

Figure 1. The Photo of Actual 302+



Figure 2. The Photo of Actual 302+



Figure 3. The Photo of Actual 302+

FEATURES

 \bigcirc Operating temperature: $0^{\circ}\text{C} \sim 40^{\circ}\text{C}$

Storage temperature: -30°C~60°C

 \bigcirc Operating humidity: Non condensing (<10°C)

 \leq 90% RH (at 10°C to 30°C)

 \leq 75% RH (at 30°C to 40°C)

(Without condensation)

⇒ Size (L×W×H): 206.9×58.7×28.1mm

Weight: 265g

➡ EMI , EMC: Meets all applicable requirements in EN/IEC 61326-1

APPLICATIONS

It is widely used to measure AC and DC voltage, AC current, resistance, and continuity.

DESCRIPTIONS

302+ is a portable professional measuring instrument with LCD and back light easily reading. The single-hand operation design for the range switch makes measurement simple and easy. It is an ideal multi-function instrument with scores of practical applications for professional, workshop, school, hobby and home use. Both auto range and manual range are available.

SAFETY INFORMATION

A **Warning** identifies conditions and procedures that are dangerous to the user; A **Caution** identifies conditions and procedures that could cause product damage, equipment under test damage or permanent loss of data.

△△ Warning

To prevent personal injury, use the product only as specified, or the protection supplied by the product can be compromised. To prevent possible electrical shock, fire or personal injury:

Use only correct measurement category (CAT), voltage and amperage rated probes, test leads and adapters for the measurement.

Do not touch voltages >30V AC rms, 42V AC peak or 60V DC.

Carefully read all instructions.

Hold the product behind the tactile barrier.

Do not exceed the measurement category (CAT) rating of the lowest rated individual component of a product, probe or accessory.

Do not measure current while the test leads are in the input



jacks.

Do not use the product around explosive gas, vapor or in damp or wet environments.

Limit operation to the specified measurement category, voltage or amperage ratings.

Do not work alone.

Do not apply more than the rated voltage, between the terminals or between each terminal and earth ground.

Comply with local and national safety codes. Use personal protective equipment (approved rubber gloves, face protection, and flame-resistant clothes) to prevent shock and arc blast injury where hazardous live conductors are exposed.

Replace the batteries when the low battery indicator (shows to prevent incorrect measurements.

The battery door must be closed and locked before you operate the product.

Measure a known voltage first to make sure that the product operates correctly.

Remove all probes, test leads and accessories that are not necessary for the measurement.

Only use probes, test leads and accessories that have the same measurement category and voltage rating as the product.

Keep fingers behind the finger guards on the probes.

Connect the common test lead before the live test lead and remove the live test lead before the common test lead.

Remove all probes, test leads and accessories before the battery door is opened.

SYMBOL

Table 1

~	AC (Alternating current)	-	Earth ground
	DC (Direct current)	<u>a</u>	Do not dispose of this product as unsorted municipal waste. Note: This product complies with the Regulation for the Administration of Waste Electrical and Electronic Products (China).
Δ	Hazardous voltage. Risk of electric shock.	C€	Conforms to European Union directives.
Δ	Risk of danger (important safety information; refer to the datasheet.)		Double insulation
4	Application around and removal from hazardous live conductors is permitted.	+	Battery
CAT III	CAT III equipment is designed to protect against transients in equipment in fixed equipment installations, such as distribution panels, feeders and short branch circuits and lighting systems in large buildings.	CAT IV	CAT IV equipment is designed to protect against transients from the primary supply level, such as an electricity meter or an overhead or underground utility service.

SPECIFICATIONS

Table 2. AC Current

Range	400.0A
Resolution	0.1A
	1.8% ±5 digits (45Hz to 65Hz)
Accuracy	2.5%±5 digits (65Hz to 400Hz)



Table 3. AC Voltage

Range	600.0V	
Resolution	0.1V	
Accuracy	1.5% ±5 digits (45Hz to 400Hz)	

Table 4. DC Voltage

Range	600.0V
Resolution	0.1V
Accuracy	1% ±5 digits

Table 5. Resistance

Range	$400.0\Omega/4000\Omega$
Resolution	$0.1\Omega/1\Omega$
Accuracy	1% ±5 digits
Continuity beeper	≤70Ω

Table 6. Environmental Specifications

Operating temperature	0°C to 40°C
Storage temperature	-30°C to 60°C
Operating humidity	Non condensing (<10°C) ≤90% RH (at 10°C to 30°C) ≤75% RH (at 30°C to 40°C) (without condensation)
Operating altitude	2000 meters
Storage altitude	12,000 meters
EMI, EMC	Meet all applicable requirements in EN/IEC 61326-1
Temperature coefficients	Add 0.1×specified accuracy for each °C above 28°C or below 18°C
Measurement category	CAT IV 300V, CAT III 600V
Safety compliance	EN/IEC 61010-1, Pollution Degree 2 EN/IEC 61010-2-032 EN/IEC 61010-031:2002/A1:2008 €
IP Rating	IP 30 Per IEC 60529:2001; Non-operating
Batteries	2 AAA, NEDA 24A, IEC LR03

Note

The Measurement Category (CAT) and voltage rating of combinations of test probes, test probe accessories, current clamp accessories and the product is the lowest rating of individual components.

OPERATION

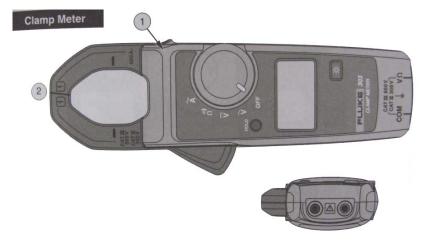


Figure 4. Clamp Meter

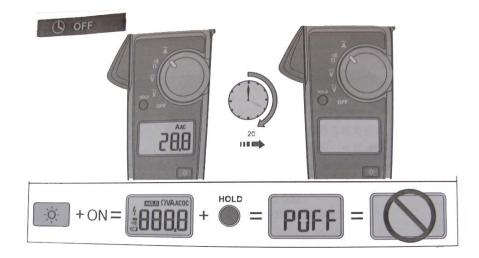


Figure 5. Switch Measuring Function and Range

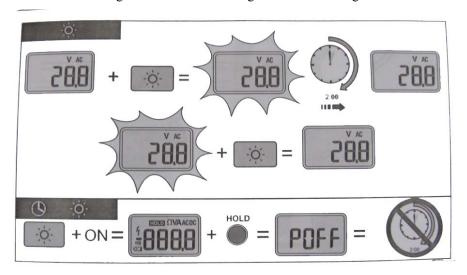


Figure 6. Switch Measuring Function and Range

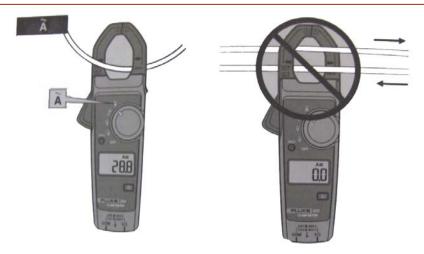


Figure 7. Switch Measuring Function and Range

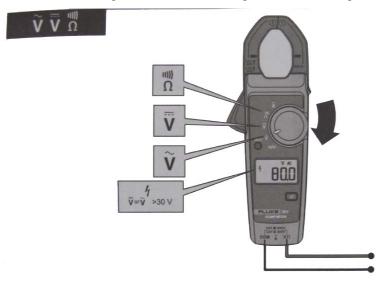


Figure 8. Switch Measuring Function and Range

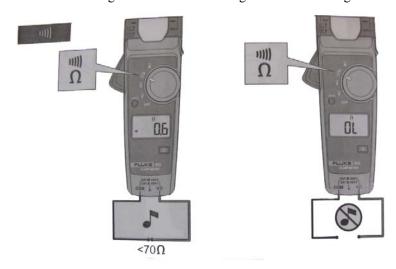


Figure 9. Switch Measuring Function and Range



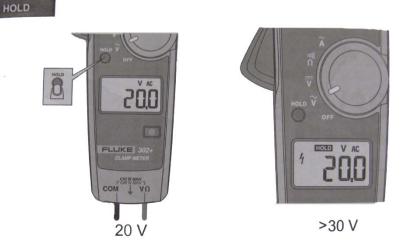


Figure 10. Switch Measuring Function and Range

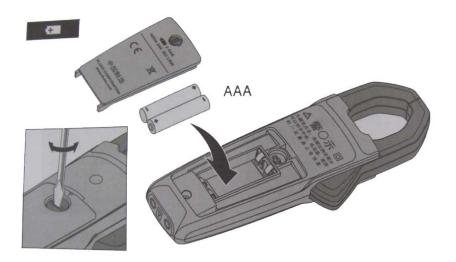


Figure 11. Replace Battery

ORDERING INFORMATIONS

Table 7. Unit Price

Quantity	Unit Price
302+	\$

NOTICE

- 1. ATI reserves the right to make changes to its products or to discontinue any product or service without notice, and advise customers to obtain the latest version of relevant information to verify, before placing orders, that information being relied on is current and complete.
- 2. All products are sold subject to the terms and conditions of sale supplied at the time of order acknowledgment, including those pertaining to warranty, patent infringement, and limitation of liability. Testing and other quality control techniques are utilized to the extent ATI deems necessary to support this warranty. Specific testing of all parameters of each device is not necessarily performed, except those mandated by government requirements.

Clamp Meter



MS2108A

- 3. Customers are responsible for their applications using ATI components. In order to minimize risks associated with the customers' applications, adequate design and operating safeguards must be provided by the customers to minimize inherent or procedural hazards. ATI assumes no liability for applications assistance or customer product design.
- 4. ATI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of ATI covering or relating to any combination, machine, or process in which such products or services might be or are used. ATI's publication of information regarding any third party's products or services does not constitute ATI's approval, warranty or endorsement thereof.
- 5. IP (Intellectual Property) Ownership: ATI retains the ownership of full rights for special technologies and/or techniques embedded in its products, the designs for mechanics, optics, plus all modifications, improvements, and inventions made by ATI for its products and/or projects.