

New 6.5 digit DMM



884X – 6.5 Digit Precision DMM

884X – background

- ❑ Brand recognition - Fluke is market leader in DMM category
- ❑ Technology - Fluke is built on precision low frequency source and measurement technology
- ❑ Product offering – we have not had a competitive bench DMM for 10 years

A bench DMM is the most asked-for new product from Fluke!

8845 & 8846 position



Adds a new 6.5 Digit 0.0024 % Vdc accurate multimeter to portfolio

Analogue performance

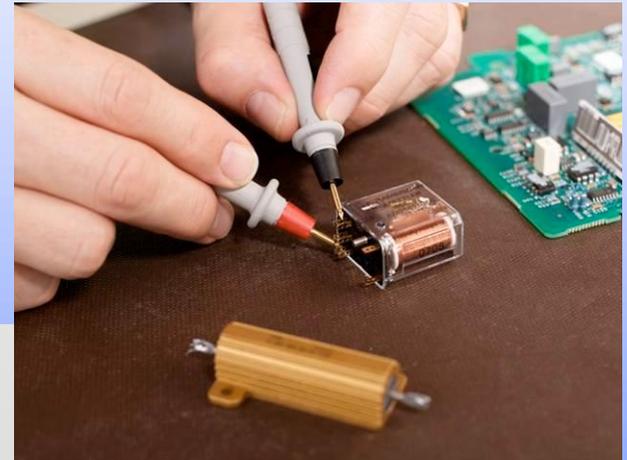
- For precision measurement applications
 - 6.5 digit resolution
 - primary & secondary readings
 - 0.0024% basic V_{dc} accuracy
 - with wider ranges
 - 100 mV to 1000 V with 100 nV resolution
 - 10 Ω to 1 G Ω with 10 $\mu\Omega$ resolution
 - 100 μ A to 10 A with 100 pA resolution

Full suite of measurements

- A variety of measurements for every application
 - Volts, Ohms and Amps plus:-
 - Capacitance: 1 nF to 10 mF, 1 pF resolution
 - Temp: RTD, -200 Å to 600 Å, 0.001 Å resolution (RTD 4 Wire & 385 with R_0 & Alpha parameters)
 - Freq & period: 3 Hz to 1 MHz @ ± 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 device port
 - TrendPlot™
 - Histogram
 - Statistics



System connectivity

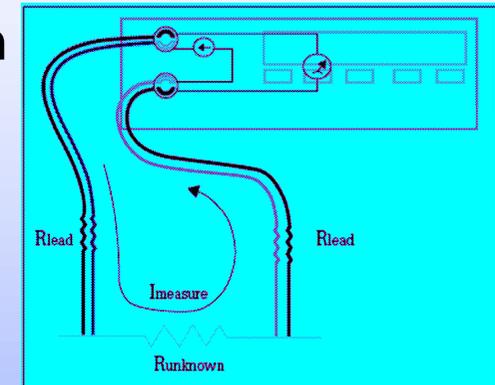
Remote interfaces to PC's and ATE systems

- IEEE488.2
- LAN
- RS232-USB adapter [optional]
- Trigger I/O
- Rear panel inputs
- Fluke 45 & Agilent 34401A command emulation

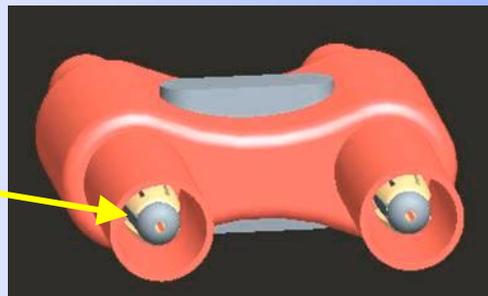


2 x 4 wire Ohms technique

- ❑ 4 wire measurement method is used for precision lo-O measurements, typically <math><1000\Omega</math>
 - Eliminates test lead resistance from measurement typically 0.5Ω
- ❑ 2x4 wire Ohms
 - Combines 4 wire source & sense leads into two test leads
 - Simplifies connecting to the device under test, eliminating setup errors
 - Allows probing into tight or small components



Patented split contacts provide 4 wire measurements in a single pair of test leads

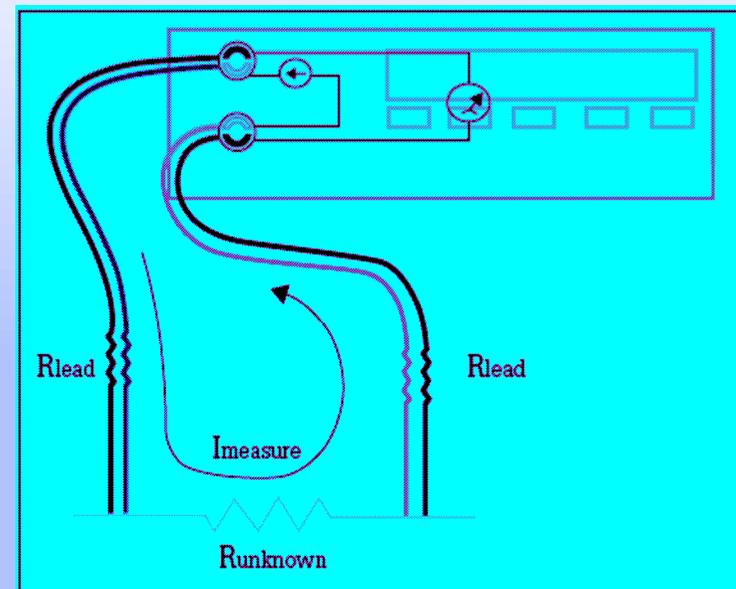


Nordic Tour

September 2006

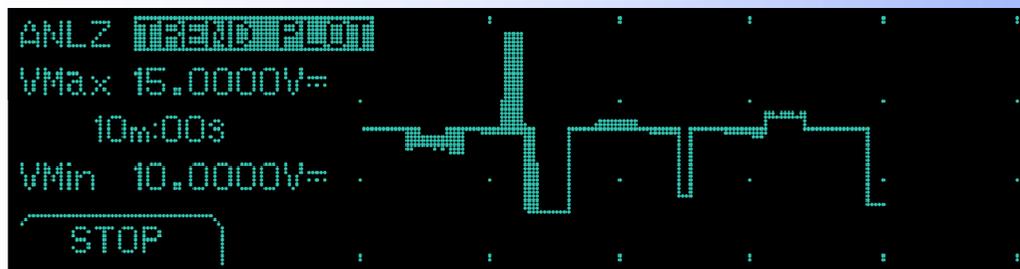
2 x 4 wire Ohms technique

- Applications
 - Relay contact resistance
 - Coil resistance
 - Terminators (loO)
 - Connector contacts
 - Reference dividers



Trendplot™

- ❑ Used to understand signal dynamics – drift, glitches etc.
- ❑ Numeric based DMM cannot display signal historic trends
- ❑ 8845A & 8846A offer:
 - Graphical display that plots measurements over time
 - Quickly display signal issues like drift, glitches, surges and drop-outs
 - Real time analysis – no need to transfer data to PC

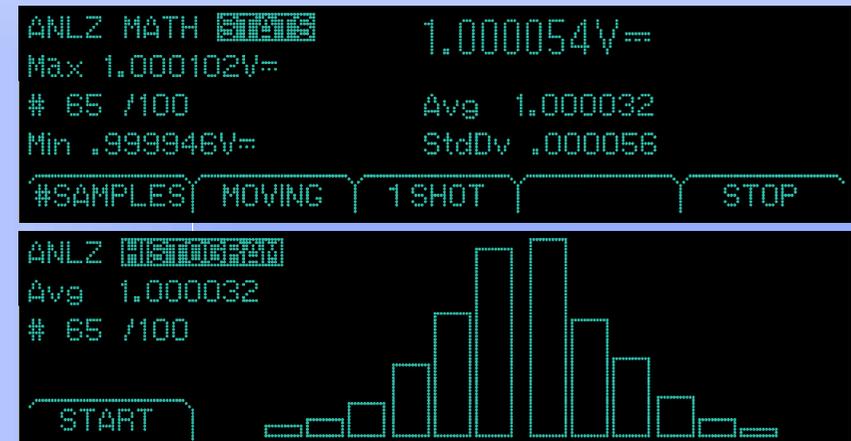
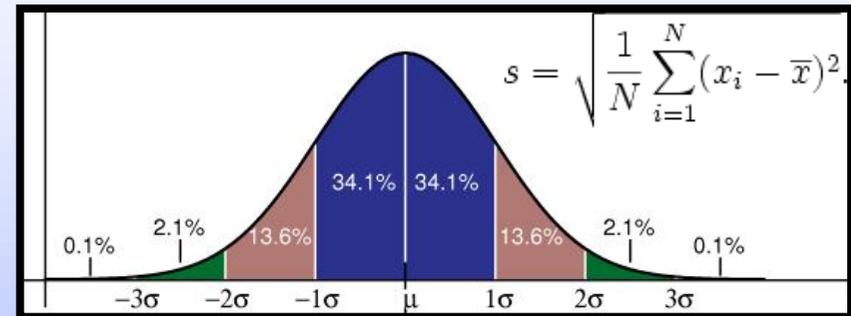


Applications

Temperature monitoring
Monitoring reference test points through temperature cycle
Verify circuit designs
TCXO circuit tests
Capture intermittent events
Power supply stability tests

Statistical analysis

- ❑ Determine the deviation or variance of the measured value relative to expected value
- ❑ Helps us understand how close and how often the measured value reaches limits of tolerance
- ❑ 8845A & 8846A offer:
 - Automatic calculation of min, max, ave and SD
 - Results presented on one screen – eliminates need to switch functions and retake measurements
 - Plots histogram – an easy to use visual analysis tool



Easy to use !

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



Summary specifications

- Internal memory
 - 5000 readings
- Power
 - 100V, 120V, 220V, 240V
 - 47-440Hz
 - 28VA peak
 - 12W average
- Display
 - vacuum fluorescent dot matrix

	8845A	8846A
Resolution	6.5 Digits	
Measurement Function		
Basic VDC Accuracy	0.0035%	0.0024%
VDC	1000 V	
VAC	750 V	1000 V
Resistance (2x4 Wire Ohms)	100 Ω to 100 MΩ	10 Ω to 1 GΩ
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°
Advanced Functions		
Analytical Functions	Statistics, Histogram, TrendPlot™, Limit Compare	
Math Functions	Ratio, NULL, Min/Max	Ratio, NULL, Min/Max, dB/dBm
Input Output		
USB Device Port	—	USB Memory Drive port
Real Time Clock	—	Yes
Interfaces	RS232, IEEE-488.2, Ethernet	
Programming & Emulation	SCPI (IEEE-488.2), Agilent 34401A, Fluke 45	
General		
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 61010-1 CAT I 1000V CAT II 600V	
Warranty	1 year	

Models

884X – 6.5 Digit Precision DMM

Mainframes	
8845A	6.5 Digit Precision Multimeter, 35ppm
8845A/C	6.5 Digit Precision Multimeter, 35ppm Cert
8845A/SU	6.5 Digit Precision Multimeter, SW & Cable
8845A/CSU	6.5 Digit Precision DMM, Cert, SW & Cable
8846A	6.5 Digit Precision DMM, 25ppm USB Mem
8846A/C	6.5 Digit Precision DMM, 25ppm USB Mem Cert
8846A/SU	6.5 Digit Precision Multimeter, SW & Cable
8846A/CSU	6.5 Digit Precision DMM, CERT, SW & Cable
What's Included:	Standard Units
TL71	TL71, TEST LEAD SET, PREMIUM DMM
LCI Line Cord	Line Power Cord
Fuse	Spare Line Power fuse
CARD	Statement of Calibration Practices (8 1/2 x 11 Sheet paper) WEEE Information Sheet Registration Card, Generic, Web Access Accessories Brochure
Warranty	Warranty Information Document
CD-ROM	CD-Rom, Programmer And Users Manual, 8845A/8846a
FVF-SC5	FlukeView Forms -Basic For 8845/8846
884xA SU (Software plus Cable bundle)	
FVF-UG	FlukeView Forms Software Upgrade - NO cable
884X-USB	USB to RS232 cable adapter

Accessories

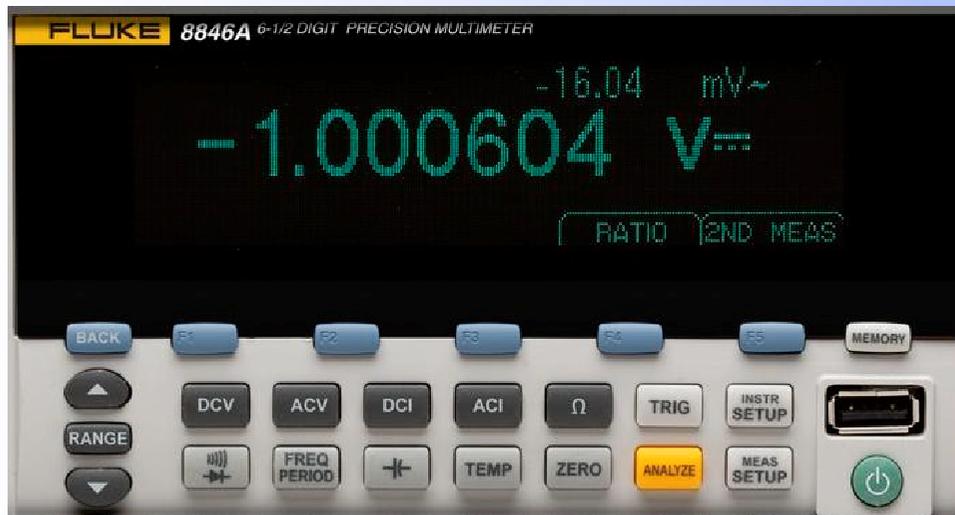
884X – 6.5 Digit Precision DMM

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

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

Summary

- ❑ Provides best in class analogue performance
- ❑ Complete suite of measurement functions for every application
- ❑ New innovative techniques and functions to improve testing and troubleshooting



*The best performance,
utility and value in 6.5 digit
multimeter category*