

# High-Precision Resistance Decade and Calibrator

Model 1406  
Model 1407

Code: 1406 EN  
Delivery: 4 weeks  
Warranty: 24 months

**NEW**  
including DAkkS-  
Calibration Certificate



**1406 EN**

- Range model 1406 10 mΩ bis 100 kΩ
- Range model 1407 100 mΩ bis 1MΩ
- Accuracy 0.01 %
- Temperature coefficient ≤ 5 ppm/K
- Stability < 0,01 % resp.

## Application

The field of application of the precision decade model 1406/1407 reaches from general precision measuring to simulation of a variety of measuring transducers, such as for example strain gage transducers, resistance thermometers, hygrometers and others.

## Description

The decade resistors are wire-wound resistors and consist of low-capacity and low-conductivity wire coiling made of ZERANIN®.

An especially developed precision stepping switch with high-quality contact materials and optimal brush construction guarantees very good reproducibility.

As regards accuracy, stability and reliability, the decades model 1406/1407 are designed to meet high-standard requirements.

## Technical Data

Resistance ranges:	model 1406	10 mΩ ... 100 kΩ
	model 1407	100 mΩ ... 1 MΩ
Zero resistance of the complete resistance box:	< 10 mΩ	
Resistance tolerance:	see table	
Calibration:	in Ohm absolute at 23 °C	
Resistance material:	ZERNANIN®	
Temperature coefficient:	in the ranges 10 x 1 Ω to 10 x 100 kΩ ≤ 5 ppm/K	
Long-term stability:	< 0.01 %	
Power dissipation:	0.4 W per step = 4 W/decade	
Operating voltage:	500 V max.	
Test voltage:	2800 VDC	
Design and construction:	according to DIN EN 60477	
Switching arrangement:	short-circuiting between two neighbouring	
Switch positions:	12, limited to 11 steps	
Contact material:	Ag plated on E-Cu, slider pack, solid silver	
Operating moment:	approx. 0.1 Nm	
Dimensions (length by height by depth):	433 x 95 x 120 [mm]	
Weight:	approx. 2.8 kg	

## Order Information

Precision resistance decade including DAkkS Calibration Certificate	<b>Model 1406</b>
Precision resistance decade including DAkkS Calibration Certificate	<b>Model 1407</b>

## Accessories

Assembly set for 19" rack mounting	<b>Model 1491</b>
Leather case	<b>Model 1495</b>

## DAkkS Calibration Certificate

burster präzisionsmesstechnik is an accredited calibration laboratory entitled to perform calibrations within the accredited measurands and measurement ranges and to issue an internationally recognized DAkkS Calibration Certificate.

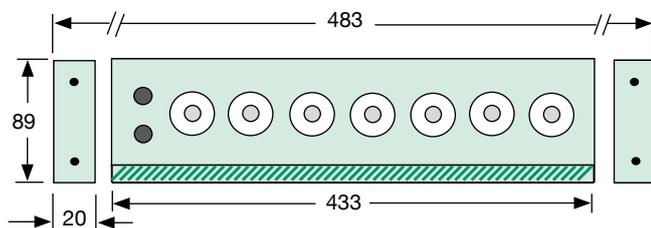
The Calibration Certificate shows the values for the resistance in 10 switch positions of each decade and the inherent relative uncertainty. As experience has shown, the relative uncertainty in the upper decades amounts to only 1/5 to 1/20 of the respective error tolerance. More precise knowledge of resistance values thus means a veritable increase in value of the instrument.

Order Code	<b>14 DKD-1406</b>
	<b>14 DKD-1407</b>

## Error tolerance, load

Model 1406	Model 1407	Value	Tolerance	Max. Load Current [mA]
X	-	10 x 0.01 Ω	± 2 %	2000
X	X	10 x 0.1 Ω	± 0.5 %	2000
X	X	10 x 1 Ω	± 0.05 %	600
X	X	10 x 10 Ω	± 0.02 %	200
X	X	10 x 100 Ω	± 0.01 %	60
X	X	10 x 1 kΩ	± 0.01 %	20
X	X	10 x 10 kΩ	± 0.01 %	6
-	X	10 x 100 kΩ	± 0.02 %	2

## Housing



Dimensions given in mm

