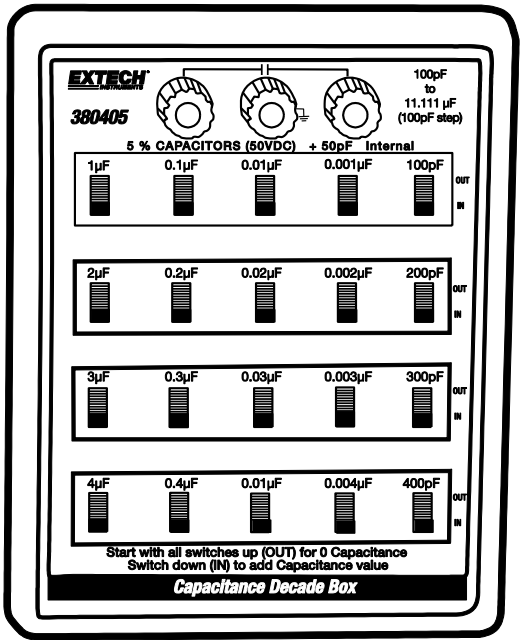
EXTECH INSTRUMENTS

User Manual

Capacitance Decade Box

Model 380405



Introduction

Congratulations on your purchase of the Extech 380405 Capacitance Decade Box. This device offers 5 decades of capacitance ranges from 100pF to 11.111uF (in 100pF steps). Slide switches allow easy addition and subtraction of capacitance values. Binding posts (3) offer simple and secure connections. Careful use of this decade box will provide years of reliable service.

Specifications

Capacitance ranges	100pF to 11.111uF in 100pF steps
Internal Residual Cap:	50pF maximum
Voltage limit	50VDC (non-polarized capacitors)
Connection	Three (3) binding posts
Accuracy	5% (< =1uF: 1kHz test frequency; > 1uF: 100Hz test frequency)
Operating conditions	Temperature: 0 to 50ºC (32 to 122ºF) / Humidity: < 80%RH
Dimensions/Weight	14.7 x 11.7 x 3.3cm (5.79 x 4.61 x 1.3") / Approx. 312g (0.69 lbs)

Operation

Binding Post Connections

The binding posts can be used for connections in several ways:

1. A banana plug can be inserted directly into the posts.
2. Bare wire can be threaded through the post after it has been unscrewed. Once the bare wire is threaded, tighten the posts as necessary.
3. Alligator clips can be used but use caution not to strip the post threads or plastic post housing.

The Capacitance output is available on the RED and the BLACK binding posts. The WHITE post is case ground and is typically not used. Connect the positive lead of the device under test to the RED post. Connect the negative lead to the BLACK post. Use the WHITE grounding post only if the device under test will be grounded to the 380405 case.

Range Selection

The 20 front panel switches are used to select the capacitance that will be output on the RED and BLACK terminals. When a switch is set to the IN position, the value printed above the switch is added to the total capacitance available at the posts. When the switch is set to OUT it is excluded from the total capacitance. If all of the switches are set to OUT, the total output capacitance will be zero (+ 50pF residual capacitance – approx).

For example, if the desired output value is 10.5uF, set the following switches to the IN position: 4uF, 3uF, 2uF, 1uF, 0.4uF, and 0.1uF.

Testing

This device can be used to verify the calibration integrity of multimeters, LCR meters, calibrators, etc. Connect as described in the Binding Post Connections section above, and then set the capacitance switches to output the desired capacitance. Ensure that the voltage supplied by the device under test is not greater than 50VDC. The device under test should read the value of capacitance selected on the tester. If it does not, the device under test may need calibration, adjustment, or repair.