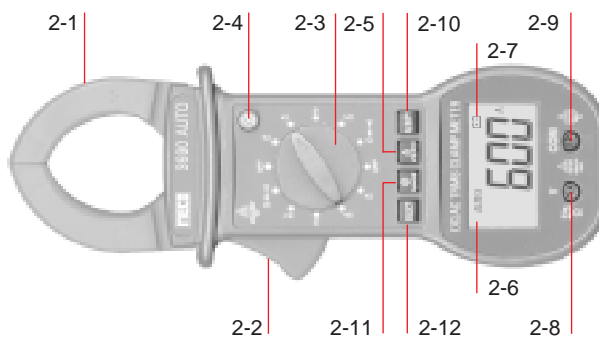




**DC / AC
CLAMP METER**
**MODEL :
3690AUTO**

1

FRONT PANEL CONTROLS



- 2-1 Transformer Jaw : This is used to sense the current signal. To measure DC/AC current, conductor must be enclosed by the jaw.
- 2-2 Transformer Trigger : This is used to open the jaw.
- 2-3 Function selector switch : This is used to select the function user desired such as DCA, ACA, $\frac{V}{\Omega}$, ohm, continuity, diode and Hz.
- 2-4 Data Hold Button
- 2-5 Zero Button
- 2-6 LCD : This is a 3¼ digit liquid crystal display with maximum indication of 4000 counts.
- 2-7 Low Battery Symbol : When this Symbol appears, it means the battery voltage drops below the minimum required voltage. Refer to section V for battery replacement.


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- 2-8 $V\Omega$, Hz, \rightarrow , \bullet) Input Terminal : This terminal is used as input for voltage, ohm, continuity, diode and frequency measurement.
- 2-9 COM Terminal : This terminal is used as common reference input.
- 2-10 Hz / Duty Button
- 2-11 Range Button
- 2-12 Select Button

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1. SPECIFICATIONS

1.1 General Specifications

- Display** : 3¼ digit liquid crystal display (LCD)
Max reading 4000 counts
- Polarity** : Automatic, Positive implied,
(-) negative polarity indication
- Zero adjustment** : Automatic
- Over range indication** : "OL" or "-OL"
- Low battery** : "  " mark turns on.
- Sample rate** : 3 times per second, nominal
- Operating conditions** : 0°C to +50°C at > 75% RH
(Noncondensing)
- Storage conditions** : -20°C to +60°C, 80% RH with
battery removed
- Accuracy** : Accuracy specification at 27°C
 $\pm 5^\circ\text{C}$ less than 75% RH.
- Power Supply** : Two 1.5 V AAA size battery
- Battery Life** : 150 hours typical with carbon
zinc
- Dimensions** : 215mm (H) x 80mm (W) x
40 mm(D)
- Weight** : 280 gms (approx.)
- Accessories** : one pair of test leads.
Two 1.5 V AAA size battery
(installed),
Instruction manual.
- Max. Jaw Opening** : 30mm

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1.2 Electrical Specification

DC CURRENT :

Range	Accuracy	Overload Protection
400A	$\pm (1.5\% \text{ rdg} \pm 5 \text{ dgts})$	1200A DC Max. for 1 minute
600A	$\pm (2.0\% \text{ rdg} \pm 5 \text{ dgts})$	

AC CURRENT :

Range	Accuracy		Overload Protection
	50 - 60Hz	40 - 500Hz	
400A	$\pm (1.75\% \text{ rdg} \pm 5 \text{ dgts})$	$\pm (3.5\% \text{ rdg} \pm 5 \text{ dgts})$	1000A AC Max. for 1 minute.
600A	$\pm 5 \text{ dgts}$	$\pm 5 \text{ dgts}$	

AC Voltage (Auto Ranging)

Range : 4V, 40V, 400V, 600V
 Resolution : 1mV to 1V
 Accuracy : $\pm (1.2\% \text{ rdg} + 4 \text{ dgts})$ on 50 - 60 Hz
 $\pm (2\% \text{ rdg} + 25 \text{ dgts})$ on 40 - 500Hz
 $\pm (4\% \text{ rdg} + 5 \text{ dgts})$ on 600V
 Input impedance : $>10M\Omega$
 Over load protection : 600V DC or 600V AC rms.

DC Voltage (Auto Ranging)

Range : 400mV, 4V, 40V, 400V, 600V
 Resolution : 0.1mV to 1V
 Accuracy : $\pm (0.5\% \text{ rdg} + 8 \text{ dgts})$ on 400mV to 400V
 $\pm (0.7\% \text{ rdg} + 2 \text{ dgts})$ on 600V
 Input impedance : $>10M\Omega$
 Over load protection : 600V DC or 600V AC rms.

Resistance (auto ranging)

Range : 400 Ω , 4K Ω , 40K Ω , 400K Ω , 4M Ω , 40M Ω
 Resolution : 0.1 Ω to 0.01M Ω
 Accuracy : $\pm (0.75\% \text{ rdg} + 8 \text{ dgts})$ on 400 Ω to 400K Ω
 $\pm (1.0\% \text{ rdg} + 6 \text{ dgts})$ on 4M Ω
 $\pm (2.0\% \text{ rdg} + 4 \text{ dgts})$ on 40M Ω

Open Circuit Volts : 0.4V DC
 Over load protection : 600V DC or AC rms.

Diode test

Test Current : 1.0 mA \pm 0.6 mA
 Accuracy : $\pm (3.0\% \text{ rdg} + 3 \text{ dgts})$ only for reference
 Open circuit volts : 3.0V DC typical.
 Overload protection : 600V DC or AC rms.

Continuity

Audible indication : less than 40 Ω \pm 20 Ω
 Overload protection : 600V DC or AC rms.

Frequency (Auto Ranging)

Ranges : 100Hz, 1KHz, 10KHz, 100KHz, 500KHz

Resolution : 0.1 Hz to 0.1 KHz
 Accuracy : $\pm (0.3\% \text{ rdg} + 2 \text{ dgts})$
 Sensitivity : 3.0V rms min.
 Effect reading : 10 - 9999
 Overload protection : 200V DC or AC rms.

% Duty Cycle (auto ranging)

Range : 1% to 90 %
 Accuracy : $\pm (0.5\% \text{ rdg} + 5 \text{ dgts})$
 Resolution : 0.1 %
 Overload protection : 200V DC or AC rms.

