

**Aumictech**

Test &amp; measurement • bought, sold, repaired, calibrated

**Data Sheet**

August 15, 2026

AGILENT / KEYSIGHT

## Agilent/Keysight L4421A

Agilent Keysight L4421A 40 Channel Armature Multiplexer The Agilent/Keysight L4421A is an LXI Class C 40-channel armature multiplexer with built-in Ethernet, low thermal offset, and a thermocouple reference on the terminal block for temperature scanning with an external DMM. Four additional fused inputs support current routing without external shunts. Distributed data acquisition, design verification, functional test scanning, and thermocouple temperature measurements with an external DMM. LXI Class C Ethernet with graphical web interface The Agilent/Keysight L4421A is an LXI Class C 40-channel armature multiplexer with built-in Ethernet, low thermal offset, and a thermocouple reference on the terminal block for temperature scanning with an external DMM. Four additional fused inputs support current routing without external shunts. Distributed data acquisition, design verification, functional test scanning, and thermocouple temperature measurements with an external DMM. LXI Class C Ethernet with graphical web interface 40 latching armature 2-wire channels plus 4 fused current inputs



MODEL

**Agilent / Keysight  
L4421A**

CALIBRATION

**Available on request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**L4421A**

LISTING

<https://aumictechlabs.com/products/l4421a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

### This unit

The Agilent/Keysight L4421A is an LXI Class C compliant 40-channel armature multiplexer engineered for signal switching in data acquisition, design verification, and functional test environments. Compact and network-connected via Ethernet, it enables distributed measurement systems with flexible channel configurations - supporting general-purpose scanning or simultaneous multi-channel closure. The

module excels in temperature measurement applications through its integrated thermocouple reference junction and low thermal offset characteristics when paired with an external DMM. Four additional fused inputs route up to 1 A of current to external meters, eliminating the need for external shunt resistors in AC and DC current measurements.

**Technical Specifications**

**Channel Configuration:** 40 switching channels, 2-wire latching armature relays

**Switching Ratings:** Signals up to 300 V and 1 A; 2 A carry current

**Scan Rate:** Up to 100 channels per second

**Current Inputs:** Four fused channels (41–44) rated 1 A maximum for external DMM routing

**Connectors:** Standard 50-pin D-sub

**LXI Compliance:** Class C

**Interfaces:** 10BaseT/100BaseTx Ethernet; optional IEEE 488.2 GPIB

**Web Interface:** Java-enabled graphical setup and remote monitoring

**Relay Diagnostics:** Counter tracks relay cycle life and predicts end-of-life conditions

**Power Supply:** 100 V to 240 V  $\pm 10\%$  input; 50 Hz to 60 Hz  $\pm 10\%$ ; 15 VA consumption

**Operating Temperature:** 0°C to 55°C (full accuracy)

**Operating Humidity:** Up to 80% RH at 40°C (full accuracy)

**Key Features**

- Break-before-make relay sequencing prevents signal shorts during multiplexer scans
- Customizable switch sequences for complex measurement routines
- External trigger synchronization for coordinated test events
- Integrated thermocouple reference junction for temperature measurement
- Built-in relay condition monitoring to optimize maintenance scheduling

**Typical Applications**

- Multi-channel temperature and thermocouple data logging
- AC/DC current measurement without external shunt resistors
- Design verification and functional test signal routing
- Distributed data acquisition over Ethernet networks

**Compatibility & Integration**

Keysight E2094N I/O Libraries Suite included. Supported programming interfaces: IVI-C, IVI-COM, LabVIEW, VEE Pro, TestStand, Measurement Studio, LabWindows/CVI, Switch Executive, Visual Studio .NET, C/C++, and Visual Basic 6.

## L4421A Characteristics / Specifications

| PARAMETER                             | VALUE                           |
|---------------------------------------|---------------------------------|
| Model                                 | L4421A                          |
| Instrument Type                       | 40 channel armature multiplexer |
| Lxi Class                             | C                               |
| Channel Configuration Two Wire        | 40                              |
| Channel Configuration Four Wire       | 20                              |
| Current Channels Fused                | 4 (1.5 A fused)                 |
| Switch Type                           | armature latching               |
| Maximum Voltage Dc Or Ac Rms          | plus or minus 300 V             |
| Maximum Switch Current                | 1 A                             |
| Maximum Carry Current                 | 2 A                             |
| Maximum Power                         | 60 W                            |
| Volt Hertz Limit                      | 1e8                             |
| Initial Closed Channel Resistance     | less than 1.5 ohm               |
| Offset Voltage                        | less than 3 uV                  |
| Isolation Channel To Channel Or Earth | greater than 10 Gohm            |
| Thermocouple Cold Junction Accuracy   | less than 0.8 C                 |
| Bandwidth At Terminal Block           | 45 MHz                          |
| Crosstalk 300 Khz                     | minus 75 dB                     |
| Crosstalk 1 Mhz                       | minus 75 dB                     |
| Crosstalk 20 Mhz                      | minus 50 dB                     |
| Crosstalk 45 Mhz                      | minus 40 dB                     |
| Capacitance Hi Lo                     | 150 pF                          |
| Capacitance Lo Earth                  | 150 pF                          |
| Relay Life No Load Typical            | 100 M operations                |
| Relay Life 10 V 100 MA Typical        | 10 M operations                 |

| PARAMETER                           | VALUE                                   |
|-------------------------------------|-----------------------------------------|
| Relay Life Rated Load Typical       | 100 k operations                        |
| Scanning Speed                      | 100 ch/s                                |
| Open Close Time Typical             | 4 ms / 4 ms                             |
| Analog Bus Connection               | yes                                     |
| Scan Count                          | 1 to 50000 or continuous                |
| Scan Interval                       | 0 to 99 hours with 1 ms step            |
| Channel Delay                       | 0 to 60 s per channel with 1 ms step    |
| External Trigger Delay              | less than 2 ms                          |
| External Trigger Jitter             | less than 2 ms                          |
| Power Supply                        | 100 V to 240 V plus or minus 10 percent |
| Power Line Frequency                | 50 Hz to 60 Hz plus or minus 10 percent |
| Power Consumption                   | 15 VA                                   |
| Operating Temperature Full Accuracy | 0 C to 55 C                             |
| Storage Temperature                 | minus 40 C to 70 C                      |
| Dimensions                          | 40.9 mm x 212.3 mm x 379.3 mm           |
| Weight                              | 3.8 kg (8.4 lb)                         |
| Standard Interface                  | LAN 10BaseT/100BaseTx                   |
| Alternate Interface                 | IEEE 488.2 GPIB                         |
| Bandwidth                           | At Terminal Block: 45 MHz               |
| Operating temperature               | Full Accuracy: 0 C to 55 C              |

# General Specifications & Supplementary Characteristics

| PARAMETER                           | VALUE                                                                                                          |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Storage temperature                 | minus 40 C to 70 C                                                                                             |
| Operating temperature               | Full Accuracy: 0 C to 55 C                                                                                     |
| Operating Temperature               | Full Accuracy: 0 C to 55 C                                                                                     |
| Operating Temperature Full Accuracy | 0 C to 55 C                                                                                                    |
| Dimensions                          | 40.9 mm x 212.3 mm x 379.3 mm                                                                                  |
| Weight                              | 3.8 kg (8.4 lb)                                                                                                |
| Standard Interface                  | LAN 10BaseT/100BaseTx                                                                                          |
| Alternate Interface                 | IEEE 488.2 GPIB Notes Numeric rows from Agilent L4421A 40-Channel Armature Multiplexer data sheet 5989-4825EN. |

# 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                        |                                 |
|---------------------------------------|---------------------------------|
| Specifications                        |                                 |
| PARAMETER                             | VALUE                           |
| Model                                 | L4421A                          |
| Instrument Type                       | 40 channel armature multiplexer |
| Lxi Class                             | C                               |
| Channel Configuration Two Wire        | 40                              |
| Channel Configuration Four Wire       | 20                              |
| Current Channels Fused                | 4 (1.5 A fused)                 |
| Switch Type                           | armature latching               |
| Maximum Voltage Dc Or Ac Rms          | plus or minus 300 V             |
| Maximum Switch Current                | 1 A                             |
| Maximum Carry Current                 | 2 A                             |
| Maximum Power                         | 60 W                            |
| Volt Hertz Limit                      | 1e8                             |
| Initial Closed Channel Resistance     | less than 1.5 ohm               |
| Offset Voltage                        | less than 3 uV                  |
| Isolation Channel To Channel Or Earth | greater than 10 Gohm            |
| Thermocouple Cold Junction Accuracy   | less than 0.8 C                 |
| Bandwidth At Terminal Block           | 45 MHz                          |
| Crosstalk 300 Khz                     | minus 75 dB                     |
| Crosstalk 1 Mhz                       | minus 75 dB                     |
| Crosstalk 20 Mhz                      | minus 50 dB                     |
| Crosstalk 45 Mhz                      | minus 40 dB                     |
| Capacitance Hi Lo                     | 150 pF                          |
| Capacitance Lo Earth                  | 150 pF                          |
| Relay Life No Load Typical            | 100 M operations                |
| Relay Life 10 V 100 MA Typical        | 10 M operations                 |
| Relay Life Rated Load Typical         | 100 k operations                |

| PARAMETER                           | VALUE                                   |
|-------------------------------------|-----------------------------------------|
| Scanning Speed                      | 100 ch/s                                |
| Open Close Time Typical             | 4 ms / 4 ms                             |
| Analog Bus Connection               | yes                                     |
| Scan Count                          | 1 to 50000 or continuous                |
| Scan Interval                       | 0 to 99 hours with 1 ms step            |
| Channel Delay                       | 0 to 60 s per channel with 1 ms step    |
| External Trigger Delay              | less than 2 ms                          |
| External Trigger Jitter             | less than 2 ms                          |
| Power Supply                        | 100 V to 240 V plus or minus 10 percent |
| Power Line Frequency                | 50 Hz to 60 Hz plus or minus 10 percent |
| Power Consumption                   | 15 VA                                   |
| Operating Temperature Full Accuracy | 0 C to 55 C                             |
| Storage Temperature                 | minus 40 C to 70 C                      |
| Dimensions                          | 40.9 mm x 212.3 mm x 379.3 mm           |
| Weight                              | 3.8 kg (8.4 lb)                         |
| Standard Interface                  | LAN 10BaseT/100BaseTx                   |
| Alternate Interface                 | IEEE 488.2 GPIB                         |

#### Notes

Numeric rows from Agilent L4421A 40-Channel Armature Multiplexer data sheet 5989-4825EN.

### Available from Aumictech

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

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

#### Aumictech

788 S 500 E, Pleasant Grove, UT 84062  
[sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341  
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·  
30-day returns  
NAICS 423690 · 811210 · 541380  
Generated August 15, 2026

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