



Keysight 34980A Multifunction Switch / Measure Unit

Compact, economical one-box solution for medium to high-density switch / measure applications in design verification, automated test and data acquisition

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34980A Multifunction Switch / Measure Unit

The Keysight 34980A Multifunction Switch / Measure unit is designed for R&D and manufacturing test engineers working in design verification, automated test, or data acquisition who are either looking to upgrade their existing systems or need a new, cost-effective alternative.

The 34980A is an eight-slot mainframe that offers 19 plug-in modules and an optional 6 1/2-digit DMM. It is easy to integrate with standard LAN, USB, and GPIB connectivity to a PC and is priced up to 40% less than comparable switching solutions.

Broad offering of modules

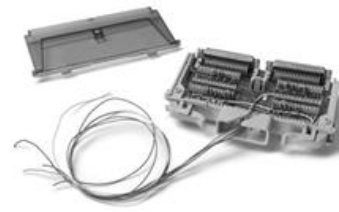
With 19 different plug-in modules in low frequency, RF and microwave switching to 20 GHz, digital I/O, D/A converters, and counter/totalizer functionality, the 34980A has the core switch/measure functionality needed for most automated test and data acquisition applications. The 34980A can accommodate up to 560 2-wire MUX or 1024 2-wire matrix crosspoints in one mainframe.



Standard Dsub cable



Connector kit



Screw terminal block

Internal DMM option

The 6 1/2-digit DMM is mounted inside the mainframe without consuming any of the eight available slots. It can measure 11 types of inputs.

- Temperature and thermocouples, RTD's, or thermistors
- DC and AC voltage
- 2- and 4-wire resistance
- Frequency and period
- DC and AC current

Ease of integration

With the 34980A, you can make quick and easy system connections by choosing between standard 50— or 78-pin DSub cables, quick-disconnect terminal blocks, or mass interconnect connections.

The 34980A offers built-in LAN, USB 2.0, and GPIB interfaces for simple connection to your PC, as well as the most common programming environments with SCPI, IVI, or LabView software drivers.

Built-in graphical web interface

Remote access and control of the instruments via a Java-enabled browser.

- Set up, troubleshoot, and maintain your system remotely
- View and modify instrument setup
- Open, close, or monitor switches
- Setup and initiate scans
- Send SCPI commands
- Define and execute switch sequences
- View error queue
- Get status reports on relay counts, firmware revisions, and more

Low cost

Applications vary, and the 34980A is designed to meet specific testing needs by offering a flexible, tailorable solution for signal switching, battery testing, monitoring, product characterization, thermal profiling, environmental testing, and quality control at a price that is up to 40% less than comparable modular solutions.

34980A modules at a glance

The 34980A mainframe holds up to eight plug-in modules. Mix and match them to create a custom system for your switching and system control needs. You can easily add or replace modules as your requirements change.

Low-frequency modules

Multiplexers		Max volts	Max current	Scan Ch / sec
34921A	40 channel armature	± 300 V	1 A	100
34922A	70 channel armature	± 300 V	1 A	100
34923A	40 / 80 channel reed	± 150 V	0.5 A	500
34924A	70 channel reed	± 150 V	0.5 A	500
32925A	40 / 80 channel optically isolated FET multiplexer	± 80 V	0.5 A	1000

Matrix switches		Max volts	Max current	Scan Ch / sec
34931A	Dual 4 x 8 armature	± 300 V	1 A	100
34932A	Dual 4 x 16 armature	± 300 V	1 A	100
34933A	Dual / Quad 4 x 8 reed	± 150 V	0.5 A	500

GP / Actuator switches		Max volts	Max current	Scan Ch / sec
34937A	28 channel form C	300 V	1 A	N / A
	4 channel form A	250 AC	5 A	N / A
34938A	20 channel 5 Amp form A	250 AC	5 A	N / A

RF and microwave modules

RF switching		Insertion loss, freq range, VSWR
34941A	Quad 1 x 4 50 Ohm	0.6 dB, 3 GHz, < 1.25
34942A	Quad 1 x 4 75 Ohm	Contact factory

Microwave switching		
34945A	Microwave switch / Attenuator drive	Drive up to 64 external switch coils; 32 SPDT switches, 8 multipoint switches, 8 attenuators, or custom combination.
34946A	Dual 1 x 2 SPDT terminated	< 0.42 dB to < 0.69 dB, 4 GHz or 20 GHz, < 1.15 to < 1.30
34947A	Triple 1 x 2 SPDT unterminated	< 0.42 dB to < 0.69 dB, 4 GHz or 20 GHz, < 1.15 to < 1.30

System measurement and control modules

Information

34950A	64 Bit DIO with Memory Counter	Eight 8-bit digital I/O channels, up to 5 V thresholds, 7 handshaking protocols, pattern memory, two 10 MHz frequency counter/totalizers, 10 MHz programmable clock output
34951A	4 Channel Isolated D/A Converter with Waveform Memory	Output DC V up to ± 16 V or DC current up to ± 20 mA, Output waveforms w/200 kHz update rate and 16-bit resolution
34952A	Multifunction Module with 32 Bit DIO, 2 Channel D/A, and Totalizer	Four 8-bit digital I/O channels, 2 ± 12 V analog outputs, 100 kHz gated totalizer
34959A	Breadboard	Access to +12V and +5V supplies, 16 GPIO ports, 32 relay drive lines for custom designs



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