

## T5-600/T5-1000

### Electrical Tester Instruction Sheet

#### ⚠ Read First: Safety Information

If this product is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

#### ⚠ Warning

- Do not use the tester if it is damaged or operating abnormally. Protection may be impaired.
- Before each use:
  - Make sure the battery door is closed and latched.
  - Inspect the tester and test leads. Look for cracks, missing plastic, exposed metal, or damaged insulation. Replace damaged test leads before using the tester.
  - Verify the tester's operation by measuring a known voltage.
- Replace the batteries as soon as the low battery indicator (🔋) appears.
- Do not use the tester around explosive gas, vapor or dust.
- Do not apply more than the rated voltage, as marked on the tester, between terminals or between any terminal and earth ground.
- Refer servicing to qualified personnel.
- Use caution when working above 30 V ac rms, 42 V ac peak, or 60 V dc.
- When using the probes, keep your fingers behind the finger guards on the probes.
- Connect the common test lead before you connect the live test lead. Disconnect the live test lead first.
- The display will not display hazardous voltages in display hold. The voltage indicator LED (🔌) continues to operate.

#### Symbols

~	AC (alternating current)	⏚	Earth ground
—	DC (direct current)	□	Double insulated
⚠	Caution, risk of danger (refer to the manual.)	🔋	Battery
		⚡	Caution, shock hazard

#### Voltage Indicator 🔌

While the tester is on, the LED glows when more than 30 V ac or 60 V dc is present across the leads. (The LED can also glow at lower voltages.) Be aware that such voltages pose a shock hazard.

#### Measuring Voltage (V)

The tester automatically selects dc (DC) or ac (AC) voltage mode based on the peak values of the measured signal.

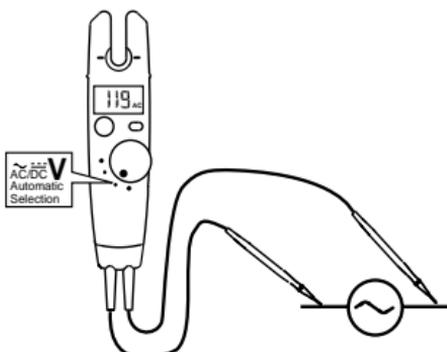
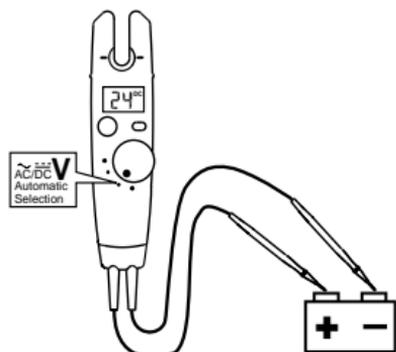
The tester defaults to ac voltage when turned on.

#### DC Voltage

T5-600 maximum: 600 V CAT III  
 T5-1000 maximum: 1000 V, also 600 V CAT IV

#### AC Voltage

45 Hz to 66 Hz  
 T5-600 maximum: 600 V rms  
 T5-1000 maximum: 1000 V rms, also 600V rms CAT IV

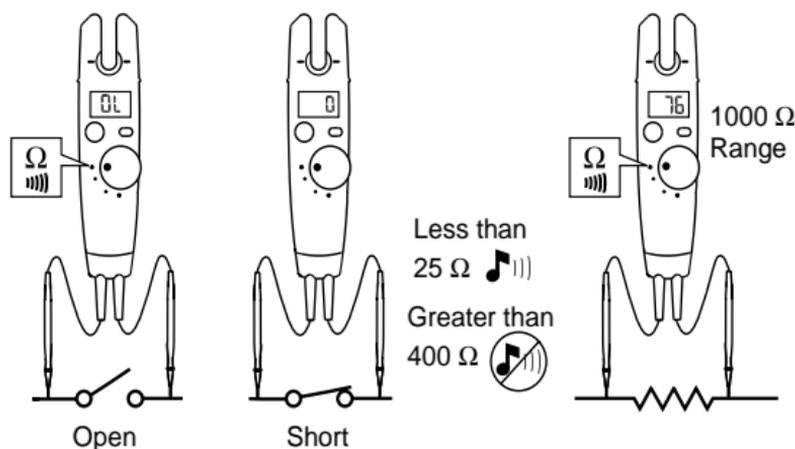


ex2.eps

## Measuring Continuity and Resistance ( $\Omega$ )

### Continuity

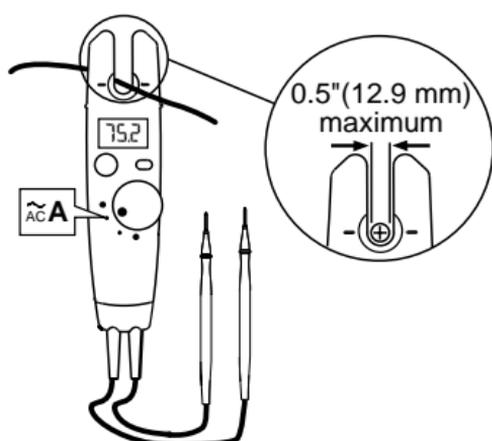
### Resistance



ex3.eps

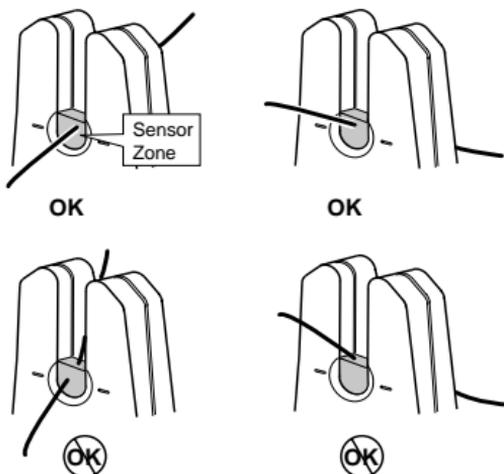
Beeper indicates shorts lasting 10 ms (1/100 second) or longer.

## Measuring AC Current (A)



- Range: 0 A to 100.0 A; 45 Hz to 66 Hz
- Do not connect test probes to voltages while measuring current.
- Place conductor anywhere within the sensor zone (shaded area shown below).

ex1.eps



ex5.eps

## Display Hold **HOLD**

To hold the reading on the display, press and release **HOLD**. The display will not display hazardous voltages in display hold. The voltage indicator LED () continues to operate.

To exit the display hold mode, press and release **HOLD** again, or turn the rotary switch to a new position.

## Automatic Power Down

The tester turns off automatically if you do not turn the rotary switch or press **HOLD** for approximately 45 minutes. To resume operation, turn the tester off, then turn the tester on.

## Low Battery Indicator

### Warning

To avoid false readings, which could lead to possible electric shock or personal injury, replace the battery as soon as the low battery indicator () appears.

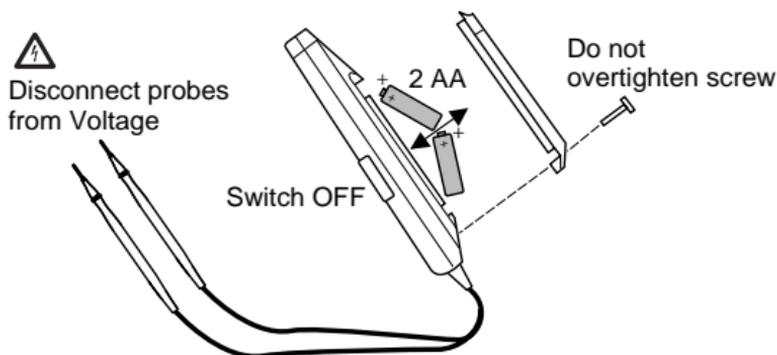
## Maintenance

Clean the case with a damp cloth and detergent. Do not use abrasives or solvents.

Because the inputs are electronically protected, no fuses are required.

## Battery Replacement

Observe the polarity markings inside the battery compartment.



ex4.eps

## Replacement Parts

Test Lead Assembly. Replace only with Fluke double-insulated leads (☐) See "Accessories" for available probes.	PN 648029
Battery Door	PN 1626588
Battery Door Screw	PN 1618578

## Accessories

H5 Belt Holster

TP1 Probe Set, Flat-Blade

TP4 Probe Set, 4 mm round

*Service Information Sheet*, PN 686953

To contact Fluke, call:

USA: 1-888-99-FLUKE (1-888-993-5853)

Canada: 1-800-36-FLUKE (1-800-363-5853)

Europe: +31 402-678-200

Japan: +81-3-3434-0181

Singapore: +65-738-5655

Anywhere in the world: +1-425-446-5500

Visit Fluke's Web site at [www.fluke.com](http://www.fluke.com).

## Specifications

*Specifications subject to change without notice.*

**Calibration:** One-year calibration cycle.

**Maximum Voltage Between any Terminal and Earth Ground:**

T5-600: 600 V rms, Overvoltage Category III; Pollution Degree 2

T5-1000: 1000 V rms, Overvoltage Category III, also 600 V rms overvoltage Category IV, Pollution Degree 2

**Maximum Voltage between Current Fork and Earth Ground:** T5-600

and T5-1000: 1000 V rms, Overvoltage Category III, also 600 V rms, Overvoltage Category IV, Pollution Degree 2, (This dual rating applies to the current fork only.)

**Temperature:** Operating: -10 °C to +50 °C (14 °F to 122 °F);

Storage: -30 °C to +60 °C (-22 °F to +140 °F)

**Altitude:** Operating: 2000 m (6562 ft); Storage: 10,000 m (32808 ft)

**Relative Humidity:** 0 % to 95 %, 5 °C to 30 °C (41 °F to 86 °F); 0 % to 75 %, 30 °C to 40 °C (86 °F to 104 °F); 0 % to 45 %, 40 °C to 50 °C (104 °F to 122 °F)

**Battery Type and Life:** AA (2); 360 hours continuous with alkaline; 125 hours continuous with zinc chloride

**Shock, Vibration:** 1 m drop at -10 °C to 50 °C (14 °F to 122 °F) per ANSI/ISA-S82.01-1994 and EN 61010-1: 1995. Random vibration per MIL-PRF-28800F for a Class 2 instrument (5 Hz to 55 Hz, 3 g maximum).

**Surge Protection:** T5-600 6 kV per IEC 61010;

T5-1000 8 kV per IEC 61010

**Enclosure Rating:** IP 52 per IEC 60529, no vacuum applied

**RF Field Specification:** 0.5 % full scale + (specified accuracy) at 3 V / m

**Safety:** Complies with ANSI/ISA-S82.01-94, UL classified to IEC 61010, CSA/CAN C22.2 No.1010.1-92, and EN 61010-1: 1995.

**EMC:** EN 61326

**Certifications:**



In accordance with IEC 61010-1 54CJ

Accuracy is specified for 1 year after calibration, at 18 °C to 28 °C (64 °F to 82 °F) with relative humidity to 90 %. AC conversions are ac-coupled, average responding, and calibrated to the rms value of a sine wave input.

Accuracy specifications are given as follows:

$$\pm ( [\% \text{ of reading}] + [\text{number of least significant digits}] )$$

**Temperature coefficient of 0.1 x (specified accuracy) / °C for <18 °C or >28 °C (< 64.4 °F or > 82.4 °F)**

Function	T5-600 Range	T5-1000 Range	Resolution	Accuracy
$\tilde{V}$	600 V rms	1000 V rms	1 V	$\pm (1.5 \% + 2 \text{ digits})$
$\bar{V}$	600 V	1000 V	1 V	$\pm (1 \% + 1 \text{ digit})$
$\tilde{A}$	100.0 A	100.0 A	0.1 A	$\pm (3 \% + 3 \text{ digits})$
$\Omega$	1000 $\Omega$	1000 $\Omega$	1 $\Omega$	$\pm (1 \% + 2 \text{ digits})$

Function	Input Protection		Input Impedance (nominal)
	T5-600	T5-1000	
$\tilde{V}$	600 V rms	1000 V rms	1 M $\Omega$ , <100 pF ac-coupled
$\bar{V}$	600 V rms	1000 V rms	1 M $\Omega$ , <100 pF
$\Omega$	600 V rms	1000 V rms	---

Function	Open Circuit Test Voltage	Short Circuit Current
$\Omega$	1.65 V dc (nominal)	<0.6 mA

**CAT III** protects against transients in a *fixed equipment installation* such as a distribution panel, and lighting systems in large buildings.

**CAT IV** protects against transients from a *primary supply* such as an electricity meter or an overhead or underground utility service.

### ***Limited Warranty & Limitation Of Liability***

This Fluke product will be free from defects in material and workmanship for two years from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, send the defective product to the nearest Fluke Authorized Service Center with a description of the problem.

**THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY.**

Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.