RBB

36

## **RBB SPECIFICATIONS**

RBB6

B C D E F

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10

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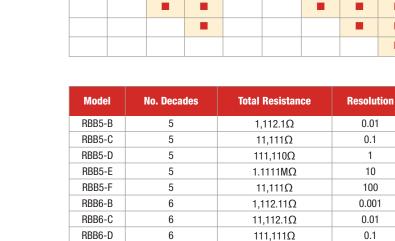
1.11111MΩ

11.1111MΩ

# HIGH ACCURACY DECADE BOXES WITH VERSATILE WIDE OHM RANGE

A versatile range of resistance decade boxes, available in 5 & 6 decades. Both high accuracy and a wide range, 0.001 ohm to 11 mega ohm, are combined in a rugged case. The switches used are gold plated to ensure a low contact resistance and negligible thermal E.M.F. Some models employ the Waidner Wolf technique to eliminate the errors that may be caused by the variations in switch contact resistance. These models are particularly suited to applications such as Pt100 simulation where resolutions as low as 0.001 ohm (» 0.0025°C) are required.

KEY FEATURE	RBB
5 and 6 decades available	
Total Range 11.111 Mega ohm	
Smallest Steps 0.001 milli ohm	
Special Waidner Wolff decade minimises switch contact resistance	
Accuracy 0.05% for premium dials	
Resistance coils wound in selected low TC wire	
Special models for Pt100 simulation	
Special model for insulation simulation	



RBB5

B C D E

#### Calibration

RBB6-E

RBB6-F

Calibration certificates including UKAS traceable are available on request

#### Switches

Contact material gold plated brass Contact resistance = 5 mohm Insulation Resistance (all paths = 10Gohm) Proof voltage 1kV

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### Resistors

Temperature Co-efficient:

 $\pm$ 3ppm / +20°C to +85°C  $\pm$ 5ppm maximum over -55°C to + 125°C 0.1, 0.01, and 0.001 dials 10ppm/°C

Full Load Stability:

- ±35ppm/10,000 hours
- ±50ppm/26,000 hours

No Load Stability:

±25ppm/10,000 hours

±35ppm/26,000 hours

Over full temperature range: -50°C to +125°C

Power Rating:

0.33 watt (+85°C) 0.25 watt (+110°C)

RESISTANCE BOX

:	Decade	Accuracy	Current Max mA
	10 x 0.001Ω	± 2%	2000
	10 x 0.01Ω	± 1%	2000
	10 x 0.1Ω	± 0.5%	2000
	10 x 1Ω	± 0.2%	600
	10 x 10Ω	± 0.05%	200
	10 x 100Ω	± 0.05%	60
	10 x 1kΩ	± 0.05%	20
	10 x 10kΩ	± 0.05%	6
	10 x 100kΩ	± 0.1%	2
	10 x 1MΩ	± 0.1%	0.3

Sutable for Pt100 Simulation	Resolution °C when Simulating Pt100	Residual Resistance
	0.025	1Ω
—		0.012Ω
—	—	0.012Ω
—	_	0.012Ω
—	_	0.012Ω
	0.0025	1Ω
	0.025	1Ω
_		0.013Ω
_		0.013Ω
_		0.013Ω

Maximum Continuous Working Voltage:

70V dc / 33Vrms

Noise:

Essentially non-measurable <1.5µV

Thermal E.M.F:

<0.4µV

Encapsulation:

Moulded epoxy

Windings:

Exclusive 'air cushioned' technique provides virtually stressless elements for improved performance. Non inductively wound. Direction of winding reversed at half turns point

#### Weight

RBB5 - 0.5kg RBB6 - 0.6kg

#### Size

350mm x 100mm x 80mm (W H D) approx