

# World Class

## Decade boxes



**Modularity, safety, accuracy, flexibility, ... everything you need for your experiments: Wheatstone bridge, gain calculation, etc.**

- A complete range: resistance, capacitance, galvanometers, etc.
- Selector knob with gold/silver contacts
- A stop to prevent accidental switching from 10 to 1
- A male earth connector with locating pin
- Outputs on  $\varnothing$  4 mm safety terminals
- Standard delivery includes IEC 61010-2-31 connection leads
- Typical accuracy: 0.5% (resistance), 2% (capacitance)

# Training tool: Decade boxes

The modular elements make it easy to set up a Wheatstone bridge or any other assembly. They can be assembled simply and quickly to form homogeneous, compact blocks.

## SIMPLE RESISTANCE BOXES

References	Range	I max.	Accuracy
<b>DX0001</b>	0.1 to 1 Ω	1 A	1% ± 5 mΩ
<b>DX0002</b>	1 to 10 Ω	750 mA	1% ± 5 mΩ
<b>DX0003</b>	10 to 100 Ω	250 mA	0.5 %
<b>DX0004</b>	100 to 1000 Ω	75 mA	0.5 %
<b>DX0005</b>	1 to 10 kΩ	25 mA	0.5 %
<b>DX0006</b>	10 to 100 kΩ	7.5 mA	0.5 %
<b>DX0007</b>	100 to 1000 kΩ	2 mA	0.5 %
<b>DX0008</b>	1 to 10 MΩ	0.2 mA	0.5 %

- 11-position switch (0 = short circuit)
- 1 red terminal
- 2 black terminals
- Dimensions : 72 x 72 x 90 mm
- Weight: 220 g

## 4-DECADE RESISTANCE BOX

Decade	Range	I max.	Accuracy
1st	1 Ω to 10 Ω	700 mA	1%
2nd	10 Ω to 100 Ω	200 mA	1%
3rd	100 Ω to 1 kΩ	70 mA	1%
4th	1 kΩ to 10 kΩ	20 mA	1%

- Resistance in desk-type box
- 4 switches
- 2 black terminals
- 1 earth terminal (green/yellow)
- Dimensions : 296 x 78.5 x 85
- Weight: 1kg
- **Ref. for ordering: DX0040**

## K RATIO RESISTANCE BOX

- Switch with 7 ratios: 1/1000 to x 1000
- Accuracy ± 0.2%
- For Wheatstone bridge application
- 1 red terminal
- 2 black terminals
- Dimensions: 72 x 72 x 90 mm
- Weight: 220 g
- **Ref. for ordering: DX0030**

## DECADE CAPACITANCE BOXES

References	Range	Loss angle	Accuracy
<b>DX0050</b>	1 to 10 μF	< 10 <sup>-2</sup>	2%
<b>DX0051</b>	0.1 to 1 μF	< 10 <sup>-2</sup>	2%
<b>DX0052</b>	0.01 to 0.1 μF	< 10 <sup>-2</sup>	2%

- 3 boxes with 11-position switch (including 0)
- 2 black terminals
- 1 earth terminal (green/yellow)
- Max. voltage: 300 V DC
- Dimensions : 72 x 72 x 90 mm
- Weight: 220 g

## Example of application: The WHEATSTONE bridge

G = zero galvanometer

BK ratio resistance box

$$\text{where } K = \frac{R2}{R1}$$

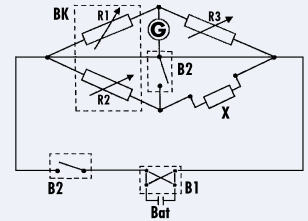
R3 = resistance box

X = resistance to be measured  
where  $X = K \times R3$

B1 = simple inverter box

B2 = dual switch box

Bat = power supply



## ZERO GALVANOMETER

- Dial with anti-parallax mirror
- Accuracy ± 2.5%
- 2 calibres per pushbutton (break: 100 μA/div. - make: 1 μA/div.)
- 1 red terminal
- 1 black terminal
- Zero adjustment screw
- Internal resistance 180 Ω
- Accuracy ± 2.5% of scale range
- Dimensions : 72 x 72 x 63 mm
- Weight: 220 g
- **Ref. for ordering: DX0060**

## DUAL SWITCH BOX

- 2 switches with 1 break / 1 make / 1 transitory make
- 4 black terminals
- Max. power: 50 VA
- Max. current: 5 A
- Max. voltage: 250 V
- Dimensions : 72 x 72 x 90 mm
- Weight: 220 g
- **Ref. for ordering: DX0020**

## SIMPLE INVERTER BOX

- 1 inverter with 1 break / 1 make / 1 inverted make
- 4 black terminals
- Max. power: 50 VA
- Max. current: 5 A
- Max. voltage: 250 V
- Dimensions : 72 x 72 x 90 mm
- Weight: 220 g
- **Ref. for ordering: DX0010**

## Accessories and spare parts

### Accessory:

HA2042 10 jumper links 19 mm apart - Ø 4 mm

### Spare parts:

AG1002 25 cm safety lead - 2 plugs Ø 4 mm with rewriter

Characteristics subject to modifications according to technological developments.

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