

# Precision High-Tension Multimeter

Product Group

# F

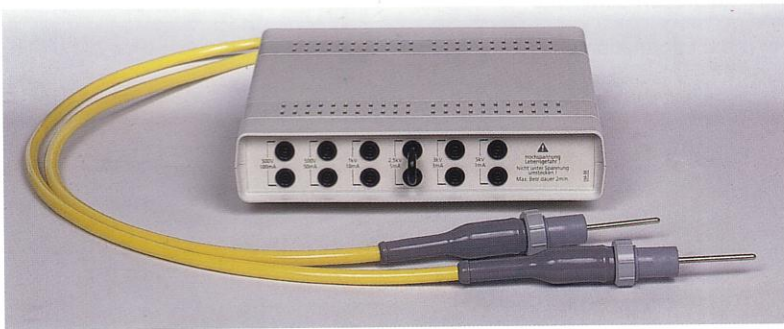
Precision High-Voltage  
Multimeter  
Load Unit



2GA27 94-8A

The 94-8A precision high-tension multimeter has been specially designed for calibrating current and voltage measurements in high-tension test apparatus. The measuring accuracy of the multimeter can be traced back to PTB normal. By means of the DKD calibration certificate, which is available as an optional extra, the measuring instrument allows internal calibrating authorities to issue in-factory calibrating certificates for monitoring measuring and test equipment. In order to measure voltage, the device is simply connected to the high-tension voltage supply by means of the enclosed connecting cable. The 94-8 R load unit is available for measuring current in high-tension circuits. The maximum measuring range for direct and three-phase currents is 10,000 V and 7,707 V respectively. Current is measured as far as 100 mA, DC and AC. The measured value is shown by means of 4 ½-digit LED display. Automatic range changeover in all modes ensures that the most favourable measuring range is always selected.

- High-voltage measurement
- Current measurement in high-voltage circuit
- Automatic range changeover
- 4 ½-digit LED display
- Connections for load network
- High-voltage connecting cable suitable for high-voltage test apparatus
- DKD calibration certificate (optional extra)
- Adapter cable available on request for connections to other makes (high-voltage test apparatus)

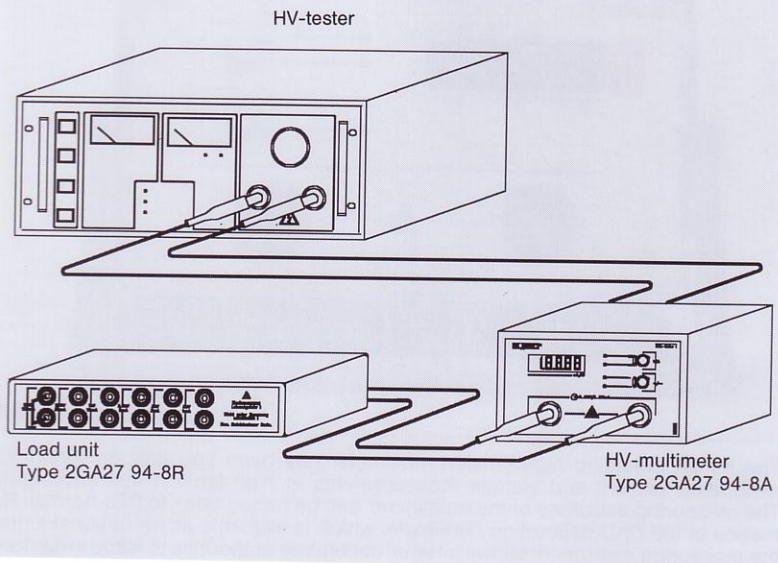


2GA27 94-8R

In connection with the precision high-voltage multimeter, the load unit serves for calibrating the current ranges of high-voltage test units.

**Precision high-voltage multimeter**

Technical data:  
AC-voltage measurement: 100-7070 V AC true rms with DC-coupling  
DC-voltage measurement:  $\pm 100$  V to  $\pm 10\,000$  V  
Current measurement: 0.2-100 mA AC and DC  
4½ digit LED display:  
Accuracy:  $\pm 0.2\%$  of rdg.  $\pm 2$  digit  
Mains supply: 230 V  $\pm 10\%$  49 - 61 Hz (option 115 V)  
Dimensions: Housing  
W = 260, D = 260, H = 160 mm



Principle connection plan

**Load unit**

Technical data:  
6 resistance values selectable: 5 M $\Omega$ , 1 M $\Omega$ , 500 k $\Omega$ , 100 k $\Omega$ , 10 k $\Omega$ , 5 k $\Omega$   
Dimensions: Housing  
W = 260, D = 260, H = 70 mm

**ORDERING DATA**

High-voltage multimeter with 2 m HV connecting cable **2GA27 94-8A**

**ACCESSORIES**

Load unit **2GA27 94-8R**

DKD calibration certificate **2GA27 94-8F**

For more information on calibration see pages F 44 / F 45

**DEUTSCHER KALIBRIERDIENST (DKD)**

Kalibrinstelle für elektrische Meßgrößen

AKKREDITIERT DURCH DIE PHYSIKALISCH-TECHNISCHE BUNDESANSTALT (PTB)



Deutsche Aerospace

Order No. **420**  
DKD **1101**  
Kalibrationsmark **93-02**

**Kalibrierschein**  
*Calibration Certificate*

Gegenstand / Objekt: **Hochspannungs-Digitalmultimeter**

Hersteller / Manufacturer: **Elabo**

Typ / Type: **94-8A**

Fabrikat/Serien-Nr. / Serial number: **9252004**

Auftraggeber / Customer: **Elabo Produktions GmbH  
7180 Crailsheim**

Auftragsnummer / Order No.: **VAD103 - 4743**

Anzahl der Seiten des Kalibrierscheines / Number of pages of the certificate: **3**

Datum der Kalibrierung / Date of calibration: **04.02.1993**

Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung sowohl der Physikalisch-Technischen Bundesanstalt als auch des ausstellenden Kalibrerlaboratoriums.  
This calibration certificate may not be reproduced other than in full except with the permission of both the Physikalisch-Technische Bundesanstalt and the issuing laboratory.  
Calibration certificates without signature and seal are not valid.

Stempel / Seal: **DKD 1101**

Leiter des Kalibrerlaboratoriums / Head of the calibration laboratory: **Böhm**

Beauftragter / Person responsible: **Weigel**

**DEUTSCHER KALIBRIERDIENST (DKD)**

Kalibrinstelle  
**Deutsche Aerospace**

Seite 3 zum Kalibrierschein vom 04.02.1993

**420**  
DKD **1101**  
**93-02**

**Meßergebnisse Gleichspannung**

Meßbereich	Richtiger Wert	Anzeige	Meßunsicherheit
1 kV	0,5 kV	0,4999 kV	$5 \cdot 10^{-4}$
	0,8 kV	0,7997 kV	$2 \cdot 10^{-4}$
	1,0 kV	0,9996 kV	$2 \cdot 10^{-4}$
10 kV	2,0 kV	2,000 kV	$2 \cdot 10^{-3}$
	4,0 kV	4,000 kV	$2 \cdot 10^{-3}$
	6,0 kV	6,001 kV	$8 \cdot 10^{-4}$
	8,0 kV	8,003 kV	$6 \cdot 10^{-4}$
	10,0 kV	10,005 kV	$5 \cdot 10^{-4}$

**Meßergebnisse Gleichstrom**

Meßbereich	Richtiger Wert	Anzeige	Meßunsicherheit
10 mA	10 mA	10,000 mA	$1 \cdot 10^{-4}$
100 mA	100 mA	100,02 mA	$5 \cdot 10^{-4}$

**Meßergebnisse Wechselspannung 50 Hz**

Meßbereich	Richtiger Wert	Anzeige	Meßunsicherheit
330 V	300 V	0,3006 kV	$3 \cdot 10^{-3}$
1 kV	1,0 kV	0,9999 kV	$1 \cdot 10^{-3}$
3,3 kV	3,0 kV	3,001 kV	$5 \cdot 10^{-3}$
10 kV	7,0 kV	7,002 kV	$5 \cdot 10^{-3}$

**Meßergebnisse Wechselstrom 50 Hz**

Meßbereich	Richtiger Wert	Anzeige	Meßunsicherheit
3,3 mA	3 mA	3,006 mA	$2 \cdot 10^{-3}$
10 mA	5 mA	5,001 mA	$1 \cdot 10^{-3}$
33 mA	10 mA	10,001 mA	$5 \cdot 10^{-3}$
100 mA	100 mA	100,06 mA	$5 \cdot 10^{-4}$

Die dimensionslosen Anteile der Meßunsicherheit sind Relativwerte, bezogen auf den Anzeigewert.