

## 8508A Reference Multimeter accessory guide

### Technical Data

#### Introduction

The 8508A Reference Multimeter is complemented by a comprehensive range of accessories, all of which are designed to help you get the most from your reference multimeter.

This datasheet explains in more detail the make-up of each accessory and offers technical specifications where required.

Accessories currently available for the 8508A Reference Multimeter include:

- **8508A-LEAD**  
Comprehensive Measurement Lead Kit  
Ordering Information  
Item Number 1886203
- **8508-7000K**  
Calibration kit  
Ordering Information  
Item Number 1886226
- **8508A-SPRT**  
Standard Platinum Resistance Thermometer  
Ordering Information  
Item Number 1886182
- **8508A-PRT**  
100  $\Omega$  PRT  
Ordering Information  
Item Number 1886194
- **Y8508**  
Rack Mount Kit  
Ordering Information  
Item Number 1886215
- **Y8508S**  
Rack Mount Kit Slides  
Ordering Information  
Item Number 1886232
- **NVLAP**  
NVLAP Accredited Calibration  
Ordering Information  
Item Number 1256990
- **UKAS**  
UKAS Accredited Calibration  
Ordering Information  
Item Number 1883673

#### 8508A-LEAD

Quantity	Description
4	1.5 m two core screened low thermal cable with 6 mm gold plated copper spade terminals
1	1 m screened 322/0.1 copper (30 Amp rating) with 6 mm gold plated copper spade terminals
2	Four-wire shorting P.C.B. (used to null front and rear input)
2	Locking adaptor 4 mm binding post to safety
1	General purpose lead kit and probes

The 8508A Reference Multimeter has excellent performance specifications. But stability and accuracy can often be compromised by the use of inappropriate connecting leads and associated processes when performing measurements.

The 8508A-LEAD set includes high quality, low leakage, low dielectric absorption PTFE insulated cables, terminated with 6 mm gold plated copper spade terminals. Their insulation properties make them ideal for resistance and current measurements minimizing leakage current and charge storage problems, their low capacitance makes them ideal for ac applications, and the 6 mm gold plated copper spade terminals ensure low thermal emfs for dc voltage and resistance work.



8508A-LEAD kit contents

A general purpose lead kit which includes test probes and alligator clips provides the convenience of making rapid connections for less demanding applications and troubleshooting.

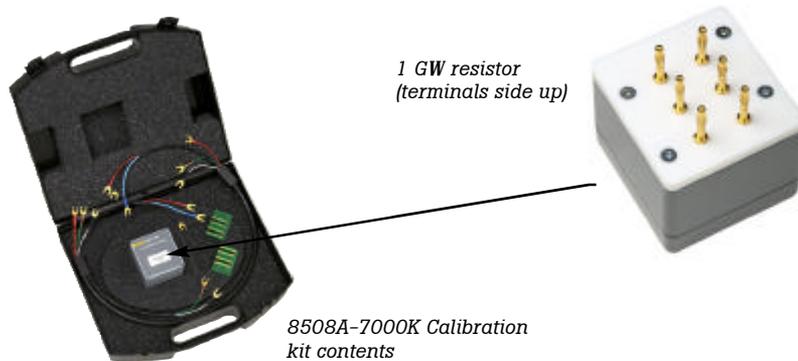
#### 8508A-7000K

The Fluke 8508A-7000K Calibration Kit contains a specially designed lead set, 1 G $\Omega$  standard resistor and four-wire shorting P.C.B.s for performance verification and calibration adjustment of the 8508A. The lead set allows the 8508A to be connected to a 5720A calibrator and a 5725A amplifier in the configuration described in the 8508A User Manual Calibration and Verification chapter, enabling users to exactly duplicate the setup used for factory calibration.

The leads are constructed from low capacitance, low leakage dielectric material (PTFE), with low thermal emf 6 mm gold plated copper spade terminations. The 1 G $\Omega$  standard resistor plugs directly into the 8508A front input terminals without any inter-connecting leads, minimising errors from lead effects and noise pickup. It is specified for stability with time (100 ppm/yr) and temperature (25 ppm/  $^{\circ}$ C), and is supplied with a calibration certificate stating its measured value to an uncertainty of 110 ppm.

**8508A-7000K (cont.)**

Quantity	Description
1	1 GΩ resistor - 100 ppm/yr and 25 ppm/°C stability, factory calibration uncertainty 110 ppm (95 %CL)
1	Screened lead set that connects 8508A Reference Multimeter to 5720 & 5725 precision calibrators
2	Four-wire shorting P.C.B. (used to null front and rear input)
1	Carry case



**8508A-SPRT**

- Measure temperatures as high as 661 °C
- Inconel™ and platinum sheaths guard against contamination
- Less than 10 mK/year drift
- Fifth wire provides shield ground

**8508A-PRT**

- Range to 660 °C
- Meets all ITS-90 requirements for resistance ratios
- Rtp drift < 20 mK after 500 hours at 660 °C
- Strain-free sensor design

designed and manufactured by the Hart Scientific primary standards metrologists to complement the Fluke 8508A Reference Multimeter's precision PRT temperature function.



8508A-SPRT and 8508A-PRT

The Fluke 8508A-SPRT Extended Range Metal-Sheath SPRT and 8508A-PRT Secondary Standard PRT Temperature Sensors have been

	<b>8508A-SPRT</b>	<b>8508A-PRT</b>
Temperature range	-200 °C to 661 °C	-200 °C to 660 °C
Nominal R <sub>TFW</sub>	25.5 Ω (± 0.5 Ω)	100 Ω (± 1 Ω)
Calibration uncertainty	2.1 mK @ 660 °C	+ 0.015 °C @ 661 °C
Sensitivity	0.1 Ω/°C	0.4 Ω/°C
Drift rate	<10 mK per year max. 2-3 mK per year typical	<0.03 °C/ 500 hours at 660°C
Stability	± 0.003 °C	± 0.003 °C
Protective sheath	Inconel™ 600 0.219" dia. X 19" L (5.56 mm x 482 mm)	Inconel™ 600 0.25" dia. X 15" L (6.35 mm x 381 mm)

**Other accessories currently available to complement the 8508A Reference Multimeter**

- **Y8508**  
Rack Mount Kit



- **Y8508S**  
Rack Mount Kit Slides



- **NVLAP**  
NVLAP Accredited Calibration
- **UKAS**  
UKAS Accredited Calibration

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Printed in UK 7/2003 2091295 D-ENG-N Rev A, DS269