

# ZX Series Decade Resistance Boxes



Accuracy to  $\pm 0.01\%$

## ZX74 Series

The ZX74 Series of Decade Resistance Boxes are very high accuracy and stable six-dial instruments. There are 4 versions in the series with a maximum resistance of 1,111,111 $\Omega$ . The ZX83 series adds another two Decade Boxes that extend the resistance range to 111, 111, 100 $\Omega$ .

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 adjustable feet and a retractable carrying handle.

The very popular ZX74 model has a lowest decade with steps of 1m $\Omega$ . 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.

## Specification

### Basic accuracy:

ZX74, ZX75, ZX76: (0.01% +0.002 $\Omega$ ) at 20°C  $\pm 2^\circ\text{C}$

ZX77, ZX83, ZX84: (0.05%+0.002 $\Omega$ ) at 20°C  $\pm 2^\circ\text{C}$

RH: 75% non-condensing

Insulation resistance: >1000M $\Omega$ @1000V

Temp. coefficient: (-5 to +10)ppm/ $^\circ\text{C}$

Power dissipation: MAX 0.2W

### Shipping:

Dimensions (mm): 435x136x110

Weight (Kg): 4

Type	Total Resistance $\Omega$	Dials Available										
		X10M $\Omega$	X1M $\Omega$	X100K $\Omega$	X10K $\Omega$	X1K $\Omega$	X100 $\Omega$	X10 $\Omega$	X1 $\Omega$	X0.1 $\Omega$	X0.01 $\Omega$	X0.001 $\Omega$
ZX74	1,111.210	-	-	-	-	-	$\pm 0.01\%$	$\pm 0.01\%$	$\pm 0.05\%$	$\pm 0.1\%$	$\pm 2\%$	$\pm 5\%$
ZX75	11,111.1	-	-	-	-	$\pm 0.01\%$	$\pm 0.01\%$	$\pm 0.02\%$	$\pm 0.05\%$	$\pm 0.5\%$	$\pm 5\%$	-
ZX76	111, 111.0	-	-	-	$\pm 0.01\%$	$\pm 0.01\%$	$\pm 0.01\%$	$\pm 0.02\%$	$\pm 0.1\%$	$\pm 1\%$	-	-
ZX77	1,111,110	-	-	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.1\%$	$\pm 1\%$	-	-	-
ZX83	11,111,110	-	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	-	-	-	-
ZX84	111,111, 100	$\pm 0.1\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	$\pm 0.05\%$	-	-	-	-	-

### ZX90 Series

The ZX90 Series of Decade Resistance Boxes comprise of 10 instruments to cover a resistance range of up to 1,111,111Ω with instruments available in 4, 5, 6 and 7 Decades. Whilst they are low cost these instruments are of high quality and feature precision low contact resistance switches.

The resistive elements are made of enamelled manganin wire which is non-inductively wound onto high quality formers. Each resistive element is heat treated and undergoes a controlled ageing process to produce the very highest stability and to achieve low temperature coefficient. The instruments are housed in an attractive metal case which is both robust and dust proof.



Accuracy to  $\pm 0.1\%$

RANGE SWITCHING:			X10 <sup>5</sup>	X10 <sup>4</sup>	X10 <sup>3</sup>	X100	X10	X1	X0.1	X0.01	Dimensions	Weight
Type	Number of Decades	Total Resistance (ohms)									(mm) (unpacked)	(kgs)
ZX90	4	111.1	-	-	-	-	$\pm 0.1\%$	$\pm 0.5\%$	$\pm 2\%$	$\pm 5\%$	200x95x94	0.85
ZX91	4	11,110.0	-	-	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	-	-	200x95x94	0.85
ZX92	5	1,111.1	-	-	-	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	$\pm 2\%$	$\pm 5\%$	242x95x94	1.0
ZX93	5	11,111.0	-	-	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	$\pm 2\%$	-	242x95x94	1.0
ZX94	5	111,110.0	-	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	-	-	242x95x94	1.1
ZX95	6	11,111.1	-	-	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	$\pm 2\%$	$\pm 5\%$	284x95x94	1.15
ZX96	6	111,111.0	-	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	$\pm 2\%$	-	284x95x94	1.25
ZX97	6	1,111,110.0	$\pm 0.2\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	-	-	284x95x94	1.25
ZX98	7	111,111.1	-	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	$\pm 2\%$	$\pm 5\%$	327x95x94	1.35
ZX99	7	1,111,111.0	$\pm 0.2\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.5\%$	$\pm 2\%$	-	327x95x94	1.35



**Tinsley**  
Precision Instruments

In accordance with our policy of continual improvement the specifications of the products within this brochure can possibly change without notice.

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