

# Decade Capacitance Boxes

Sold throughout the world to governments, educational authorities and industry



## CD Series Features

- > *Wide range of values*
- > *Accuracy 1%*
- > *Wide range of applications*
- > *Range 100 pf – 100mf*

**G**uildline CD Series Decade Capacitance Boxes cover the range of 100 pF to 111  $\mu$ F, utilizing polypropylene dielectric capacitors. Having a high accuracy, low power factor and very high insulation resistance, they are suitable for test equipment, timing circuits and filters – in addition to the conventional RF and AF applications. Moreover being reasonably priced, they could be substituted for much higher priced instruments in applications not requiring the ultimate in accuracy.

## Capacitors

These are polypropylene and are shown in detail over leaf together with accuracy and voltage ratings.

The accuracies referred to over leaf constitute the accuracy of an incremental change in the setting of the switches. For the same terminal accuracy, the stray capacitances must be added.

***CD Series provides a cost effective variable capacitance design for a wide range of applications.***

## Switches

Small, low loss wafer switches are used in order to reduce the leakage and losses to a minimum. Silver plated contacts and a positive detent mechanism ensure a long operational life.

## Construction

The instruments have a metal case, anodized front panel, ground terminal and multi-way binding posts. As a safety measure, types CD3, CD4A, CD5 and CD8 have press buttons enabling the units to be discharged after use. All types have the capacitors isolated from the case, which facilitates their use in 2-terminal or 3-terminal applications. Residual capacitances for various connections are given over leaf.

# CD Decade Capacitance Boxes

## CD Specifications

TYPE	MAXIMUM VALUE	MINIMUM STEP	NUMBER OF DECADES	DIMENSIONS and WEIGHT (See code below)
CD1	0.111 microfarad	100 picofarad	3	A
CD2	1.111 microfarad	1000 picofarad	3	A
CD3*	11.1 microfarad	0.01 microfarad	3	B
CD4A*	111 microfarad	0.01 microfarad	4	C
CD5*	100 microfarad	10 microfarad	1	D
CD7	1.111 microfarad	100 picofarad	4	A
CD8*	11.11 microfarad	1000 picofarad	4	B
CD9	11.11 microfarad	100 picofarad	5	A

\* AC current must be limited to 0.35 amp. at 50/60 hz and above.

### RESIDUAL CAPACITANCES

Connection:	Type CD1	Type CD2	Type CD3	CD7	CD8
'L' to 'G' (2-terminal)	54 pF	54 pF	60 pF	68 pF	58 pF
'G' to true earth (3 - terminal)	25 pF	25 pF	28 pF	30 pF	28 pF
'G' not connected	38 pF	38 pF	52 pF	50 pF	56 pF

INCREMENTAL ACCURACY AND WORKING VOLTAGES			
x 0.0001 decade	1% Polystyrene	300 V.W. DC	120 V 50/60 Hz
x 0.001 decade	1% Polystyrene	300 V.W. DC	120 V 50/60 Hz
x 0.01 decade	1% Polystyrene	300 V.W. DC	120 V 50/60 Hz
x 0.1 decade	1% Polystyrene/polycarbonate	300 V.W. DC	120 V 50/60 Hz
x 1.0 decade	1% Polystyrene/polycarbonate	300 V.W. DC	120 V 50/60 Hz
x 10	5% Metallised Polyester	300 V.W. DC	120 V 50/60 Hz

Continuous development may result in minor changes in internal and external design.

## CD Series Ordering Information

CD/Type      Decade Capacitance Boxes  
                  Certificate of Conformance (included)  
                  Report of Calibration (extra charge)

### GENERAL SPECIFICATIONS

#### Dimensions

A	112 H x 90 W x 324 D mm (4.4 H x 3.5 W x 12.8 D in)
B	115 H x 115 W x 370 D mm (4.5 H x 4.5 W x 14.5 D in)
C	130 H x 140 W x 435 D mm (5.1 H x 5.5 W x 17.1 D in)
D	130 H x 140 W x 180 D mm (5.1 H x 5.5 W x 7.1 D in)

#### Weight

A	1.1 Kg (2.4 lbs)
B	1.75 Kg (3.85 lbs)
C	3.0 Kg (6.6 lbs)
D	1.5 Kg (3.3 lbs)

### GUILDLINE IS DISTRIBUTED BY:

**Guildline Instruments Limited**  
P.O. Box 99  
21 Gilroy Street  
Smiths Falls, Ontario Canada K7A 4S9  
Phone: (613) 283-3000  
FAX: (613) 283-6082  
Web: [www.guildline.ca](http://www.guildline.ca)