

HEATHKIT

Heathkit Decade Resistance Model IN-3117

The Heathkit IN-3117 Decade Resistance Box is a precision laboratory instrument for electrical measurement, circuit design, and bridge applications. It delivers selectable resistance values from 1 Ω to 999,999 Ω in 1 Ω increments, with 0.5% accuracy across all ranges. The unit employs shorting-type switches with make-before-break action to ensure smooth, artifact-free resistance adjustment during live measurements. Minimum terminal resistance at zero is 0.025 Ω , and current handling varies by range - from 1000 mA peak (X1) down to 3 mA peak (X100K), with working currents typically half the maximum. All resistors are rated at 1 watt. Compatibility & Integration The IN-3117 operates as a standalone instrument and pairs effectively with Heathkit Decade Capacitance Kits for solving combined resistance and capacitance network problems. Aumictech offers NIST-traceable calibration and repair



MODEL	CALIBRATION
Heathkit IN-3117	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
IN-3117	https://aumictechlabs.com/products/in-3117-2/

- NIST-traceable cal
- SAM registered
- 30-day returns
- NAICS 423690 · 811210 · 541380

This unit

The Heathkit IN-3117 Decade Resistance Box is a precision laboratory instrument for electrical measurement, circuit design, and bridge applications. It delivers selectable resistance values from 1 Ω to 999,999 Ω in 1 Ω increments, with 0.5% accuracy across all ranges. The unit employs shorting-type switches with make-before-break action to ensure smooth, artifact-free resistance adjustment during live measurements. Minimum terminal resistance at zero is 0.025 Ω , and current handling varies by range - from 1000 mA peak (X1) down to 3 mA peak (X100K), with working

currents typically half the maximum. All resistors are rated at 1 watt.

Technical Specifications
Resistance range: 1 Ω to 999,999 Ω Resolution: 1 Ω increments Accuracy: 0.5% Resistor power rating: 1 W Minimum DC terminal resistance: 0.025 Ω Maximum current per range: X1 (1000 mA peak, 500 mA working); X10 (300 mA peak, 150 mA working); X100 (100 mA peak, 50 mA working); X1K (30 mA peak, 15 mA working); X10K (10 mA peak, 5 mA working); X100K (3 mA peak, 1.5 mA working) Dimensions: 5" H $\times$ 7.5" W $\times$ 6.625" D Net weight: 2.5 lbs

Key Features
Precision resistors with 0.5% tolerance Shorting-type switches with make-before-break contact action Compact laboratory footprint suitable for bench and rack integration Low residual terminal resistance minimizes measurement error

Typical Applications
AC and DC bridge circuits Variable multiplier or shunt configurations Substitution resistance measurement Circuit design validation Educational and experimental testing Calibration and troubleshooting

Compatibility & Integration
The IN-3117 operates as a standalone instrument and pairs effectively with Heathkit Decade Capacitance Kits for solving combined resistance and capacitance network problems.

Features & description

From manufacturer datasheet

Features

- Range: 1 to 999,999 Ω in 1 Ω steps • Resistors: precision $\pm 0.5\%$ accuracy, 1 W (some builds use 3 W)
- Minimum DC resistance: 0.025 Ω at terminals with all switches at zero • Maximum current by decade (working / maximum):

IN3117 Characteristics / Specifications

PARAMETER	VALUE
X10	150 / 300 mA
X1k	15 / 30 mA
X10k	5 / 10 mA
X100k	1.5 / 3 mA - Dimensions: 7.5 in W × 5 in H × 6.625 in D (191 × 127 × 168 mm) - Weight: 2.5 lb (≈1.1 kg) - Passive instrument (no power required); metal case Technical Specifications
Model	IN-3117
Manufacturer	Heathkit / Heath Company
Instrument Type	Decade Resistance Box
Family	Heathkit Decade Substituters
Alias	Heathkit IN-3117; Decade Resistance Model IN-3117 Electrical 1–9999999 Ω; 0.5%; decade current limits as above Operational Notes Prefer Heathkit IN-3117 kit/assembly specifications. Observe decade current ratings to avoid resistor damage. Confirm whether unit has open or encapsulated switches and 1 W vs 3 W resistors.
Range	1 to 999,999 Ω in 1 Ω steps
Resistors	precision ±0.5% accuracy, 1 W (some builds use 3 W)
Minimum DC resistance	0.025 Ω at terminals with all switches at zero
Dimensions	7.5 in W × 5 in H × 6.625 in D (191 × 127 × 168 mm)
Weight	2.5 lb (≈1.1 kg)

IN3117 Specifications

PARAMETER	VALUE
Key Features	- Range: 1 to 999,999 Ω in 1 Ω steps
Technical Specifications	Model: IN-3117
Electrical	1-9999999 Ω ; 0.5%; decade current limits as above

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
X1	500 / 1000 mA
X10	150 / 300 mA
X100	50 / 100 mA
X1k	15 / 30 mA
X10k	5 / 10 mA
X100k	1.5 / 3 mA

Specifications

PARAMETER	VALUE
Model	IN-3117
Manufacturer	Heathkit / Heath Company
Instrument Type	Decade Resistance Box
Family	Heathkit Decade Substituters
Alias	Heathkit IN-3117; Decade Resistance Model IN-3117

Electrical

1-999999 Ω; 0.5%; decade current limits as above

Operational Notes

Prefer Heathkit IN-3117 kit/assembly specifications. Observe decade current ratings to avoid resistor damage. Confirm whether unit has open or encapsulated switches and 1 W vs 3 W resistors.

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

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

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 8, 2026

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