



# 270 Clamp-On Tester with Digital Multimeter

## APPLICATIONS

Measure flame safety control current

Test run and start capacitors and motors

Measure motor run current and capture peak motor start up amperage

Measure heat anticipator current

Determine thermocouple voltage

Test line and control voltages

Measure heating element resistance

Measure air temperature in ducts

Test for the presence of voltage in circuits without contacting the circuit

Measure temperature differential using relative mode



10" x 1.3" x 2.5"

## Why pay more?

### Perfect for tight, narrow, spaces...

The new TPI 270 with slim jaw and body is ideal for cramped work areas and crowded electrical panels.

## Features

- Measure motor in-rush current and run current
- Measure temperature differential with relative mode
- Non-contact voltage feature can be used to immediately see if power is being supplied to the 24VAC control circuit of thermostats
- Frequency, Min/Max/Record, Data Hold, and Peak Hold
- Up to 40,000 Microfarads to test run and start capacitors
- 4,000 count display with 41 segment analog bargraph

### ALL THESE PLUS...

- Auto & Manual Ranging
- Low Battery Indicator
- Over Range Indication ("OL")
- Hi Voltage Indicator(>30V AC/DC)
- Auto Power Off after 30 minutes
- Separate Battery/Fuse Compartment
- Low Ohm Range (400V)
- Amps AC Resolution: 0.01A
- VDC/VAC Resolution: 0.1mV
- DCμA measurement (0.01μA resolution)
- Temperature measurement with 0.1 ° resolution

**The Value Leader™**



## 270 Clamp-On Tester General Features and Specifications

**TPI offers a complete line of...**

**CO, Combustibles & Combustion (CEA)**

**Refrigerant Leak Detectors**

**Digital Manometers**

**Temperature Contact & IR Instruments**

**IAQ: Air Flow / Humidity**

**Handheld Oscilloscopes**

**Digital Multimeters & Clamp-on Meters**

**Accessories & Kits**

### Test Products

#### International, Inc.

Headquarters:

9615 SW Allen Blvd.  
Beaverton, OR 97005  
USA

503-520-9197

Fax: 503-520-1225

email:

info@tpi-thevalueleader.com

### Test Products

#### International, Ltd.

342 Bronte St. South  
Unit 9  
Milton, Ontario L9T  
5B7  
Canada

Canada

905-693-8558

Fax: 905-693-0888

email:

info@tpicanada.com

### Test Products

#### International UK Ltd.

Longley House, East Park  
Crawley, West Sussex  
RH10 6AP England

Tel: +44 (0)1293 561212

Fax: +44 (0)1293813465

contactus@tpieurope.com

### Instrument Specifications

Basic DC Accuracy:	0.5%
DC Voltage (maximum):	600V
Resolution (maximum):	0.1mV
AC Voltage (maximum):	600V
Resolution (maximum):	0.1mV
DC Amps (maximum):	400µA
Resolution (maximum):	0.01µA
AC Amps (maximum):	400A
Resolution (maximum):	0.01A
Resistance (maximum):	40MΩ
Resolution (maximum):	0.1Ω
Frequency (maximum):	400MHz
Resolution (maximum):	0.001KHz
Capacitance (maximum):	40,000µF
Resolution (maximum):	0.001nF
Temperature (maximum)	1,000°F
Resolution (maximum)	0.1°
Diode:	Test Current Max 1.5mA
Continuity:	Buzzer sounds at <approx. 35Ω Response time; 50ms
Agency Approval:	CEIEC 1010: CATIII; 600V cULus 61010
Overall Dimensions:	10" x 1.3" x 2.5" (255 x 32.5 x 65mm)
Weight:	.8 lbs (363g)

### Standard Accessories

GK11M	Standard K-Kype Thermocouple Probe
A085	UL Listed Silicone Test Lead Set with Alligator Clips (screw on)
A270	Soft Carrying Pouch

### Optional Accessories

A202	Line Splitter
A771	Carbon Monoxide Adapter
A620	Pressure Adapter
TLS2000RB	Deluxe Test Lead Kit

### Distributed By:



To learn about the entire line of TPI products visit:

**www.tpi-thevalueleader.com**

Copyright © 2005 Test Products International, Inc. L 270-1205

# 270

### 1. How does the non-contact voltage detection work?

This feature allows you to detect the presence of voltage without contacting the circuit with the test leads. By pressing the NCV button and holding the jaw close to the wire or circuit, the meter will inform you both audibly and visually if the circuit is live.

### 2. What is hi voltage indication?

High voltage indication is an audible and visual safety alert informing you the test leads are in contact with a voltage greater than 30V AC or DC.

### 3. What is relative mode?

Relative mode allows you to perform measurements relative to a stored value. For example, when performing a low resistance measurement, first touching the test prods together and pressing the relative button will subtract the lead resistance from subsequent measurements.

### 4. Is it possible to determine the maximum current draw on a line that has loads that vary?

By activating the min/max mode on the 270 it will record the minimum and maximum current measured. This is helpful when trying to see what the maximum load draw is as devices turn on and off.

### 5. Can I measure motor start up current with the TPI 270 clamp-on tester?

Yes, the 270 has a peak hold function that allows motor start up current to be captured.

### 6. Can I test the run and start capacitors on motors?

The 270 has the ability to measure capacitors up to 40,000 microfarads in size.

### 7. Do I need an adapter to measure temperature with the 270?

An adapter is not needed to perform temperature tests with the 270. The 270 accepts K-type thermocouple probes with a sub-mini connector.

### 8. What is the value of having an analog bargraph display?

The analog bargraph allow you to see rapid signal fluctuations occurring too fast to be seen on the digital display. Meters without this feature are unable to show the presence of rapidly fluctuating inputs.

### 9. Is it possible to measure AC amps on a device that uses a power cord?

Yes, to accomplish this you can use the TPI line splitter (A202). AC amps must be measured by isolating a single wire and the A202 line splitter does this without damaging the power cord.