



ZX

Resistance standard, 6-decade boxes
- 1 m Ω to 10 M Ω

ZX series of 6 decade boxes are very high accuracy and stable six-dial instruments. They are designed for accurate and reliable applications in laboratories or onsite use as resistance thermometer simulation. There are 6 models in the series with a maximum resistance of 111,111,100 Ω .

Description

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The resistive elements are non-inductively wound on high quality formers using a resistance wire of specially selected alloy. Each resistive element is heat treated and undergoes a controlled ageing process to produce the very highest stability and also a low temperature coefficient.

Switches are of the highest quality with low pressure contacts for long life and reliability. Each decade switch is manufactured using a fully enclosed construction for maintenance free operation. These decade boxes are housed in attractive robust metal cases with a retractable carrying handle.

The very popular ZX74 model has a lowest decade with steps of 1 m Ω . This is particularly useful for Resistance Thermometer Simulation and resistance bridge networks.

All models have an extra terminal connected to the electrostatic screen which may be required in AC bridge applications.

On request, they can be supplied with a COFRAC calibration certificate delivered by our accredited laboratory SOFIMAE.

Specifications

Resistance generation

Type	Total resistance	Dials available										
		x 10 MΩ	x 1 MΩ	x 100 kΩ	x 10 kΩ	x 1 kΩ	x 100 Ω	x 10 Ω	x 1 Ω	x 0,1 Ω	x 0,01 Ω	x 0,001 Ω
ZX74	1,111.110 Ω						±0.01 %	±0.01 %	±0.05 %	±1%	±2%	±5%
	I_{max}						45 mA	140 mA	450 mA	1.4 A	1.4 A	1.4 A
ZX75	11,111.1 Ω					±0.01 %	±0.01 %	±0.02 %	±0.05 %	±0.5 %	±5%	
ZX76	111,111.0 Ω				±0.01 %	±0.01 %	±0.01 %	±0.02 %	±0.1 %	±1%		
ZX77	1,111,110 Ω			±0.05 %	±0.05 %	±0.05 %	±0.05 %	±0.1 %	±1%			
	I_{max}			1 mA	3 mA	10 mA	30 mA	100 mA	300 mA	1 A	3 A	
ZX83	11,111,110 Ω		±0.05 %	±0.05 %	±0.05 %	±0.05 %	±0.05 %	±0.05 %				
ZX84	111,111,100 Ω	±0.1 %	±0.05 %	±0.05 %	±0.05 %	±0.05 %	±0.05 %					
	I_{max}	0.1 mA	0.3 mA	1 mA	3 mA	30 mA	100 mA					

Direct reading of generated value

Minimum value:

- ZX74 model: 0.1 Ω
- Other models: < 20 mΩ

Accuracy at 20°C ±2°C:

- ZX74 / ZX75 / ZX76 models: (0.01% + 0.002 Ω)
- ZX77 / ZX83 / ZX84 models: (0.05%+ 0.002 Ω)

Insulation resistance: > 1000 MΩ at 1000 V

Temperature coefficient: -5 to +10 ppm/°C

Maximum admissible voltage on terminals: 30 V~ RMS or 50 V- according to IEC 61010-1

Maximum power: 0.2 W

General specifications

Size	440 x 130 x 120 mm
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Weight	4 kg
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Environmental specifications

Reference range	20°C \pm 2°C (RH: 40 to 80% non-condensing)
Operating reference range	5 to 35°C (RH: < 75% non-condensing)

Models and accessories

Instrument:

RD6D-ZX74	6-decade resistance box: 10 x 0.001 Ω to 10 x 100 Ω
RD6C-ZX75	6-decade resistance box: 10 x 0.01 Ω to 10 x 1 k Ω
RD6B-ZX76	6-decade resistance box: 10 x 0.1 Ω to 10 x 10 k Ω
RD6A-ZX77	6-decade resistance box: 10 x 1 Ω to 10 x 100 k Ω
RD-ZX83	6-decade resistance box: 10 x 10 Ω to x 1 M Ω
RD-ZX84	6-decade resistance box: 10 x 100 Ω to 10 x 10 M Ω

Certification:

QMA11EN	COFRAC certificate of calibration
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Packing information:

Shipping size	440 x 130 x 120 mm
Weight	4 kg