

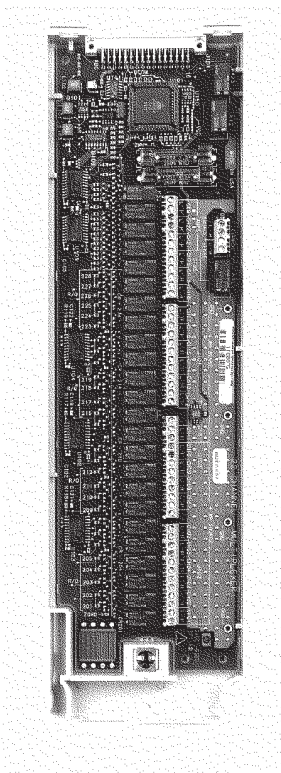
# HP 34970A Data Acquisition/Switch Unit

## Multiplexer Selection Guide

Choose between the broad functionality of the HP 34901A, the high speed scanning of the HP 34902A, or the single-ended density of the HP 34908A. These three modules are the *only* way to connect to the HP 34970A internal DMM. They can be used to scan with external instruments as well.

All multiplexer modules employ break-before-make scanning, ensuring only one closed channel (or channel pair) at a time. Multiple channel closures are allowed on the HP 34901A and HP 34902A modules when not configured for scanning.

	HP 34901A	HP 34902A	HP 34908A
Number of Channels	20 + 2	16	40
Max scan speed	60 ch/s	250 ch/s	60 ch/s
Number of contacts	2 or 4	2 or 4	1
Temperature			
Thermocouple	✓	✓	✓
2-wire RTD	✓	✓	✓
4-wire RTD	✓	✓	
Thermistor	✓	✓	✓
dc Volts	✓	✓	✓
ac Volts	✓	✓	✓
2-wire Ohms	✓	✓	✓
4-wire Ohms	✓	✓	
Frequency	✓	✓	✓
Period	✓	✓	✓
dc current	✓		
ac current	✓		



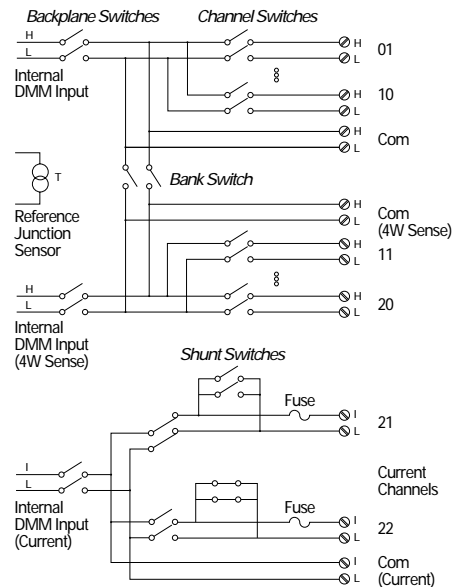
## HP 34901A

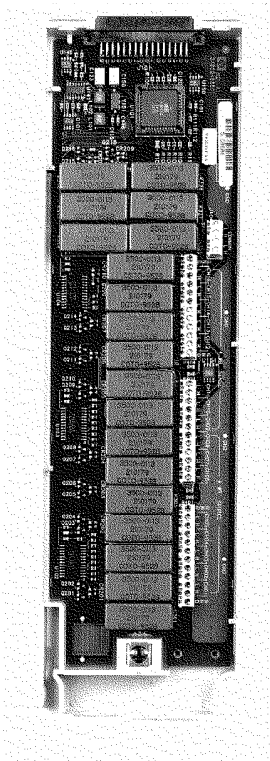
### 20-Channel General-Purpose Multiplexer

- 60 ch/s scanning
- Two- and four-wire scanning
- Built-in thermocouple reference junction
- 300 V switching

The HP 34901A is the most versatile multiplexer for general purpose scanning. It combines dense, multi-function switching with 60 channel/second scan rates to address a broad spectrum of data acquisition applications.

Two- and four-wire channels can be mixed on the same module. Two additional fused inputs (22 channels total) route up to 1A of current to the internal DMM, allowing ac and dc current measurements without the need for external shunt resistors.





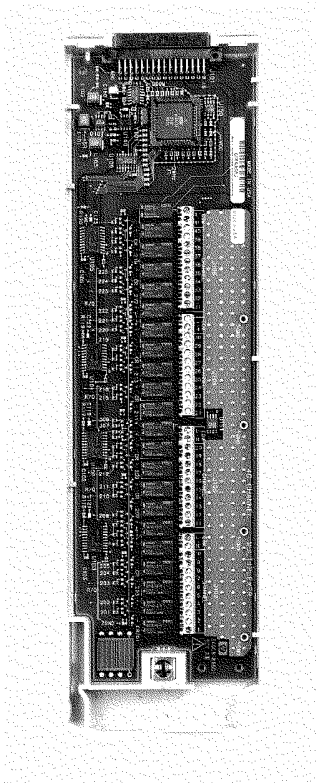
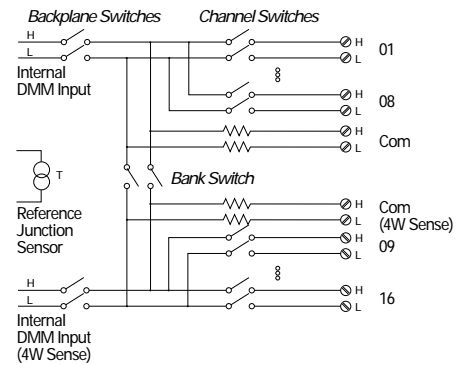
## HP 34902A

### 16-Channel High-Speed Multiplexer

- 250 ch/s scanning
- Two- and four-wire scanning
- Built-in thermocouple reference junction

The HP 34902A employs reed relays to achieve scan rates up to 250 channels-per-second. Use this module for high-throughput automated test applications as well as high-speed data logging and monitoring tasks.

Sixteen two-wire inputs switch up to 300 V. Two- and four-wire channels may be mixed on the same module. User provided shunt resistors are required for current measurements.



## HP 34908A

### 40-Channel Single-Ended Multiplexer

- 60 ch/s scanning
- Single-wire switching for common-low applications
- Built-in thermocouple reference junction

Use the HP 34908A for the greatest density in common-low applications, such as battery test, component characterization, and benchtop testing.

Each module switches 40 one-wire inputs. All two-wire internal measurements except current are supported. The module low connection is isolated from earth and can float up to 300V.

