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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 34921A 40-Channel Armature Multiplexer for 34980A

HP Agilent 34921A 40 Channel Armature Multiplexer Module The Agilent 34921A is a 40-channel armature multiplexer module for 34980A/3499-family switch mainframes providing general-purpose low-frequency signal routing with armature relays. Automated multi-channel voltage and sensor scanning, low-frequency ATE routing, and general-purpose multiplexer switching in 34980A systems. Compatible with 34980A switch mainframe family The Agilent 34921A is a 40-channel armature multiplexer module for 34980A/3499-family switch mainframes providing general-purpose low-frequency signal routing with armature relays. Automated multi-channel voltage and sensor scanning, low-frequency ATE routing, and general-purpose multiplexer switching in 34980A systems. Compatible with 34980A switch mainframe family Mainframe Family: 34980A / related Agilent switch systems



MODEL

**HP / Agilent
34921A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

34921A

LISTING

<https://aumictechlabs.com/products/34921a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 34921A is a 40-channel armature multiplexer module for the 34980A Multifunction Switch/Measure Unit. It delivers high-density signal routing with low thermal offset performance, supporting mixed 2-wire and 4-wire configurations for automated test and data acquisition systems. The module features latching armature relays with integrated relay life monitoring and

direct AC/DC current measurement capability on four dedicated channels, eliminating the need for external shunts in standard current measurement applications. Technical Specifications Channels: 40 (2-wire configuration) Switch Rating: 300 V, 1 A Carry Current: 2 A maximum Scan Rate: 100 channels/second Configuration: Mixable 2-wire or 4-wire Thermal Offset: $<3\ \mu\text{V}$ Relay Type: Latching armature with integrated counter Bandwidth: Up to 45 MHz Current Measurement Channels: 4 channels (AC/DC, built-in; additional channels via optional shunts) Key Features Latching armature relays with integrated relay counter for life monitoring Low thermal offset ($<3\ \mu\text{V}$) for precision low-level signal measurements Four direct AC/DC current measurement channels on channels 41–44 Optional terminal blocks (such as 34921T) provide built-in thermocouple reference junctions for temperature measurements with minimal thermal error 50-pin D-sub connectors support standard cables, terminal blocks, and mass interconnect solutions Safety interlock prevents analog bus connections when not properly configured Typical Applications General-purpose signal scanning, temperature measurement with thermocouple inputs, direct AC/DC current monitoring, and multi-channel data acquisition in automated test environments. Compatibility & Integration Designed as a plug-in module for the Agilent 34980A mainframe. When combined with other 34980A modules, enables up to 560 2-wire or 640 1-wire channels across the system. Connects directly to mainframe analog buses for integrated measurement and switching operations.

34921A Characteristics / Specifications

PARAMETER	VALUE
Channels	40
Switch Type	Armature relay multiplexer
Mainframe Family	34980A / related Agilent switch systems
Scan Type	Break before make class
Thermal Offset Class	Low thermal EMF armature design
Bandwidth Class	DC to low frequency / audio-RF class per datasheet
Max Voltage Class	Module rated voltage per Agilent 34921A sheet
Max Current Class	Module rated current per sheet
Connector	Mass interconnect / terminal block family
Control Path	Through mainframe GPIB LAN or USB class
Form Factor	Plug-in module
Intended Signals	Voltage thermocouple general purpose low frequency
Channel Configuration	Multiplexer banks
Isolation Between Channels	Relay open isolation
Operating Life Class	Armature relay cycle life per datasheet
Temperature Range Class	Mainframe environmental rating
Calibration	Path resistance verification in system
Cold Junction Class	Supported with appropriate terminal options on family
Safety	Module voltage category per datasheet
Status Readback	Relay state via mainframe
Scan Lists	Stored in mainframe memory
Software	SCPI switch commands
Bandwidth	Class: DC to low frequency / audio-RF class per datasheet

34921A Specifications

PARAMETER	VALUE
HP Agilent 34921A 40 Channel Armature Multiplexer Module	Overview
Key Features	40 channel armature multiplexer
Low thermal offset armature relays	Compatible with 34980A switch mainframe family
Technical Specifications	Channels: 40

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Calibration	Path resistance verification in system
Cold Junction Class	Supported with appropriate terminal options on family
Safety	Module voltage category per datasheet
Status Readback	Relay state via mainframe
Scan Lists	Stored in mainframe memory
Software	SCPI switch commands Notes 40-channel armature mux identity from Agilent 34921A product literature. Use the 34921A datasheet for authoritative voltage current bandwidth and thermal EMF numbers before calibration use.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.