



Elma 3037 & 3039 Clamp Meter

Elma 3039

https://www.elma.se/product.php?id_product=3219

EAN: 5706445900046/5706445900053



Elma 3037/3039 User manual











Safety Information

- Use the Meter only as specified in this manual or the protection by the Meter might be impaired.
- Always use proper terminals, switch position, and range for measurements.
- Verify the Meter’s operation by measuring a known voltage. If in doubt, have the Meter serviced.
- Do not apply more than the rated voltage, as marked on Meter.
- To avoid false readings that can lead to electric shock and injury, replace battery as soon as low battery indicator.
- Do not use Meter around explosive gas or vapor.
- To reduce the risk of fire or electric shock do not expose this product to rain or moisture.

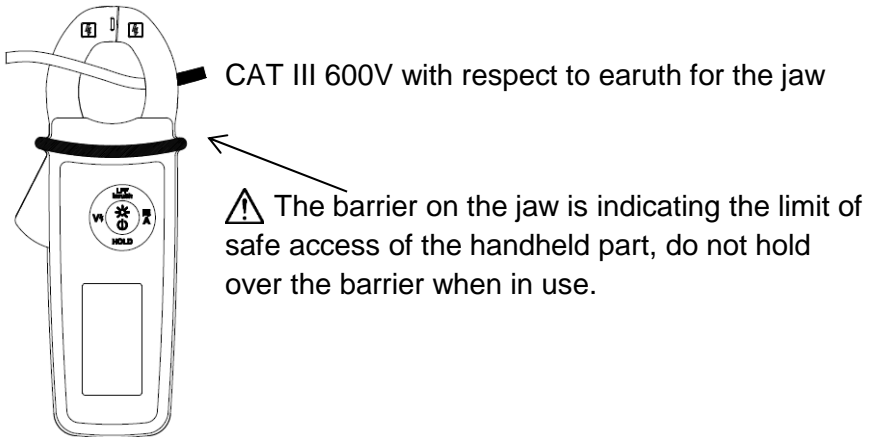
Individual protective equipment should be used if HAZARDOUS LIVE parts in the installation where measurement is to be ACCESSIBLE.

Do not expose Meter to extremes in temperature of high humidity.

Symbols as marked on the meter and Instruction card

	Risk of electric shock
	See instruction card
	DC measurement
	AC measurement
	Equipment protected by double or reinforced insulation
	Battery
	Earth
	Conforms to EU directives
	Application around and removal from hazardous live conductors is permitted
	Do not discard this product or throw away

Instrument



Power on/off

Push on the button to turn on the instrument, and hold down for >1s to shut it off.

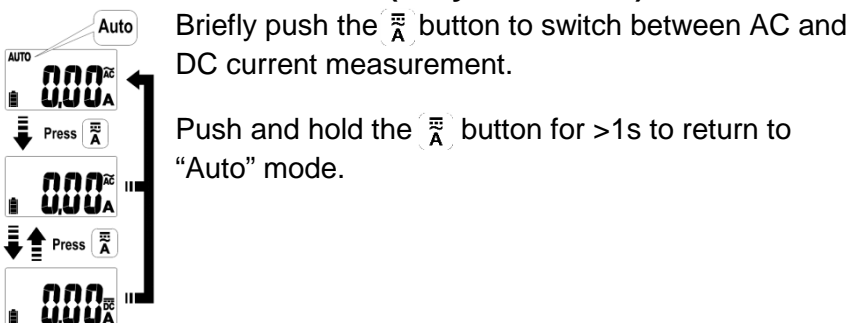
Auto power off

The instrument shuts off automatically after 20 minutes without buttons pushed.


Deactivate Auto power off

When the instrument is off, push and hold down while turning the instrument on by pushing the button. The text "AoFF" is shown in the display for a few seconds before the instrument turns on.


Auto ACA/DCA detection (Only Elma 3039)




Data hold

Push the  button to freeze the present value in the display. "Hold" is shown in the display.


The display will flash continuously if the measured signal is 50 counts larger than the display reading. However, it cannot detect across the AC and DC Current.

Push the  button to return to normal mode.


DCA Zero (Only Elma 3039)

Push the button  >2s to zero adjust.


Inrush current

Push the  button for >1s until "INRUSH" is shown in the display. When the current exceeds 5A the instrument calculates the RMS value for 100ms.


Low pass filter

When measuring AC, push the  button to enable Low pass filter. "LPF" is shown in the display. The cut-off frequency is about 160Hz.

Backlight on/off

Push briefly the  button to turn off/on the display light.

Volt sense

Push the  button briefly to enable volt sense. The number of dashes displaying on the LCD indicates the electric field intensity. If no indication, voltage could still be present.

Battery replacement

Loosen the screw in the battery cover and remove the cover. Change the batteries and fasten the battery cover.

Specifications

General specifications

Display	6000 count
Overrange indication	"OL"
Refresh rate	2 times/second
Dimensions	60x147x31,5mm
Weight	140g
Battery	2 pcs. 1,5V LR44
Battery life	Up to 20 hours (Elma 3039)/50 hours (Elma 3037) for current measurement
Clamp	25mm
LVD	EN61010-1, EN61010-2-030, EN61010-2-032
EMC	EN61326-1
Installation category	Cat III 600V

Environmental conditions

Indoor use only	
Altitude	Max 2000m
Operating temperature	0°C...30°C ≤80%RH 30°C...40°C ≤75%RH 40°C...50°C ≤45%RH
Storage temperature	-20°C...60°C; ...80%RH (no batteries)
Temperature coefficient	0,2x(accuracy)/°C; <18°C >28°C
Pollution degree	2
Chock vibration	MIL-PRF-28800F for A class 2 instr.
Drop protection	1,2m drop to hardwood on concrete floor

Electrical specifications

Accuracy is given as \pm (% of reading + counts of least significant digit) at 23°C \pm 5°C, with relative humidity Less than 80% R.H. ACV and ACA specifications are ac coupled, true R.M.S. The crest factor may be up to 3.0 as 4000 counts.

For non-sinusoidal waveforms, additional accuracy by Crest factor:

Add 3.0% for C.F. 1.0 ~ 2.0.

Add 5.0% for C.F. 2.0 ~ 2.5.

Add 7.0% for C.F. 2.5 ~ 3.0.

Position Error of Clamp: (Elma 3039) \pm 1.5% rdg.

(Elma 3037) \pm 2% rdg (max 4% near tip)

Adjacent conduct influence (Elma 3037) <0.08A/A

DC Current (Only Elma 3039)

Range	Resolution	Accuracy
60.00A *	0.01A	$\pm(1.5\%+10 \text{ digits})$ **
300.0A	0.1A	$\pm(1.5\%+5 \text{ digits})$

* < 0.3A variations as measuring in different directions

** Add 10 digits to accuracy of 60.00A range in Auto detection function.

All specs are valid from 5% to 100% of each range.

AC Current

Range	Resolution	Accuracy (50...60Hz) (Only Elma 3037)	Accuracy (50...100Hz) (Only Elma 3039)	Accuracy (100...400Hz) (Only Elma 3039)
60.00A	0.01A	$\pm(2.0\%+5 \text{ digits})$	$\pm(1.5\%+5 \text{ digits})$	$\pm(2.5\%+5 \text{ digits})$
300.0A	0.1A			

LCD displays 0 counts when the reading <20 counts.

Frequency response: (Only Elma 3039) 50...400Hz (Sine wave).

All specifications are valid from 5% to 100% of each range.

Low pass filter

Range	Resolution	Accuracy (50/60Hz)
60.00A	0.01A	$\pm(3.5\%+5 \text{ digits})$
300.0A	0.1A	$\pm(3.5\%+5 \text{ digits})$

LCD displays 0 counts when the reading <20 counts; Cut-off frequency (-3dB): Approx. 160Hz; Attenuation Characteristic: Approx. -24dB/Oct.

All specs are valid from 5% to 100% of each range.

Inrush current

Range	Resolution
300.0A	0.1A

Integration time: 100ms; Trigger current: 5A

Volt sense

Voltage range: 80...600V (At the tip of the clamp)

Maintenance

Do not attempt to repair this instrument. The instrument contains no user serviceable parts. The instrument should be turned in to Elma Instruments for service.

Cleaning

Periodically wipe the case with a dry cloth and detergent. Do not use abrasives or solvents.



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