

# M9182A/M9183A High-Performance PXI DMMs

## Get fast throughput and trustworthy measurements

The Keysight Technologies, Inc. M9182A and M9183A 6½ digit high-performance PXI digital multimeters offer fast development, fast operation, and reliable results. The M9182A provides nine built-in measurement types with all the accuracy and stability you would expect from a Keysight 6½ digit digital multimeter (DMM). The M9183A provides the same capabilities as the M9182A plus market-leading measurement speed, additional ranges, and advanced triggering.



Figure 1. M9182A/M9183A High-Performance PXI DMMs

Model/option	Description
M9182A	PXI Digital Multimeter, 6½ Digit
M9183A	PXI Digital Multimeter, 6½ Digit Enhanced Performance

Hardware		M9182A	M9183A
Resolution	6½ digit		
DCV basic 1-year accuracy	40 ppm		
4½ digit rdg/s	4,500		15,000
Triggering	External, Threshold level, pre- or post-		
Measurement ranges			
DCV, ACV	200 mV to 250 V		
DCI	2 mA to 2 A		200 nA to 2 A
ACI	2 mA to 2 A		
2 & 4-wire resistance	200 Ω to 20 MΩ		20 Ω to 200 MΩ
Frequency/period	1 Hz to 300 kHz		
Capacitance	1 nF to 10 mF		
Temperature	Thermocouple (B, E, J, K, N, R, S, T), RTD (6 types), Thermistor (2.25 kΩ, 5 kΩ, 10 kΩ)		
Other measurements	n/a	Offset compensated ohms, pulse width & duty cycle, totalizer/ event counter	
DC Source	n/a	± 10 V, ± 12 mA	
Floating isolation (Cat-II)	250 Vrms	250 Vrms	
Connector compatibility	cPCI, PXI-H, PXI-1		
Sensitivity			
Function	Lowest range	Sensitivity	
DCV	200.0000 mV	0.1 µV	
ACV	200.0000 mV	0.1 µV	
Resistance (M9183A)	20.00000 Ω	10 µΩ	
Resistance (M9182A)	200.0000 Ω	100 µΩ	
DCI (M9183A)	200.0000 nA	0.1 pA	
DCI (M9182A)	2.000000 mA	10 nA	
ACI	2.000000 mA	1 nA	
Capacitance	1000.0 pF	0.1 pF	
Resolution vs. aperture and reading rate for DCV, DCI, Ω			
Measurement aperture	Maximum readings per second	Resolution	
10 ms	98	6½ digits (22 bits)	
625 µs	1,200	5½ digits (18 bits)	
130 µs	4,500	4½ digits (14 bits)	
2.5 µs (M9183A only)	15,000	4½ digits (14 bits)	
System requirements			
Operating systems	Microsoft Windows XP, Microsoft Windows Vista (32/64 bit), Microsoft Windows 7 (32/64 bit)		
Software			
Software development platform	Visual Studio (VB.NET, C#, C/C++), Lab-VIEW, LabWindows/CVI, VEE, MATLAB		
Included GUI	Soft front panel		
Application code examples	C/C++, Visual Basic		

More Information: <http://www.keysight.com/find/modular>

## Main Features and Benefits

### Product features

Measurement speeds up to 15,000 readings/second; single reading interval time: 66 $\mu$ s
Basic DCV accuracy of 40 ppm
Measurements: DCV, ACV, DCI, ACI, 2 & 4-wire $\Omega$ , frequency/period, temperature, capacitance
Software drivers support the most common programming environments
Soft front panels and Keysight connection expert

### Your benefits

Fast single reading test throughput saves functional test time, especially when taking several different measurements with the DMM
Measurements you can trust
Reduces instrumentation and accessories required
Work in your environment of choice and reduce development time
Fast and easy installation and configuration

## Soft front panel

Keysight soft front panel provides easy-to-use instrument control. The M9182A and M9183A graphical user interface guide developers through module setup so users can quickly configure the DMM.

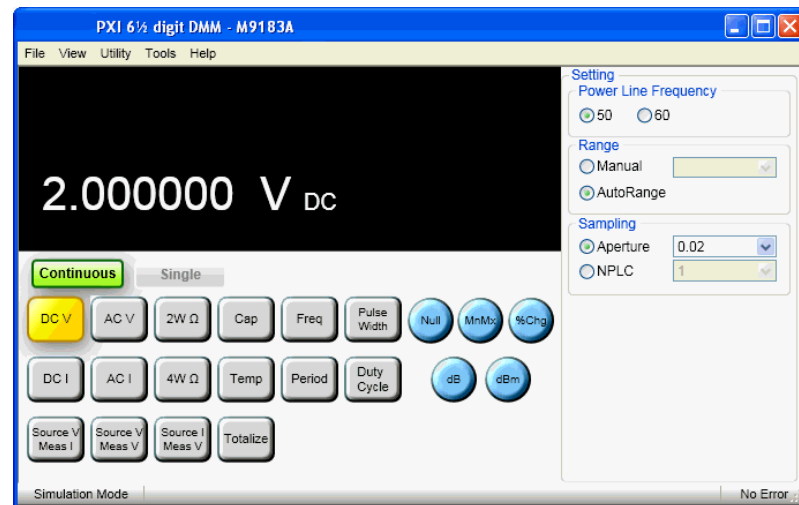


Figure 2. M9182A and M9183A soft front panel

## Industries and Applications

- Aerospace and defense
- Automotive
- Electronics test
- Medical
- Semiconductor

## Ordering Information

Model	Description
M9182A	PXI Digital Multimeter-6½ Digit
M9183A	PXI Digital Multimeter-6½ Digit, Enhanced Performance

Accessories	Description
34138A	Test lead set

Learn more at: [www.keysight.com/find/E36731A](http://www.keysight.com/find/E36731A)