Prüf- und Messtechnik

Spitzentechnologie, die überzeugt

Operation manual

Decade Box

1. Safety Precautions

This product complies with the requirements of the following European Community Directives: 2004/108/EC (Electromagnetic Compatibility) and 2006/95/EC (Low Voltage) as amended by 2004/22/EC (CE-Marking); pollution degree 2.

To ensure safe operation of the equipment and eliminate the danger of serious injury due to short-circuits (arcing), the following safety precautions must be observed.

Damages resulting from failure to observe these safety precautions are exempt from any legal claims whatever.

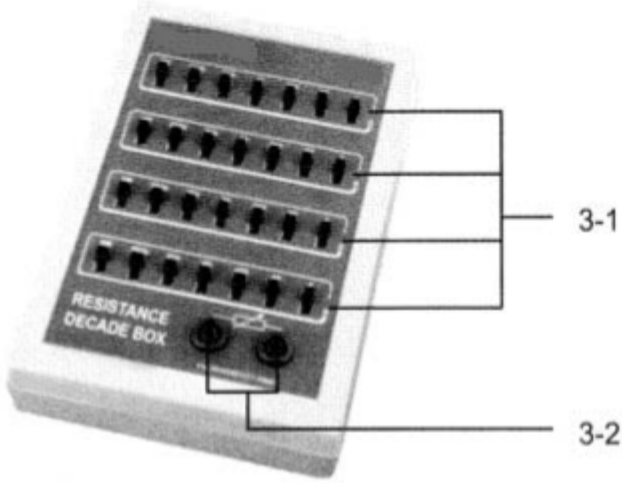
* Do not use this instrument for high-energy industrial installation measurement.
* Do not exceed the maximum permissible input ratings (danger of serious injury and/or destruction of the equipment).
* Check test leads and probes for faulty insulation or bare wires before connection to the equipment.
* To avoid electric shock, do not operate this product in wet or damp conditions. Conduct measuring works only in dry clothing and rubber shoes, i. e. on isolating mats.
* Comply with the warning labels and other info on the equipment.
* Do not subject the equipment to direct sunlight or extreme temperatures, humidity or dampness.
* Do not subject the equipment to shocks or strong vibrations.
* Do not operate the equipment near strong magnetic fields (motors, transformers etc.).
* Keep hot soldering irons or guns away from the equipment.
* Allow the equipment to stabilize at room temperature before taking up measurement (important for exact measurements).

* Periodically wipe the cabinet with a damp cloth and mid detergent. Do not use abrasives or solvents.
* The instrument is suitable for indoor use only
* Do not store the meter in a place of explosive, inflammable substances.
* Do not modify the equipment in any way
* Do not place the equipment face-down on any table or work bench to prevent damaging the controls at the front.
* Opening the equipment and service – and repair work must only be performed by qualified service personnel
* **Measuring instruments don't belong to children hands.**

2. Features

* Applications:
* General applications Troubleshooting,
* Maintenance Education and Vocational training
* Production line testing
* Radio and TV services
* Working standards
* Research design and develop
* Physics laboratory work
* Offering accurate, reliable performance
* Slide switches that allow the user to simply add or subtract for desired value
* Terminals with multi way binding posts, one to switch shield case
* ABS plastic housing case, rugged components

3.1.1. Front Panel Description



3-1 Range Select Switch
3-2 Resistance Output Terminal

3.1.2. Testing Procedure

1. Start with all switches up (0) for 0 ohms.

2. Switch down (1) to add Resistance value.

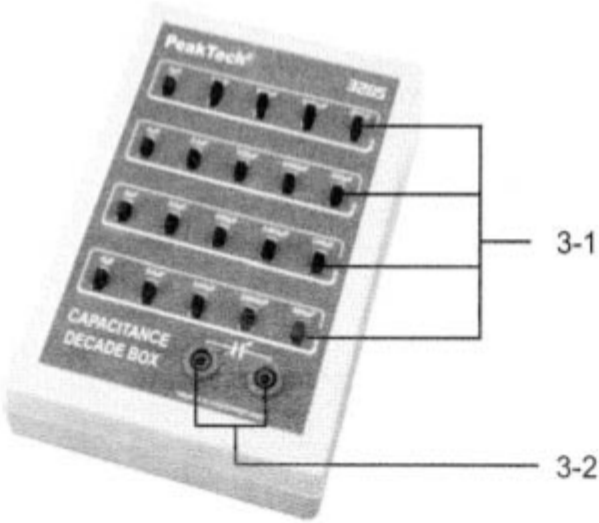
WARNING!!

* The Wattage of the "Output Resistor" is 0,3 W. Do not add the Wattage more than 0,3 W to the "Resistance Output Terminals" (3-2)
* Do not add the voltage over AC/DC 250 V to the "Output Resistance Terminals" even its stand Wattage is less than 0,3 W.

3.2. Specifications

Range	100 pF to 11,111 µF (100 pF per step)
Accuracy	5 % capacitors used throughout < 1 µF, 1 kHz test frequency > 1 µF, 100 Hz test frequency
Voltage	50 V DC, non-polarized capacitors
Internal Residual Capacitance	50 pF max.
Operating Temperature	0°C to 50°C (32°F to 122°F) < 80% RH
Weight	350 g.
Dimensions (WxHxD)	140 x 190 x 80 mm
Accessories	Operation Manual

3.2.1. Front Panel Description



3-1 Range Select Switch
3-2 Capacitance Output Terminal

3.2.2. Testing Procedure

1. Start with all switches up (0) for min. capacitance.

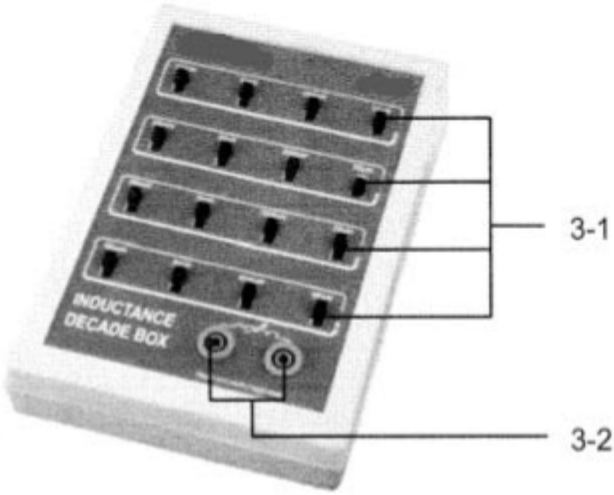
2. Switch down (1) to add Capacitance value.

WARNING!!
Do not add the voltage more than 50 V DC to the "Output Capacitor Terminals" (3-2)

3.3. Specifications

Range	10 µH to 111,1 mH (10 µH per step)
Accuracy	5 % inductors used throughout at 23°C +/- 5°C at 1 kHz test frequency
Max. Rating Current	100 mA DC or AC
Internal Residual Inductance	Approx. 0,5 µH
Operating Temperature	0°C to 50°C (32°F to 122°F) < 80 % RH
Weight	450 g.
Dimensions (WxHxD)	140 x 190 x 80 mm
Accessories	Operation Manual

3.3.1. Front Panel Description



3-1 Range Select Switch
3-2 Inductance Output Terminal

3.3.2. Testing Procedure

1) Start with all switches up (0) for min. inductance.

2) Switch down (1) to add Inductance value.

WARNING!!
Do not add the current more than 100 mA (AC or DC) into the "Output Inductor Terminals" (3-2)