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Data Sheet

August 13, 2026

FLUKE

Fluke 742A-1 Resistance Standard

The Fluke 742A-1 is a 1 ohm four-terminal resistance standard for precision on-site resistance calibration. Excellent temperature stability allows use from 18 to 28 degC with typically less than 2 ppm degradation; a supplied calibration table supports corrections in 0.5 degC increments. The 742A-1 and 742A-10k are preferred Artifact Calibration standards for Fluke 5700A/5720A calibrators. Retrace 0-40 degC cycle: less than 2 ppm typical Size: 8.6 cmHx 10.5 cmWx 12.7 cmD Weight class: about 1.5 to 2 lb Construction: Four-terminal resistance standard Specs from Fluke 742A Four-Terminal Resistance Standards datasheet row for 742A-1.



MODEL

Fluke 742A-1

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

742A-1

LISTING

<https://aumictechlabs.com/products/742a-1-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Fluke 742A-1 is a precision 1 Ω resistance standard engineered for high-accuracy calibration and verification in laboratory and field environments. This metrology-grade artifact delivers traceable, stable resistance values with no requirement for environmental controls such as oil or air baths, enabling on-site calibration work without infrastructure constraints. Technical Specifications Resistance & Accuracy Nominal resistance: 1 Ω Initial trim accuracy: ± 2 ppm of nominal Best 1-year specification: ± 4 ppm Temperature deviation (18°C to 28°C): 3.0 ppm maximum from 23°C reference Stability & Thermal Performance Six-month stability: ± 2.5 ppm One-year stability: ± 4 ppm Retrace error (hysteresis): typically < 2 ppm after 0°C to 40°C thermal

cycling; negligible shift for 18°C–23°C–28°C cycles Operating temperature range: 18°C to 28°C Storage temperature range: 0°C to 40°C Temperature coefficients (alpha and beta) referenced to 23°C; on-board label enables temperature correction Electrical Ratings Maximum voltage: 0.5 V Maximum current: 500 mA Four-wire (Kelvin) configuration supported via dedicated binding posts for low-resistance measurement Connections & Interfaces Current HI/LO binding posts Sense HI/LO binding posts Chassis ground binding post Five-way low-thermal binding posts Physical Specifications Dimensions: 86 mm H × 105 mm W × 127 mm D Weight: 1.5 to 2 lbs (0.68 to 0.91 kg) Construction: small and rugged form factorKey Features No special environmental conditioning required Fluke Primary Standards Lab calibration with full traceability documentation Rear panel label with measured value and temperature coefficients for field reference Report of Calibration included with each unitTypical Applications Artifact calibration of precision calibrators and resistance bridges Traceable resistance verification in accredited laboratories On-site calibration and field standards workCompatibility & Integration Ideally suited for artifact calibration of Fluke 5700A and 5720A Calibrators.

Features & description

From manufacturer datasheet

Features

- Four-terminal construction
 - Portable rugged package (no oil bath required)
 - Temperature correction table supplied
 - Low retrace after thermal cycling
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Applications

- Artifact calibration of 5700A/5720A calibrators
- Precision on-site resistance calibration
- Working resistance standard without oil/air baths

742A Characteristics / Specifications

PARAMETER	VALUE
Model	742A-1
Manufacturer	Fluke
Instrument Type	Four-Terminal Resistance Standard
Alias	742A-1; Fluke 742A-1
Nominal value	1.0 ohm
Deviation from nominal class	17 ppm
Calibration uncertainty 6 month	5.0 ppm
Calibration uncertainty 12 month	8.0 ppm
Stability at 23 degC	1.0 ppm
Maximum voltage	0.5 V
Operating temperature	18 degC to 28 degC
Storage temperature	0 degC to 40 degC
Size	8.6 cmHx 10.5 cmWx 12.7 cmDWeight class: about 1.5 to 2 lb
Construction	Four-terminal resistance standard Notes Specs from Fluke 742A Four-Terminal Resistance Standards datasheet row for 742A-1.

742A Specifications

PARAMETER	VALUE
Applications	- Artifact calibration of 5700A/5720A calibrators
Key Features	- Four-terminal construction
Technical Specifications	Model: 742A-1
Notes	Specs from Fluke 742A Four-Terminal Resistance Standards datasheet row for 742A-1.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	0 degC to 40 degC
Operating temperature	18 degC to 28 degC
Operating Temperature	18 degC to 28 degC
Size	8.6 cmHx 10.5 cmWx 12.7 cmDWeight class: about 1.5 to 2 lb
Construction	Four-terminal resistance standard Notes Specs from Fluke 742A Four-Terminal Resistance Standards datasheet row for 742A-1.

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	742A-1
Manufacturer	Fluke
Instrument Type	Four-Terminal Resistance Standard
Alias	742A-1; Fluke 742A-1

Specifications

PARAMETER	VALUE
Nominal value	1.0 ohm
Deviation from nominal class	17 ppm
Calibration uncertainty 6 month	5.0 ppm
Calibration uncertainty 12 month	8.0 ppm
Stability at 23 degC	1.0 ppm

Stability 18-28 degC: +/-3.0 ppm

Specifications

PARAMETER	VALUE
Maximum voltage	0.5 V
Operating temperature	18 degC to 28 degC
Storage temperature	0 degC to 40 degC

Retrace 0-40 degC cycle: less than 2 ppm typical
Size: 8.6 cmHx 10.5 cmWx 12.7 cmDWeight class: about 1.5 to 2 lb
Construction: Four-terminal resistance standard

Notes
Specs from Fluke 742A Four-Terminal Resistance Standards datasheet row for 742A-1.

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.