



**THE DATASHEET OF
A103**





Your Tools at Work

True RMS DMM & Handheld Oscilloscope

6 INSTRUMENTS IN 1

The versatile handheld TPi 440.... a customer winner!



COMPARE!	TPi 440	FLUKE 87-5	FLUKE 867BE
1. 4,000 Count True RMS DMM w/waveform display	Yes	No	Yes
2. 1 MHz Oscilloscope	Yes	No	Yes
3. Trend Mode	Yes	No	Yes
4. Component Test	Yes	No	Yes
5. Logic Test	Yes	No	Yes
6. Frequency Counter	Yes	Yes	Yes

The above information is provided to the best of TPi's knowledge and is not guaranteed. The above information is subject to change at any time.

Advanced Capabilities for the Troubshooter....

- **POWER QUALITY**
- **INDUSTRIAL MOTOR CONTROLS**
- **View waveform to verify power quality delivered to variable speed drives.**
- **Measure voltage and frequency at the same time.**
- **400µF to check motor start and run capacitors.**
- **DC µAmps for checking flame safety controls.**
- **DC mV for checking thermocouples.**

Waveform analysis is a key troubleshooting technique for quickly locating electronic system problems. An oscilloscope provides a picture of voltage with respect to time. Voltage is displayed vertically and time horizontally. The TPi 440 combines the features of a Digital Multimeter with the waveform capability of a 1 Mhz bandwidth oscilloscope. This easy-to-use instrument features Continuous autoset for operating simplicity and a separate T-Base Button to manually adjust the sweep rate. See reverse inside and reverse for further details.



Low Current Adapter A254
Measures from 10mA to 60 amps AC/DC.



Current Shunt Adapter A130
Allows any DMM with AC/DC millivolt range to measure up to 30 amps.



Pressure Adapter A620
Measure up to 500 PSI. Measure up to 10,000 PSI.



Cigarette Lighter DC Adapter A408
Charge the 440 while on the road or in remote locations.



tpi-thevalueleader.com

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TPi 440 Applications

- Power Quality
- Variable Speed Drives
- Industrial Motor Controls
- Battery Testing
- Programmable Logic Controls
- NC/CNC Machines
- Uninterruptable Power Supplies
- Audio
- Video
- Industrial Lighting Controls
- Factory Automation
- Line Conditioners
- Voltage Regulators
- Inverters
- Gaming Industry

See page two for technical information.

The Value Leader™

6 Instruments in 1...

- 1 Auto Ranging 4,000 Count True RMS DMM**
TPi's 440 has 9 measurement functions and 0.3% basic DC accuracy.
- 2 1 MHz Oscilloscope**
View industrial power signals such as motor controls, UPS, switching power supplies, and PLC controls with detail and clarity.
- 3 Trend Mode**
Graph readings over a predetermined time period to check for surges or dropouts.
- 4 Component Test**
Check voltage-current signatures on resistors, capacitors, and semiconductors.
- 5 Logic Test**
Indicates transitions up to 2 MHz.
- 6 Frequency Counter**
Measure low frequency signals from 1Hz to 2 MHz and display duty cycle, pulse width and period.

- **PC/Printer Compatibility to RS-232C Port** Optional accessory A402 allows user to download data or waveforms to PC for archiving, processing, and report generation. Ideal for extended monitoring.

Waveform capabilities

Applications and Frequently Asked Questions

Auto Button

Press the Auto Button to manually adjust sweep (time/division) to shrink or enlarge waveforms for analysis.

Autoset

Autoset automatically determines the correct vertical and horizontal settings for optimum waveform viewing. Autoset saves hands free operation while moving between test points.

Printer Compatibility to RS-232C Port

The optional RS-232C printer accessory A402 allows user download data or waveforms to a PC for archiving, processing, and report generation. Perfect for extended monitoring. Eight waveform storage locations enables remote data acquisition for later viewing.

DMM

The 440 DMM allows the user to obtain accurate measurements of non-sinusoidal AC voltage and current waveforms found in controls and power supplies. **Optional Version:** 220 volt 50/60Hz capacitor is included when specifying **440X**.

440 comes with 440 Oscilloscope and protective boot.

440 comes with 440 Oscilloscope, protective boot, and A402 PC software 32 cable



Deluxe Test Lead Kits TLS2000B & TLS2000RB
High-quality silicone-rubber test leads with 700-wire strand.



Cigarette Lighter DC Adapter A408
Charge the 440 while on the road or in remote locations.

Industrial motor control

View start-up inrush currents, waveform symmetry, SCR trigger pulses, variable frequency drive signals, pulse width modulation, noise, miscellaneous AC/DC speed control signals, and synchronous motor and generator field excitation controls.

Power quality

Define AC voltage wave shapes, current waveforms, machine start-up and power quality interference, and noise on industrial feeds and/or general noise.

Battery testing

Measure voltage drops in Gel-Cell type batteries when connected in circuit. Measure stationary battery charger float and equalize voltages and individual cell voltages in DC backup power systems.

Programmable logic controls

Read PLC input and output signals, control signals, signal conditioning circuits, communication lines and power supplies.

NC/CNC machines

Check power quality, sensor outputs, control circuits, safety circuits, calibration and adjustments of components, relays and switches. Troubleshoot axis drives.

Uninterruptible power supplies

Sense and monitor circuits, switching circuits, output waveforms and current waveforms.

Audio

Locate noise spikes and voltage/current drops on all home/auto amplifiers, mixers, preamps, and paging system amplifiers.

Video

Analyze horizontal and vertical scan rates, z-axis blanking, sync pulses and luminance.

Industrial lighting controls

Troubleshoot SCR and Trac dimming controls and photo sensors. Measure lamp ballast voltages.

Factory automation

Robot control signals, machine vision, machine control and sensing circuits, calibration of positioning systems, analog controllers, and servo controls.

Line conditioners

Detect noise and monitor waveform distortion.

Voltage regulators

Define noise and stability.

Inverters

Define waveform quality.

Gaming Industry

Troubleshoot for component and capacitor degrading which causes noise to appear as periodic waveforms or rapid fluctuations. Most meters cannot catch these anomalies due to a slow sampling frequency. The 440 samples at 20 million times per second. This offers a visual graph of the voltage making it fast and simple for you to detect the noise.

FAQ

Where do I use the 440?

The 440 is ideal for viewing industrial power signals, UPS systems, power supplies and PLC controls. Use anywhere a DMM is used.

Does the 440 measure capacitance?

Yes, the 440 can measure up to 400uF (microfarads).

What is the highest voltage the 440 can measure?

The 440 can measure up to 1,000 DCV and 1,000 ACV.

What is the lowest voltage the 440 can measure?

The 440 can measure down to 0.1 millivolts on both DCV and ACV.

The scope also has a volts/division setting of 0.1 volts.

How is the RS232 port used?

With the optional A402 cable and software you can acquire data and download it to a spreadsheet.

Can the 440 measure more than 10 DCA or ACA?

Yes, TP1 offers a number of amp adapters to extend the range up to 1,000 amps. TP1 has a wide range of optional accessories that enables the user to measure amps, temperature, pressure, or CO.

CERTIFICATION OF CALIBRATION, CERTIFICATE OF COMPLIANCE

For details and related fees, call 800-368-5719.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- [View A103 on WIN SOURCE](#)
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- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management