to 130,000 measurements. This audio logger is ideal for monitoring of noise in rooms, recording & production facilities, etc...

The Elma DT173 has a built-in realtime clock and can be easily and quickly programmed via USB connectivity to set measurement criteria such as logging interval, number of measurements and program alarms.

All measurements can be transferred to PC for control and documentation.

### Features:

- USB connectivity
- Smart audio data logging
- Storage capacity for up to 130,000 measurements
- Standard/Peak logging
- Compliant with IEC 61672-1 Class 2
- Supplied complete with windshield, mounting bracket, 32-bit Windows software, USB cable, manual and battery

### Specifications:

Model:	Elma DT173
Measures	30 to 130dB AC
Solution	0.1dB
Frequency Range	31.5 - 8kHz
Accuracy	±1.4dB
Frequency Weighting	A or C
Time Weighting	125ms fast / slow 1s
Microphone	½ condenser
Logging Interval	Between 1 sec. and 24 hours
Memory	129920 measurements
Battery	1 x 3, 6v 1/2 AA lithium (included) approx. 200 hours
Dimensions	144(H) x 27(W) x 22(D) mm
Weight	80g

*Used to monitor noise in rooms, for recording and production facilities*



## Elma 1350B – Digital Sound Level Meter

– class 2 sound level meter

The Elma 1350B is a small and handy Digital Sound Level Meter featuring three ranges, choice of refresh rate, choice of AC frequency weighting, analogue output and min/max function.

### Features:

- Choice of three sound measuring ranges
- Choice of refresh rates
- Choice of AC Frequency weighting
- Analogue output
- Min/Max Function
- Compliant with IEC 651 Type 2 and ANSI S1.4 Type 2
- Supplied complete with windshield, bag, manual and battery

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### Specifications:

Model:	Elma 1350B
Measuring Range	32 ~ 80, 50 ~ 100, 80 ~ 130dB AC
Resolution	0.1dB
Frequency Range	31.5 ~ 8kHz
Accuracy	±1.5dB (ref94dB @ 1kHz)
Display	4 digit
Battery	9v PP3 incl.
Dimensions	231(H) x 53(W) x 33(D) mm
Weight	340g



## Elma 978 – Mini Lux Meter with backlight

– pocket size easy to use light meter

The Sagab by Elma 978 is a portable, easy-to-carry Mini Lux Meter which fits in your pocket and is ready to use when you are.

Measure light in a wide variety of areas and applications, with an immediate reading via the large scale, automatically backlit display.

Reads results in both LUX and foot candle.

### Features:

- Easy functionality
- Pocket size and lightweight
- LCD display with LUX, fc, LOBAT, MAX indication
- Measures from 0 to 40000 Lux/fc in four ranges
- Auto ranging and Max Hold
- Light sensitive backlit LCD screen
- Auto Power-off
- Battery supplied

**SAGAB**   
BY ELMA INSTRUMENTS



### Specifications:

Model:	Elma 978
Measuring Range	0 ~ 40,000 Lux/fc
Accuracy	±5,0% + 10D
Display	2000 counts, 3½ digit
Battery	1 x 9v 6F22 (included)
Dimensions	157(H) x 54(W) x 34(D) mm
Weight	170g

## • Elma 1335 – Digital Lux Meter with wide measuring range

– professional digital light meter

The new Elma 1335 is a versatile Luxmeter for professional measurement of a wide range of light sources.

The instrument has a very wide measuring range from 0 to 400,000 lux, which makes it suitable both for emergency lighting and outdoor measurement in strong sunshine.

### Features:

- Wide measurement range
- Large display
- Bargraph, Peak, Min/Max Hold, Relative Adjustment
- Supplied with carry case, external sensor and batteries



### Specifications:

Model:	Elma 1335
Measuring Range	0, 40, 400, 4000, 40000, 400000 Lux
Resolution	0.01, 0.1, 1, 10, 100 Lux
Accuracy	±5%
Display	3½ digit
Maximum	3999
Battery	6 x 1.5v AAA (included)
Dimensions	135(H) x 60(W) x 27(D) mm
Weight	250g



## • TM-201 – Light Meter

– easy to use professional digital light meter

The TM-201 is a low-cost, professional digital light meter with a measurement range of between 200 ~ 200,000 Lux.

The meter features data hold, max hold and zero adjustment and includes a 1.5m flexible cable from meter to sensor.

### Features:

- Range - 200,000 Lux, 20 - 20,000 footcandles
- DataHold, Max Hold & Zero adjustment features
- 1.5m flexible sensor cable
- 3½ digit LCD display with maximum reading 2000
- Overload indication
- Low battery indication

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### Specifications:

Model:	TM-201
Data Hold	Yes
Max Hold	Yes
Zero adjustment	Yes
Sensor	Silicon photodiode and filter
Measuring range	200, 2000, 20000, 200000 Lux
Accuracy	±3% (Calibrated to standard incandescent lamp 2856°K)
Angle deviation from cosine characteristics	30° ±2%
Weight	500g



## • TM-201L – LED Light Meter

– very easy to operate LED light meter

The TM-201L is a hand-held LED Light Meter with flexible Sensor and clear LCD readout which will read all visible light sources including LED and has a range of between 200 and 200,000 Lux with the ability to hold the maximum readings.

Suitable for use in factories, schools, warehouses, hospitals, office buildings and many other areas with LED lighting.

### Features:

- Max Hold
- Measures Whole Visible Light
- LCD Display
- Sensor - Silicon photodiode and filter
- Flexible Sensor
- Manual Ranging
- Overload Indicator
- Low Battery Indicator

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### Specifications:

Model:	TM-201L
Range	200 ~ 200,000 Lux, 20 ~ 20,000 FC
Display	3 ½ Digits LCD Display
Dimensions (Meter Size)	130(H) x 55(W) x 38(D) mm
Dimensions (Sensor Size)	80(H) x 55(W) x 25(D) mm
Dimensions (Cable Length)	1.5m between Meter and Sensor
Meets JISC 1609	1993 and CNS 5119 general A class specifications
Weight	250g

## • TM-209 – LED Light Meter

– wide ranging LED digital light meter

The TM-209 is a hand-held LED Light Meter with flexible sensor and clear LCD readout. It has a range of 40 to 400,000 Lux and measures whole visible light including LED, with the ability to hold the maximum and minimum readings and is suitable for use in factories, schools, warehouses, hospitals, office buildings and many other areas with LED lighting.

### Features:

- Easy operation
- Pocket size and lightweight
- LCD display with LUX, fc, LOBAT, MAX indication
- Measures from 40 ~ 40000 Lux/fc in four ranges
- Auto-ranging and Max Hold
- Light sensitive backlit LCD screen
- Auto Power-off
- Batteries supplied

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### Specifications:

Model:	TM-209
Range	40 ~ 400,000 Lux, 40 ~ 40,000 FC
Light Source	Type Selected, Fluorescent, Tungsten, Daylight etc
Accuracy	±3% (Calibrated to standard incandescent lamp 2856° K) and corrected LED day while-light spectrum ±6% (other visible light source)
Display	3½ Digits LCD Display
Dimensions (Meter Size)	130(H) x 55(W) x 38(D) mm
Dimensions (Sensor Size)	80(H) x 55(W) x 25(D) mm
Dimensions (Cable Length)	1.5m between Meter and Sensor
Weight	250g
Meets JISC 1609	1993 and CNS 5119 general A class specifications

## • TM-209M – LED Light Meter

– wide ranging multi-colour LED light meter

The TM-209M is a hand-held LED Light Meter with flexible sensor and clear LCD readout. It has a range of 40 to 400,000 Lux and measures whole visible light including RED, AMBER, GREEN, BLUE, PURPLE and WHITE LED, with the ability to hold the maximum and minimum readings.

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### Applications:

- Measures Intensity of Red, Amber, Green, Blue, Purple and White LED Light
- Measures Whole Visible Light
- Max / Min Hold
- Sensor - Silicon photodiode and filter
- LCD Display
- Flexible Sensor
- Auto-ranging
- Cosine Angular Corrected
- 99 Manual Records

### Specifications:

Model:	TM-209M
Light Source	0, 40, 400, 4000, 40000, 400000 Lux
Accuracy	±3% (Calibrated to standard incandescent lamp 2856° K) and corrected LED day while-light spectrum ±6% (other visible light source)
Display	3½ Digits LCD Display
Dimensions (Meter Size)	130(H) x 55(W) x 38(D) mm
Dimensions (Sensor Size)	80(H) x 55(W) x 25(D) mm
Dimensions (Cable Length)	1.5m between Meter and Sensor
Meets JISC 1609	1993 and CNS 5119 general A class specifications
Weight	250g

Measures various colours of light and holds the maximum and minimum readings



## • TM-206 – Solar Meter

– pocket solar power meter ideal for solar PV installations

The TM-206 Solar Power Meter measures solar radiation emitted from the sun in Watts per Square Meter or BTU and is ideal for solar PV installations to set panels at optimal angles, for meteorological and agricultural applications, and to identify high performance windows.

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### Features:

- Solar Radiation Measurement
- Select either Watts per Square Meter or BTU
- Max/Min Hold
- Data Hold
- 3½ Digits LCD Display
- Flexible Sensor

### Specifications:

Model:	TM-206
Range	2000 W/m <sup>2</sup> , 634 BTU / (ft <sup>2</sup> ·h)
Resolution	0.1 W/m <sup>2</sup> , 0.1 BTU / (ft <sup>2</sup> ·h)
Accuracy	Typically within ±10W/m <sup>2</sup> [±3 BTU / (ft <sup>2</sup> ·h)] or ±5% whichever is greater in sunlight Temperature included error ±0.38 W/m <sup>2</sup> / °C [±0.12 BTU / (ft <sup>2</sup> ·h)] / °C] deviation from 25 °C
Angular Accuracy	Cosine Corrected
Operating Temperature	0° ~ 50°C below 80% RH
Display	3½ Digits LCD Display
Dimensions	130(H) x 56(W) x 39(D) mm (Meter Size)
Weight	150g

Measures Solar Radiation - ideal for Solar PV installations to set panels at optimum angles



## • TM-207 – Solar Meter

– solar power meter with flexible sensor

The TM-207 Solar Power Meter measures solar radiation emitted from the sun in Watts per Square Meter or BTU with a flexible sensor and is ideal for solar PV installations to set panels at optimal angles, for meteorological and agricultural applications, and to identify high performance windows.

### Features:

- Solar Radiation Measurement
- Select either Watts per Square Meter or BTU
- Max / Min Hold
- Data Hold
- 3½ Digits LCD Display
- Flexible Sensor with 1.5m lead

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### Specifications:

Model:	TM-207
Range	2000 W/m <sup>2</sup> , 634 BTU / (ft <sup>2</sup> ·h)
Resolution	0.1 W/m <sup>2</sup> , 0.1 BTU / (ft <sup>2</sup> ·h)
Accuracy	Typically within ±10W/m <sup>2</sup> [±3 BTU / (ft <sup>2</sup> ·h)] or ±5% whichever is greater in sunlight Temperature included error ±0.38 W/m <sup>2</sup> / °C [±0.12 BTU / (ft <sup>2</sup> ·h)] / °C deviation from 25°C
Angular Accuracy	Cosine Corrected
Operating Temperature	0° ~ 50°C below 80% RH
Display	3½ Digits LCD Display
Dimensions (Meter Size)	130(H) x 56(W) x 39(D) mm
Weight	150g

## • TM-750 – Mini Solar Meter

– handy mini solar power meter

The TM-750 Solar Power Meter is a very handy compact tool that measures solar radiation emitted from the sun in Watts per Square Meter or BTU and is ideal for solar PV installations to set panels at optimal angles, for meteorological and agricultural applications and to identify high performance windows.

### Features:

- Solar Radiation Measurement
- Select either Watts per Square Meter or BTU
- Auto Power-off
- Data Hold
- 3¾ Digits LCD Display with maximum reading 3999
- Fixed Sensor

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### Specifications:

Model:	TM-750
Range	1999 W/m <sup>2</sup> , 634 BTU / (ft <sup>2</sup> ·h)
Resolution	0.1 W/m <sup>2</sup> , 0.1 BTU / (ft <sup>2</sup> ·h)
Accuracy	Typically within ±10W/m <sup>2</sup> [±3 BTU / (ft <sup>2</sup> ·h)] or ±5% whichever is greater in sunlight Temperature included error ±0.38 W/m <sup>2</sup> / °C [±0.12 BTU / (ft <sup>2</sup> ·h)] / °C deviation from 25 °C
Angular Accuracy	Cosine Corrected
Operating Temperature	0°C ~ 50°C below 80% RH
Dimensions	108(H) x 48(W) x 23(D) mm
Weight	80g

## • TM-740 – Mini Air Velocity Meter

– handy mini air velocity meter

The TM-740 Air Velocity Meter is a very handy compact instrument that measures air speed and temperature and is ideal for on-the-spot measurements.

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### Velocity (Air Speed):

Unit	Range	Resolution	Accuracy
m/s	0.4~25	0.1	±2%+0.2
Km/hr(kph)	1.5~90	0.1	±2%+0.8
mph	0.9~55	0.1	±2%+0.4
Knots(kts)	0.8~48	0.1	±2%+0.4
ft/min(fpm)	79~4921	1	±2%+40

### Temperature:

Unit	Range	Resolution	Accuracy
°C	-20~50	0.1	±1°C
°F	-4~122	0.1	±1.8°F

### Features:

- Measures Air Speed
- Measures Air Temperature
- Auto Power-off
- Air Flow Calculate Function
- Max, Min, Avg and Data Hold
- 30mm 6 Panel Plastic Vane
- Dual LCD display with max. readings is 9999 and 999
- Sampling Rate: 1 sample per second

### Specifications:

Model:	TM-740
Dimensions	135(H) x 48(W) x 23(D) mm
Weight	80g

Measures Air Speed and Temperature



## • TM-402 – Air Velocity Meter

– 30mm 6 blade vane air velocity meter

The TM-402 Air Velocity Meter is an instrument that measures air speed and temperature and features a 30mm 6-blade plastic vane.

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### Velocity (Air Speed):

Unit	Range	Resolution	Accuracy
m/s	0.4 ~ 25	0.1	±2%+0.2
Km/hr(kph)	1.5 ~ 90	0.1	±2%+0.8
mph	0.9 ~ 55	0.1	±2%+0.4
Knots(kts)	0.8 ~ 48	0.1	±2%+0.4
ft/min(fpm)	79 ~ 4921	1	±2%+40
Beaufort	1 ~ 10	1	-

### Temperature:

Unit	Range	Resolution	Accuracy
°C	-20 ~ 60	0.1	±1°C
°F	-4 ~ 122	0.1	±1.8°F

### Features:

- Measures Air Speed
- Measures Air Temperature
- Light air response 0.4m/s
- Auto Power-off
- Air Flow Calculate Function
- Max, Min, Avg and Data Hold
- 30mm 6 Panel Plastic Vane
- Data Logging Capacity 99 Records

### Specifications:

Model:	TM-402
Dimensions	56(H) x 30(D) x 38(W) mm
Weight	170g

Features 30mm plastic vane for air speed and temperature measurement



## • TM-412 – Air Velocity Meter

– 45mm 4 blade vane air velocity meter



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The TM-412 Air Velocity Meter is an instrument that measures air speed and temperature with a 45mm 4-blade plastic vane.

### Velocity (Air Speed):

Unit	Range	Resolution	Accuracy
m/s	0.4 ~ 25	0.1	±2%+0.2
Km/hr(kph)	1.5 ~ 90	0.1	±2%+0.8
mph	0.9 ~ 55	0.1	±2%+0.4
Knots(kts)	0.8 ~ 48	0.1	±2%+0.4
ft/min(fpm)	79 ~ 4921	1	±2%+40
Beaufort	1 ~ 10	1	-

### Temperature:

Unit	Range	Resolution	Accuracy
°C	-20 ~ 60	0.1	±1°C
°F	-4 ~ 140	0.1	±1.8°F

### Features:

- Measures Air Speed
- Measures Air Temperature
- Light air response 0.4m/s
- Auto Power-off
- Air Flow Calculate Function
- Max, Min, Avg and Data Hold
- 30mm 4 Panel Plastic Vane
- Data Logging Capacity 99 Records

### Specifications:

Model:	TM-412
Dimensions	56(H) x 30(D) x 38(W) mm
Weight	160g



## • 9150 – 3-in-1 Stud/Metal/Voltage Detector

– ideal for anyone working with stud walling

To avoid the potentially lethal risk of drilling into concealed mains wiring, pipe work, etc, the 9150 voltage and metal detector is an absolute necessity.

The 3-in1 Detector performs both these functions and more. With the flick of a switch you can also scan for wooden joists and studs beneath plaster, enabling you to locate solid fixing points for shelves and pictures.

When metal objects, voltage power supplies, wooden joist or studs are detected, the LED corresponding to the appropriate picture lights up and an alarm sounds.

### Applications:

- Detects electric cables
- Detects metal pipes & studwork
- Detects wooden battens and studs

*A handy detector essential to avoid drilling into concealed mains, wiring and pipe work*



### Specifications:

Model:	9150
Description	Auto-calibration 3-in-1 Metal / Voltage & Stud Detector
Battery	23A / 12v battery
Dimensions	142(W) x 40(H) x 39(D)mm
Weight	160g

## Elma 981 – Mini Laser Distance Meter

– for measuring distances, areas and volumes



**SAGAB**  
BY ELMA INSTRUMENTS

Professional Laser Distance Meter designed to give the user a high accuracy, one person distance measuring and estimating tool to measure remote and difficult to reach places. The compact and handy design is specifically designed for indoor applications.

Shortcut keys for addition, subtraction, Pythagoras, area and volume calculation makes measuring fast and very reliable. The last 20 measurements are also stored.

The Elma 981 is supplied with carrying case and batteries.

### Features:

- Accurate measurements in meters, inches and feet
- Distance tracking
- Backlit multi-line display
- Shortcut keys for addition, subtraction, Pythagoras and area & volume calculations
- Stores last 20 measurements
- IP54 rating

### Specifications:

Model:	Elma 981
Measuring Range	0.05 ~ 35m (0.16 ~ 164 ft)
Accuracy	Typically ± 1.5mm (± 0.06in)
IP Rating	IP54
Display	2000 counts, 3½ digit
Battery	2 x 1.5v AAA (included)
Dimensions	115(H) x 48(W) x 28(D) mm
Weight	135g (including batteries)

*Single-handed distance measuring and estimating tool for remote and difficult to reach applications*



## Elma VS3 – 'The Tracker Dog'

– 4 functions: Socket tester, Phase identifier, Fuse identifier and RCD tester

The new Elma VS3 'Tracker Dog' is a unique combo test instrument for troubleshooting and checking of electrical installations. The instrument offers all new and highly precise identification.

The VS3 Transmitter communicates with the Receiver via wireless radio signal. This enables the identification of a fuse for a specific wall socket.

VS3 can also be used to locate voltage-conducting sockets and also to distinguish between phase and neutral, even in the case of childproof and earthed sockets.

With the Transmitter connected to a socket, information is then also provided concerning the phase relationship of a second socket or an appliance relative to the socket to which the Transmitter is connected. The phase for the socket to which the Transmitter is connected is always 'Phase 1' and the socket or appliance being checked can thus be indicated as 'Phase 1', 'Phase 2' or 'Phase 3'.

It is also possible to test 30mA RCDs. The VS3 shows the tripping time and can check the function of a 30mA RCD. Press the RCD button and the VS3 generates a fault current of 30mA and the RCD is tripped. The display shows how long the process took. If the RCD does not trip within 300ms, an error message is displayed.

The VS3 Receiver also works without the Transmitter, when it becomes a very sensitive analogue Volt Stick.

The Sagab by Elma VS3 Multi-function Tester is supplied with batteries and carrying case.

### Specifications:

Model:	Elma VS3
Voltage Range	100 ~ 240v AC
Frequency Range	45 ~ 65Hz
Radio Frequency	869.525MHz
Distance	Max distance 1.2km line of sight between transmitter and receiver
Auto Power Off	After approx. 1h
Display	128 x 64 pixels with back light
Work Temp	-10°C ~ 50°C
Battery	Trans: 2 x 1.5v AA (included) / Rec: 2 x 1.5v AA (included)
Approvals	Trans: CE CAT II 300V / Rec: CE CAT III 600V
Complies with Standards	IEC61010-1
Dimensions	Trans: 180(H) x 60(W) x 45(D) mm / Rec: 195(H) x 60(W) x 37(D) mm
Weight	Transmitter 200g / Receiver 210g

### Applications:

- Socket Tester
- Phase Identifier
- Fuse Identifier
- RCD Tester

*Very accurately finds fuses in fuse boards*



## • Elma Test Leads – Premium



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Set consisting of 1 red and 1 black extra flexible, double insulated silicone lead, 0.75 mm<sup>2</sup>, 100cm. Equipped with 4mm banana plugs with protective cover and test probe with the option of mounting alligator clips, etc.

### Specifications:

Test Lead:	Premium
Compliance	IEC 61010:Cat II 1000V
Colour	Red and Black 1000v/12A

## • Elma Test Leads – 2 & 4mm Tips



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Set of red and black test leads with 1mm<sup>2</sup> leads, 100cm for 4mm banana sockets. Changeable 2/4mm test tips included. Fulfills IEC 61010 CAT IV 1000 with tip cover.

### Specifications:

Test Lead:	2 & 4mm Tips
Max. Current	10A
Length	1m
Compliance	IEC 61010:Cat IV 1000V with tip cover and CAT II without tip cover

## • Elma Test Leads – 500mA



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The Elma 13124 is a durable safety test lead with fuses in both test probes 500mA/1000V/50kA. The test leads are double insulated, 1mm<sup>2</sup> and 1.2m long with highly insulated handles & angled banana plugs. The test leads fulfill IEC 61010-1 CAT III 1000V and are supplied as a set of red and black.

### Specifications:

Test Lead:	500mA
Fuse	500mA
Safety	IEC 61010:Cat III 1000V
Length	1m

## • Elma Test Leads – 10A



elma  instruments



Elma 13124 safety test leads for your protection. Durable test leads with fuses in both test probes. 500mA/1000V/50kA. The test leads are double insulated, 1mm<sup>2</sup> and 1.2m long with highly insulated handles and angled banana plugs.

### Specifications:

Test Lead:	10A
Fuse	10A
Safety	IEC 61010 Cat III 1000V
Length	120cm

## • Elma Crocodile Clip Set



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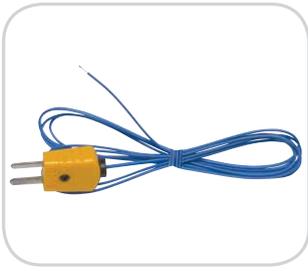


Set of Type 5004 extra robust insulated crocodile clips, 1000V/20A in red and black.

### Specifications:

Test Lead:	Premium
Compliance	IEC 61010 Cat III 1000V Cat IV 600V

• **Elma TP01** – Wire Sensor



K-Type Thermometer Wire Probe.

**Specifications:**

<b>Model:</b>	Elma TP01
Measuring Range	-40 ~ +250°C
Accuracy	±1.5°C
Dimension	1000(L) x 2(Ø) mm



• **Elma TP106** – K-Type Penetration Temperature Probe



K-type Penetration Temperature Probe with spiral cord and insulating handle.

**Specifications:**

<b>Model:</b>	Elma TP106
Measuring Range	-50 ~ 600°C
Dimensions	130(L) x 3(Ø) mm

**Features:**

- Ni-CrNi Probe
- Flexible Spiral Lead
- K-Type Fitting
- Insulating Handle



• **Elma TP104** – K-type Universal Temperature Probe



K-type Universal Temperature Probe with spiral cord and insulating handle.

**Specifications:**

<b>Model:</b>	Elma TP104
Measuring Range	-50° ~ 1100°C
Accuracy	±0.4% or ±1.5°C whichever is greater
Dimension	130(L) x 3(Ø) mm

**Features:**

- Ni-CrNi Probe
- Flexible Spiral Lead
- K-Type Fitting
- Insulating Handle



• **Elma TP110** – K-Type Surface Temperature Probe



K-Type Surface Temperature Probe with spiral cord and insulating handle.

**Specifications:**

<b>Model:</b>	Elma TP110
Measuring Range	-50° ~ 900°C
Dimension	130(L) x 8(Ø) mm

**Features:**

- Ni-CrNi Probe
- Flexible Spiral Lead
- K-Type Fitting
- Insulating Handle



• **Elma TP109** – K-Type Clamp Temperature Sensor



K-Type Clamp Temperature Sensor with spiral cord.

**Specifications:**

<b>Model:</b>	Elma TP109
Measuring Range	-50 ~ 300°C
Dimension	35mm

**Features:**

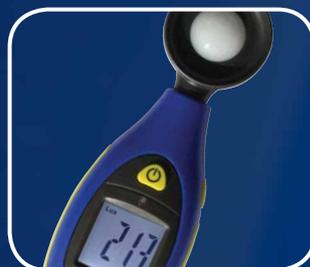
- Ni-CrNi Clamp
- Flexible Spiral Lead
- K-Type Fitting



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