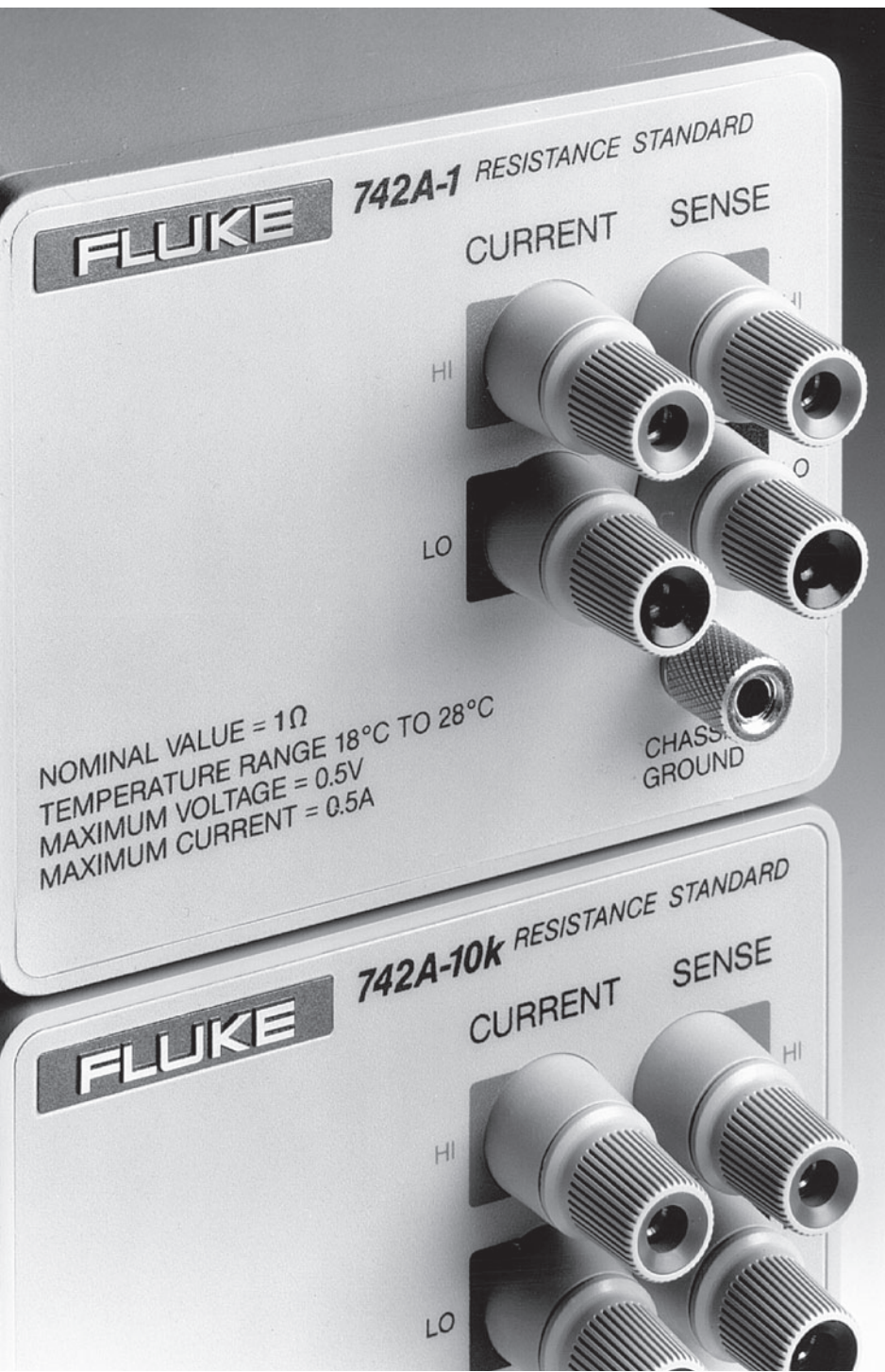


## 742A Four-Terminal Resistance Standards

### Technical Data



#### Applications

- Working standards
- Portable transfer standards
- Supports Artifact Calibration of the Fluke 5700A and 5720A Calibrators

#### Features

- Small and rugged
- No oil or air baths required
- 18°C to 28°C operating range
- Supplied with temperature characterization
- Six month stability to 2.5 ppm

Fluke 742A Standard Resistors are high accuracy working standards for precision, on-site resistance calibration. Their excellent temperature stability allows them to be used from 18°C to 28°C with typically less than 2 ppm degradation. Using the calibration table supplied with the standards, which lists corrections in 0.5°C increments, this uncertainty can be reduced to near zero. No cumbersome oil or air baths are required.

Because 742A Standard Resistors are small and rugged, they are easy to transport. Care has been taken to reduce resistance changes brought about by thermal and mechanical shock. Retrace (shift in resistance) is typically less than 2 ppm after cycling between 0°C and 40°C.

The 742A-1 1Ω and 742A-10k 10 kΩ units are ideally suited for Artifact Calibration of the Fluke 5700A and 5720A Calibrators. The other values can be used to verify the calibration if you desire.

A convenient transit case, designed to hold two standards, is available as an option.

## Specifications

Model	Nominal Value (Ohms)	Deviation from Nominal (ppm)	Stability		Calibration Uncertainty 23°C (ppm)	Max Change 18-28°C (± ppm)	Max Voltage (volts)
			6 month (ppm)	12 month (ppm)			
742A-1	1.0	17	5.0	8.0	1.0	3.0	0.5
742A-1.9	1.9	17	5.0	8.0	1.0	3.0	0.38
742A-10	10.0	17	5.0	8.0	1.0	3.0	1.0
742A-25	25.0	17	5.0	8.0	1.0	3.0	1.0
742A-100	100.0	13	4.0	6.0	1.0	3.0	2.0
742A-1k	1.0k	14	4.0	6.0	1.5	2.0	10.0
742A-10k	10.0k	9	2.5	4.0	1.0	1.5	30.0
742A-19k	19.0k	10	2.5	4.0	1.5	2.0	28.5
742A-100k	100.0k	15	4.0	6.0	2.5	2.0	100.0
742A-1M	1.0M	21	6.0	8.0	5.0	2.0	100.0
742A-10M	10.0M	28	6.0	9.0	10.0	3.0	200.0
742A-19M	19.0M	40	8.0	10.0	20.0	4.0	190.0

**Operating temperature range:**  
18°C to 28°C

**Storage temperature:**  
0°C to 40°C

**Retrace error (hysteresis):**  
23°C to 18°C to 23°C cycle:  
Negligible resistance shift

23°C to 28°C to 23°C cycle:  
Negligible resistance shift

23°C to 0°C to 23°C cycle:  
<2 ppm resistance shift

23°C to 40°C to 23°C cycle:  
<2 ppm resistance shift

**Size:** 8.6 cm H x 10.5 cm W x  
12.7 cm D (3.4" x 4.15" x 5")

**Weight:** 1.5 lbs to 2 lbs  
depending on the model

## Ordering Information

### Model

- 742A-1** 1Ω Resistance Standard
- 742A-1.9** 1.9Ω Resistance Standard
- 742A-10** 10Ω Resistance Standard
- 742A-25** 25Ω Resistance Standard
- 742A-100** 100Ω Resistance Standard
- 742A-1k** 1 kΩ Resistance Standard
- 742A-10k** 10 kΩ Resistance Standard
- 742A-19k** 19 kΩ Resistance Standard
- 742A-100k** 100 kΩ Resistance Standard
- 742A-1M** 1 MΩ Resistance Standard
- 742A-10M** 10 MΩ Resistance Standard
- 742A-19M** 19 MΩ Resistance Standard
- 742A-7002** Transit Case, holds two units



Optional 742A-7002 transit case

**Fluke.** *Keeping your world up and running.*

### Fluke Corporation

PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.  
PO Box 1186, 5602 BD  
Eindhoven, The Netherlands

For more information call:  
U.S.A. (800) 443-5853 or  
Fax (425) 446-5116  
Europe/M-East/Africa (31 40) 2 675 200 or  
Fax (31 40) 2 675 222  
Canada (800) 36-FLUKE or  
Fax (905) 890-6866  
Other countries +1 (425) 446-5500 or  
Fax +1 (425) 446-5116  
Web access: <http://www.fluke.com>

©2003 Fluke Corporation. All rights reserved.  
Printed in U.S.A. 7/2003 1260031 D-ENG-N Rev E