

Digital Capacitance Meter

MT955 Operating Manual



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Safety precautions

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 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.
- replace a defective fuse only with a fuse of the original Rating Never short-circuit fuse or fuse housing.
- never touch the tips of the test leads or probe.
- comply with the warning labels and other info on the equipment.
- conduct measuring works only in dry clothing and in rubber shoes i.e. on isolating mats.
- do not connect voltage sources across the OHM/COM terminals of the equipment.
- do not conduct current measurements with the leads connected to the VOLT/OHM terminals of the equipment.
- always start with the highest measuring range when measuring unknown values.
- disconnect test leads or probe from the measuring circuit before switching modes or functions.
- do not subject the equipment to direct sunlight or extreme temperatures.
- do not subject the equipment to extreme 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)
- 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.

Cleaning the cabinet

Clean only with a damp, soft cloth and a commercially available mild household cleanser. Ensure that no water gets inside the equipment to prevent possible shorts and damage to the equipment.

1. Specifications

Display	3 1/2 digit liquid crystal display (LCD) with a Maximum reading of 1999.
Polarity	Automatic, positive implied, negative polarity Indication
Overrange	(1) or (-1) is displayed
Zero	automatic
Low battery indication	the "  " is displayed when the battery voltage Drops below the operating level
Measurement rate	2 times per second, nominal
Operating environment	0 °C to 50 °C at < 70% relative humidity
Storage temperature	-20 °C to 60 °C, 0 to 80% R.H. with battery Removed from meter

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Accuracy Stated accuracy at 23 °C ± 5 °C, < 75% relative humidity.

Power single standard 9 V battery, NEDA 1604, JIS 006 P, IEC 6F22

Battery life 300 hours typical with carbon-zinc

Dimensions 145 mm (H) × 69mm(W) × 38 mm (D)

Weight approx. 190g incl. Battery

Accessories One pair test leads, 9 V battery (installed) one spare fuse (installed) operating instruction

Range	Resolution	Accuracy	Test Frequency
200 pF	0.1 pF	$\pm(0.5\% \text{rdg} + 0.5 \text{pF})$	820Hz
2000 pF	1 pF	$\pm(0.5\% \text{rdg} + 1 \text{dgt})$	
20nF	10 pF		
200nF	100 pF		
2 μ F	1 nF		
20 μ F	10 nF	$\pm(2.0\% \text{rdg} + 1 \text{dgt})$	8.2Hz
200 μ F	100 nF		
2000 μ F	1 μ F		
20mF	10 μ F	$\pm(4.0\% \text{rdg} + 1 \text{dgt})$	

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Test voltage: $<3.5\text{ V}$

Input protection: $0.1\text{ A}/250\text{ V}$ fast acting fuse

Zero adjust limited: $\pm 20\text{ pF}$ approx.


2. Operation

WARNING

To avoid electrical hazards, discharge the capacitor before measuring.

1. For capacitance measurement less than 200 nF , use the "O-ADJ" knob can be subtract the stray capacitance.
2. Set the range switch to the desired range.
3. Never apply an external voltage to the input terminals. Damage to the meter may result.
4. Observe polarity when measuring polarized capacitors.
5. Insert the capacitor leads into the receptacle socket or directly connect the test clip to the capacitor leads as required.
6. Read the capacitance direct from the display.

3. Battery Replacement

Power is supplied by a 9 volt "transistor" battery (NEDA 1604, IEC 6F22). The " " appears on the LCD display

when replacement is needed. To replace the battery, remove the two screws from the back of the meter and lift off the front case. Remove the battery from battery contacts.

4. Fuse Replacement

If no capacitance measurement is possible, check for a blown overload protection fuse. For access to fuses, remove the two screws from the back of the meter and lift off the front case. Replace fuse only with the original type $0.1\text{ A}/250\text{ V}$ fast acting fuse.