

Capacitance Decade Box

Model CD-300

Introduction

The CD-300 Capacitance Decade Box is a convenient tool aiding you both in design and testing as well as calibration of your test equipment. When needed to determine the correct Capacitance value, the CD-300 offers 5 decades of Capacitance ranges, from 100pF to 11.111uF (in 100pF steps). Slide switches allow for easy addition and subtraction of Capacitance values. Switches that are in the ON position are clearly marked by a white dot below it to easily distinguish it from those that are OFF. A rubber boot allows the user to pop up the unit for ease of viewing and changing of values.

Specifications

Capacitance ranges 100pF to 11.111uF in 100pF steps

Internal Residual Cap: 50pF maximum

Voltage limit 50VDC (non-polarized capacitors)

Connection (Three) (2) binding posts

Accuracy 5% (< 1uF: 1kHz test frequency; > 1uF: 100Hz test frequency)

Operating conditions Temperature: 32 to 122oF (0 to 50oC) / Humidity: < 80%RH

Dimensions/Weight 6" x 3.7" x 1.9"

Weight Approx.: 0.95 lbs.

Operation

Binding Post Connections

To connect the CD-300, connect the positive lead to the RED post and the negative lead to the BLACK post. To make the connection, a banana plug can be inserted directly into the posts. An alternate method is to thread wire through the posts. In order to do this, unscrew the post, thread your wire, and finally retighten the post as necessary. An alligator clip can be attached to the plugs as well. However, use alligator clips with caution to avoid wearing down the posts.

Range Selection

The CD-300 contains 20 switches organized in a 4 x 5 grid. Each row offers 5 decade of capacitance ranges starting at 100pF and ending at 1uF. When a switch is in the ON position, the value marked above the switch is added to the total capacitance. For example, to obtain an output capacitance of 7.32uF, the switches 4uF, 3uF, 0.3uF, and 0.02uF will be in the ON position.

Testing

The CD-300 can be used for calibration of your test equipment due to its 5% accuracy. For calibration, set the CD-300 to the desired value and connect the terminals of your test equipment to the output of CD-300. The readout of the device you are testing should be selected capacitance value (+ 50pF residual capacitance – approx). If not, adjust the device you are testing accordingly.

Limited One-Year Warranty