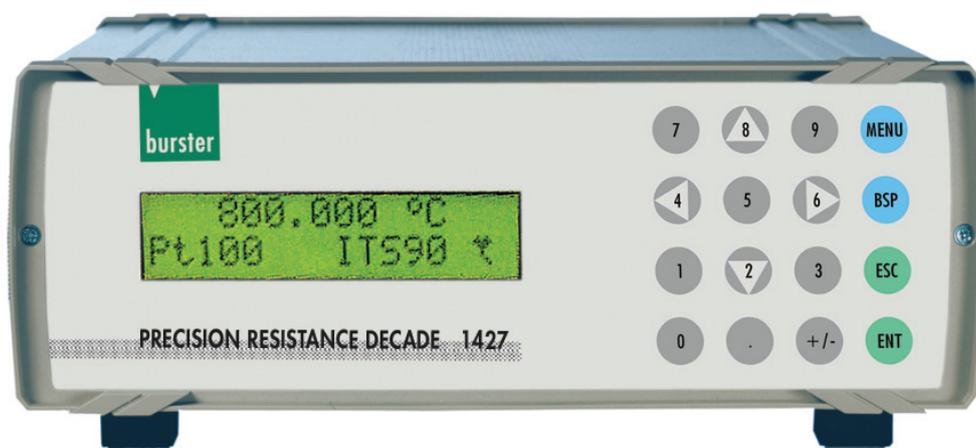


Computer Controlled High Precision Resistance Decade

Model 1427

Code:	1427 E
Manufacturer:	burster
Delivery:	4 weeks
Warranty:	24 months

NEW
preliminary data sheet



1427-E

- Resistance range from 1.00000 Ω to 1.200000 M Ω
- Error tolerance 0.005 %
- Temperature coefficient < 1 ppm/K
- Simulation of RTD (Pt, Ni), Error tolerance 0.02 °C
- RS232 (IEEE488 optional)

Description

In its function as temperature simulator the decade offers the choice of sensors like Pt 100, Pt 200, Pt 500, Pt 1000, Ni 100 and Ni 1000 in the range from -200 °C up to +850 °C. The temperature is entered via keyboard or data interface. The corresponding resistance appears at the output socket in two, three or four wire method.

The resistance decade allows a direct choice of resistances between 1 Ω and 1,2 M Ω . Depending on the ohm value the resolution can be chosen up to 0,00001 Ω . The selected resistance can be picked off via two or four wire method. The LCD display informs about chosen resistance or temperature, sensor type and control status.

Technical Data

Resistance range:	1.00000 Ω ... 1.200000 M Ω		
Resolution:	10 $\mu\Omega$ / 1 Ω / 1,2 Ω		
Temperature coefficient:	< 1 ppm/ $^{\circ}\text{C}$ (1 Ω \div 2000 Ω)	Four wire port	
	< 1 ppm/ $^{\circ}\text{C}$ (100 Ω \div 1,2 M Ω)	Two wire port	
	< 5 ppm/ $^{\circ}\text{C}$ (2 k Ω \div 10 k Ω)	Four wire port	
Range Pt sensor temperature simulation:	- 200 $^{\circ}\text{C}$... + 850 $^{\circ}\text{C}$		
Range Ni sensor temperature simulation:	- 60 $^{\circ}\text{C}$... + 300 $^{\circ}\text{C}$		
Sensor types:	Pt 10 ... Pt 10000, Ni 10 ... Ni 10000		
Temperature scales:	IPTS68, ITS90		
Pt sensor standard:	DIN (1,385), US (1,392)		
Ni sensor standard:	DIN 43760 (6180)		
Connection:	2-, 3-, 4-wire		
Remote control:	RS232, optionally IEEE488		
Temperature range:	Reference temperature	18 $^{\circ}\text{C}$... 28 $^{\circ}\text{C}$	
	Operating temperature	5 $^{\circ}\text{C}$... 40 $^{\circ}\text{C}$	
	Storage temperature	- 10 $^{\circ}\text{C}$... 50 $^{\circ}\text{C}$	
Supply:	power supply (100-240 V / 50 - 60 Hz)		
Dimensions [W x H x D]:	247 mm x 106 mm x 275 mm		
Weight:	4,5 kg		

Error tolerance for 4-wire connection

Resistance range	Error tolerance
1 Ω ... 400 Ω	0.003 % + 3 m Ω
400 Ω ... 2000 Ω	0.005 %
2000 Ω ... 10000 Ω	0.015 %

Error tolerance for 2-wire connection

Resistance range	Error tolerance
1 Ω ... 10 K Ω	0.005 % + 10 m Ω
10 k Ω ... 200 k Ω	0.005 %
200 k Ω ... 1,2 M Ω	0.01 %

Error tolerance Pt sensor simulation

Temperature	Pt100	Pt200	Pt500	Pt1000	Pt10000
- 200 $^{\circ}\text{C}$... 200 $^{\circ}\text{C}$	0.02 $^{\circ}\text{C}$	0.02 $^{\circ}\text{C}$	0.02 $^{\circ}\text{C}$	0.04 $^{\circ}\text{C}$	0.04 $^{\circ}\text{C}$
- 200 $^{\circ}\text{C}$... 500 $^{\circ}\text{C}$	0.03 $^{\circ}\text{C}$	0.04 $^{\circ}\text{C}$	0.06 $^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$	0.06 $^{\circ}\text{C}$
- 500 $^{\circ}\text{C}$... 850 $^{\circ}\text{C}$	0.04 $^{\circ}\text{C}$	0.06 $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$	0.2 $^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$

Order Code

High precision resistance decade with RS232	Model 1427-V100
High precision resistance decade with IEEE488	Model 1427-V200