

**FLUKE®**

**NEW!** 6.5 Digit Precision  
Multimeter from Fluke



**FLUKE®**

# Fluke 8845A & 8846A 6.5 Digit Precision Multimeter

- World renowned leader in precision DMM's



World renowned leader in precision

# Analog Performance

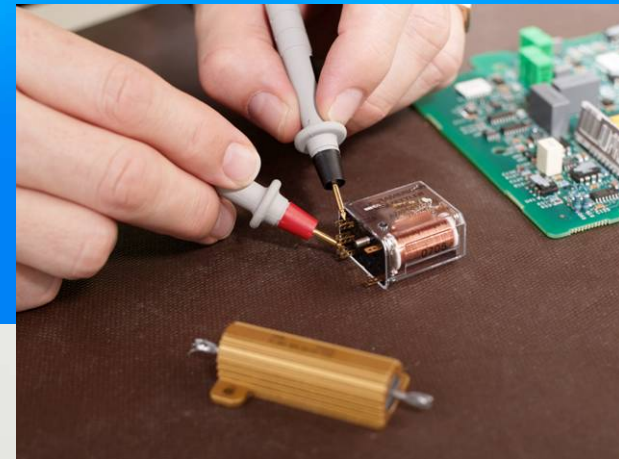
- For Precision Measurement Applications
  - 6.5 Digit Resolution
  - Primary & Secondary Readings
  - 0.0024% Basic Vdc Accuracy
  - With Wider Ranges
    - 100 mV to 1000 V with 100 nV Resolution
    - 10  $\Omega$  to 1 G $\Omega$  with 10  $\mu\Omega$  Resolution
    - 100  $\mu$ A to 10 A with 100 pA Resolution

# Full Suite of Measurements

- A variety of measurements for every application
  - Volts, Ohms and Amps Plus:-
  - Capacitance: 1 nf to 50 mF, 1 pF Resolution
  - Temp: RTD, -200 °C to 600 °C, 0.001 °C Resolution (RTD 4 Wire & 385 with Ro & Alpha parameters)
  - Freq & Period: 3 Hz to 1 MHz @  $\pm 0.01$  % Rdg
  - Math Functions: Zero, dBm, dB, Min/Max/Ave & Standard Deviation

# Innovative Functions

- Unique innovative functions that extend meter utility
  - Patented 2x4 Wire Ohms Measurement Technique.
  - USB Memory Port
  - TrendPlot™
  - Histogram
  - Statistics



## System Connectivity

- Remote interfaces to PC's and ATE systems
  - IEEE-488.2
  - LAN
  - RS-232
  - Optional - RS-232 to USB Adapter
  - Trigger I/O
  - Rear Panel Inputs
  - Fluke 45 & Agilent 34401A Command Emulation

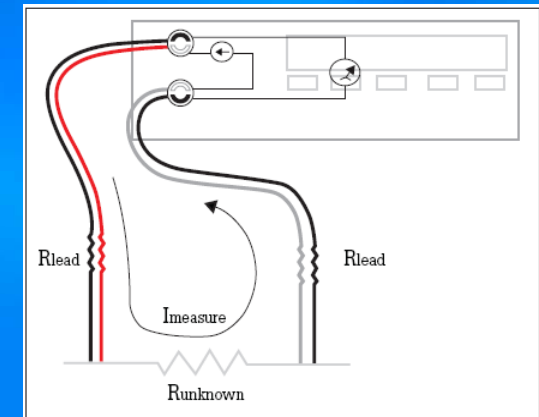




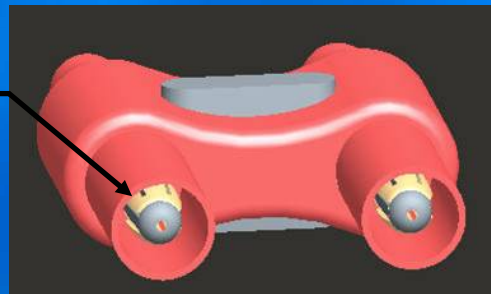
# 2x4 Wire Ohms Technique

FLUKE®

- 4 Wire measurement method is used for precision lo-ohms measurements, typically  $< 100$  Ohms
- **Why:** Eliminates including the test lead resistance in measurement, typical 0.5 Ohm without 4 wire
- **What does 2x4 Wire Ohms do:**
  - 1) Combines 4 wire Source & Sense leads into two test leads,
  - 2) Simplifies connecting to the device under test, eliminating setup errors.
  - 3) Allows probing into tight or small components



Patented Split Contacts provide 4 wire measurements in a single pair of test leads



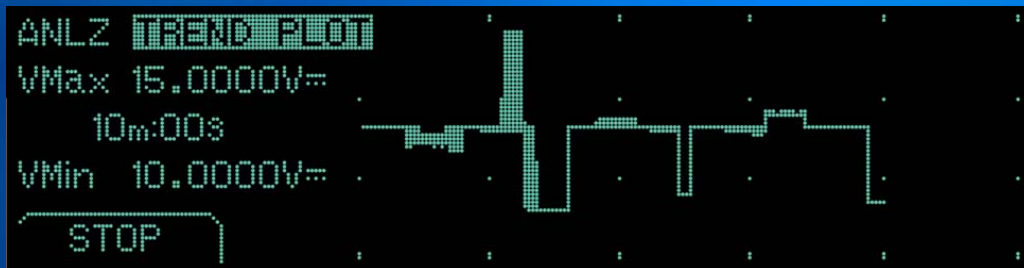
## Applications

- Relay contact resistance
- Coil resistance
- Terminators (Lo-Ohms)
- Connector contacts
- Reference Dividers

# TrendPlot™

FLUKE®

- Trendplot is used to understand signal dynamics like drift, glitches etc.
- **Why:** A numeric based DMM cannot display signal historic trends.
- **What does the 8845A and 8846A offer:**
  - 1) Graphical display that plots measurements over time.
  - 2) Quickly display signal issues like drift, glitches, surges and drop-outs.
  - 3) Real time analysis, no need to transfer data to a PC.
  - 4) Vertical resolution up to 1 ppm, unheralded for graphical trend plotting



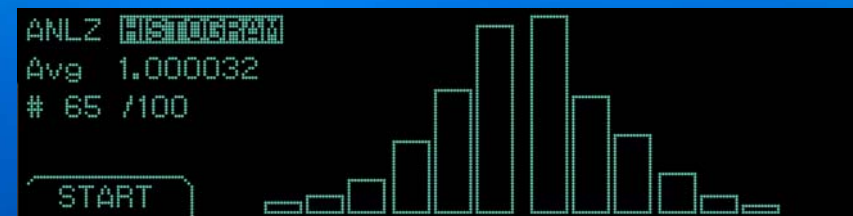
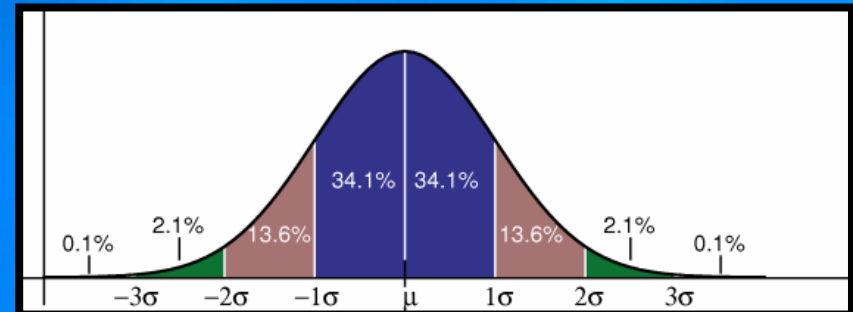
## Applications

- Temperature Monitoring
- Monitoring reference test points through temperature cycle
- Verify circuit designs.
- Temp Controlled Crystal Oscillator circuit tests
- Capture Intermittent Events
- Power Supply Stability Tests



## Statistical Analysis

- Easily determine standard deviation (noise) of a set of measurements
- **Why:** Quantify measurements with real data. Determine statistical distribution of measurements relative to DUT specifications
- **What does the 8845A and 8846A offer:**
  - 1) Automatic calculation of Min, Max, Ave and Standard Deviation
  - 2) For convenience, present results in one screen. Eliminate having to switch functions and re-take measurements
  - 3) Graphically plot Histogram, providing an easy to use visual analysis tool.



And... It's easy to use!

- Dot Matrix display with context sensitive menus and soft keys
- Direct access to measurement parameters and instrument settings



## Current Input Fuses

- The 100 mA and 10 A inputs are protected by user-replaceable fuses.
  - 100 mA input, fuse rated at 440 mA, 1000 V (fast blow)
  - 10 A input, fuse rated at 11 A, 1000 V (fast blow),



- Gain easy access without breaking cal seal
- Safety Rated CAT I 1000V, CAT II 600V
- **Warning:** For protection against fire or arc flash, replace a blown fuse only with one of the identical rating.

# Summary Specifications

- Internal Memory
  - 5000 Readings
- Power
  - 100V, 120V, 220V, 240V
  - 47 Hz to 440 Hz
  - 28VA peak
  - 12 W Avg
- Display
  - Vacuum Fluorescent, Dot Matrix Display

	8845A	8846A
Resolution	6.5 Digits	
<b>Measurement Function</b>		
Basic VDC Accuracy	0.0035%	0.0024%
VDC	1000 V	
VAC	750 V	1000 V
Resistance (2x4 Wire Ohms)	100 Mohm	1 Gohm
ADC	100 uAmp to 10 Amp	
AAC	10 mAmp to 10 Amp	100 uAmp to 10 Amp
Freq/Period	3 Hz to 300 kHz	3 Hz to 1 MHz
Continuity / Diode Test	Yes	
Capacitance	—	1 nF to 0.1 F
Temperature RTD	—	-200° to + 600°
<b>Advanced Functions</b>		
Analytical Functions	Statistics, Histogram, TrendPlot™, Limit Compare	
Math Functions	NULL, Min/Max	NULL, Min/Max, dB/dBm
<b>Input Output</b>		
USB Memory Port	—	USB Memory Drive port
Real Time Clock	—	Yes
Interfaces	RS232, IEEE-488.2, Ethernet, USB Adapter	
Programming/ Emulation	SCPI (IEEE-488.2), Agilent 34401A, Fluke 45	
<b>General</b>		
Weight	3.6 kg (8.0lbs)	
Size	8.46" (215mm)W, 3.46" (88 mm) H, 11.53" (293 mm) D	
Safety	Designed to comply with IEC 61010-12000-1, ANSI / ISA-S82.01-1994, CAN / CSA-C22.2 No.1010.1-92 1000V CATI / 600V CATII	
Warranty	1year	

## Models

<b>Mainframes</b>		
8845A	6.5 Digit Precision Multimeter, 35ppm	\$995
8845A/SU	6.5 Digit Precision Multimeter, SW & Cable	\$1195
8846A	6.5 Digit Precision DMM, 24ppm USB Mem	\$1395
8846A/SU	6.5 Digit Precision Multimeter, SW & Cable	\$1595
<b>Whats Included: Standard Units</b>		
TL71 LCI Line Cord Fuse CARD  Warranty CD-ROM FVF-SC5	TL71, TEST LEAD SET, PREMIUM DMM Line Power Cord Spare Line Power fuse Statement of Calibration Practices (8 1/2 x 11 Sheet paper) WEEE Information Sheet Registration Card, Generic, Web Access Accessories Brochure Warranty Information Document CD-Rom, Programmer And Users Manual, 8845A/8846a FlukeView Forms -Basic For 8845/8846	
<b>884xA SU (Software plus Cable bundle)</b>		
FVF-UG 884X-USB	FlukeView Forms Software Upgrade - NO cable USB to RS232 cable adapter	

## Accessories

Accessories		
Test Leads & Probes		
TL71	TL71, Test Lead Set, Premium DMM	\$16
TL910	Precision Electronic Probe Set	\$40
TL80A	Basic Electronic DMM Test Set	\$45
8845A-TPIT	Test Probe IC Tip (Set Red & Black)	WIP
8845A-EFPT	Extended Fine PT Tip Adap Set (Red/Black)	WIP
TL2X4W-PT	2x4 Wire Ohms Test lead	\$75
TL2X4W-KC	2x4 Wire Ohms Kelvin Clip	WIP
TL2X4W-TWZ	2x4 Wire Ohms SMD Test Tweezer	WIP
884X-RTD	100 Ohm RTD Temperature Probe	WIP
884X-SHORT	4-Wire short	\$30
Interface Cables		
884X-USB	USB to RS232 cable adapter	\$150
884X-ETH	Ethernet Interface Cable	\$18
RS43	RS232 Cable (2m)	\$50
Y8021	IEEE488 cable (1m)	\$210
Y8022	IEEE488 cable (2m)	\$260

Memory		
884X-512M	USB Memory 512M	\$75
884X-1G	USB Memory 1 GB	\$125
Software		
FVF-UG	FlukeView Forms Software Upgrade - NO cable	\$75
FVF-SC4	FlukeView Forms W/Cable For 8845/8846	\$225
Other		
Y8846	Rack Mount Kit	WIP
FUSE	FUSE, 11A, 1000V, FAST, .406INX1.5IN, BULK	\$7.75
FUSE	FUSE, .440 mA, 1000V, FAST, .406X1.375, BULK	\$7.9



# Summary

- The Fluke 8845A & 8846A provide the best in class analog performance
- Have a complete suite of measurement functions for every application
- Include new innovative techniques and functions to improve testing and troubleshooting

**The Best Performance, Utility and Value in 6.5 Digit  
Multimeter Category**