

MEASURING EQUIPMENT
Handheld multimeter MODEL LC-4.5

Document No.: 11-102-R1

Sheet: 1 of 1

German Cathodic Protection



Features

- DC volts for IR drop, potential & rectifier readings
- AC volts for potential & rectifier readings
- Ohms for continuity & resistance testing
- Selectable input resistance display
- Display „Freeze“ for instant off & coordinated tests
- Optional plug-in shunt for current readings
- Includes carry case with red and black test leads

GENERAL INFORMATION

Model LC-4.5 is a hand-held voltmeter to include a number of special features which facilitate corrosion and cathodic protection testing on underground structures. It is designed for field testing under almost any environmental conditions. Sealed Mil Spec. switches, sealed windows, a gasketed case and a printed circuit board with baked - on moisture and fungus resistant coating on both sides make this possible.

LCD DISPLAY: the large (0.5") display characters are easy to read under both high and low lighting conditions and function over a wide temperature range with very little drain on the battery.

THE LC-4.5: is recommended for potential surveys, side drain measurements, surface potential surveys, IR drop measurements, checking both the AC and DC circuits of rectifiers, checking for stray or hazardous AC potentials, and checking galvanic anodes. DC current measurements require the use of an optional plug-in shunt (0-20 Amp).

THE SELECTABLE INPUT: resistance feature permits detection of high resistance in the external circuit and elimination of resulting errors in virtually all cases.

THE PUSH-TO HOLD READING: button freezes the display at any desired time, which makes the meter usable in many areas having varying stray currents. It is also useful when conducting instant-off and coordinated tests.

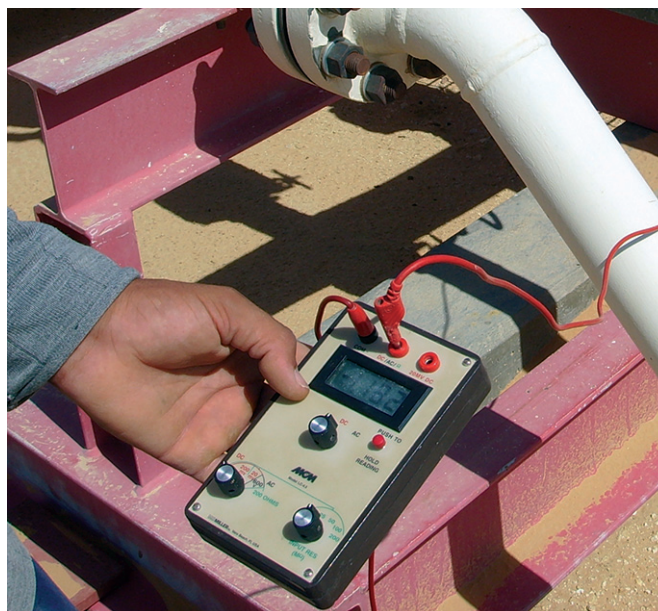
ACCESSORIES

Spare Carrying Case

Made of heavy, water resistant simulated leather, this carrying case leaves your hands free to perform tests. A quick opening snap permits ready access to the instrument, and a belt loop is included with a snap fastener.

Electrode Extension Adapter

Designed to save effort (and your back) as well as to protect you from snakes and poison ivy, the MCM electrode extension adapter firmly mates with the base of the meter by the use of Velcro® pads. The base has a threaded socket which connects to either input terminal by means of a test lead pigtail with a banana plug. Any MCM intermediate electrode extension can be screwed into the socket.



Specifications

Logic	CMOS, crystal controlled timing
Display	Liquid crystal, 3 1/2 digits, 0.5" high
DC Volt Range	0 - 20 mV (0.01 mV resolution) 0 - 200 mV (0.1 mV resolution) 0 - 2 V (1.0 mV resolution) 0 - 200 V (0.1 V resolution)
AC Volt Range	0 - 600 V (1.0 V resolution)
Resistance Range	0 - 200 Ohms (0.1 Ω resolution)
DC Current Range	Using optional 0.001 Ω LC Shunt: 0-20 A (0.01 A resolution)
Accuracy	VDC: 1% of reading ±1 digit VAC: 3% of reading ±1 digit Ohms: 2% of reading ±1 digit
AC Rejection @ 50/60/400 Hz	20 mV range: 20 mV AC 200 mV range: 5 VAC 2 V range: 120 VAC 200 V range: 600 VAC
DC Rejection	600 VAC range: 600 VDC
Zero	Automatic
Decimal Point	Automatic; set by range switch
Polarity	Automatic; negative symbol displayed, positive assumed
Input Resistance	20 mV range; 1000 Ω. All other DCV ranges are switch selectable (10, 25, 50, 100, 200 M Ω)
Operating Temperature	+8°F to +176°F (-14°C to +80°C)
Battery	One 9V alkaline recommended
Dimensions	6-1/8 x 3-5/8 x 1-3/4" overall (15 x 8 x 4.5 cm)
Weight	11 oz. approx. (0.312 kg)

External Shunt

Two shunts which plug directly into the 20 mV range of the LC-4 Meter are available:

- 0.00 Ω / 50A/ 1 mV = 1A (measure up to 20 A on the 20 mV range).
- 0.1 Ω / 2 A/ 100 mV= 1A (measure up to 200 mA on the 20 mV range).