



CE



Carry Bag



Resistance Verification Plate

4680BL, 4680BLC

The faults in any Electrical System are unavoidable. Earthing plays an important role in Generation, Transmission & Distribution for safe and proper operation of any Electrical Installation. **MECO 4680BL/4680BLC Clamp-On Earth / Ground Resistance Tester** has long jaw suitable for Earthing Strip of 65mm x 32mm. It completely eliminates the use of ground and auxiliary rods thus saving lot of time and avoiding shutdown. Calibration check can be verified by using the Resistance Verification Plate provided. This is an extremely handy instrument especially at place where it is next to impossible to measure Earth / Ground Resistance by conventional methods. Substantial time saving and easy operating justify the investment in these instruments.

Features

- Non Contact Ground Resistance Measurement
- No Auxillary Electrodes Needed
- Data Storing Memory
- Data Hold, Noise Signal
- Ground Resistance Measurement $0.01\Omega \sim 1000\Omega$
- Suitable for Earthing Strip of 65mm x 32mm
- Leakage Current (0.5mA ~ 30.00A) (Model 4680BLC)
- Auto Ranging
- Continuity Loop Test
- Auto Power Off

General Specifications

Jaw	: 65 x 32 mm Approx.
Conductor Size	: $\Phi 65$ mm * 32 mm
Battery Type	: 1.5V (AA) x 4 (Alkaline)
Display	: 4 Digit 9999 counts LCD
Range Selection	: Auto
Memory	: 99 Sets
Overload Indication	: OL
Low Battery Indication	: B
Operating Environment	: $-10^{\circ}\text{C} \sim 55^{\circ}\text{C}$
Dimensions	: 293 x 90 x 66 mm
Weight	: 1250 gms Including Battery (approx)
Accessories	: Resistance Verification Plate x 1, Battery 1.5V (AA) x 4 (Installed), User Manual x 1, Carry Bag x 1
Configurable Alarm	: Resistance : 1 ~ 199 Ω Current : 1 ~ 499mA

Electrical Specifications ($23^{\circ}\text{C} \pm 5^{\circ}\text{C}$)

Ground Resistance (Auto Range) (4680BL, 4680BLC)		
Range	Resolution	Accuracy of Reading
0.010 ~ 0.099 Ω	0.001 Ω	$\pm (1\% + 0.01 \Omega)$
0.10 ~ 0.99 Ω	0.01 Ω	$\pm (1\% + 0.01 \Omega)$
1.0 ~ 49.9 Ω	0.1 Ω	$\pm (1.5\% + 0.1 \Omega)$
50.0 ~ 99.5 Ω	0.5 Ω	$\pm (2\% + 0.5 \Omega)$
100 ~ 199 Ω	1 Ω	$\pm (3\% + 1 \Omega)$
200 ~ 395 Ω	5 Ω	$\pm (6\% + 5 \Omega)$
400 ~ 590 Ω	10 Ω	$\pm (10\% + 10 \Omega)$
600 ~ 1000 Ω	20 Ω	$\pm (20\% + 20 \Omega)$
Ground & Leakage Current: Auto Ranging, 45/65Hz, RMS (4680BLC)		
Range	Resolution	Accuracy of Reading
0 ~ 80 mA	0.05 mA	$\pm (2.5\% + 1 \text{ mA})$
80 mA ~ 650 mA	0.5 mA	$\pm (2.5\% + 2 \text{ mA})$
650 mA ~ 4 A	5 mA	$\pm (2.5\% + 10 \text{ mA})$
4 A ~ 30 A	10 mA	$\pm (2.5\% + 20 \text{ mA})$


CE



Features

- Non Contact Ground Resistance Measurement
- No Auxiliary Electrodes Needed
- Recording / 116 Sets of Memory
- Ground Resistance Measurement $0.025\Omega \sim 1500\Omega$
- Suitable for Ground Wire upto Φ 23mm (Model 4680)
- Suitable for Ground Wire upto Φ 34.5mm (Model 4680B)
- Leakage Current (0.300mA \sim 30.00A) (Model 4680)
- Leakage Current (0.300mA \sim 35.00A) (Model 4680B)
- Programmable High & Low Alarm
- Programmable Data Logging
- Auto Range
- Continuity Loop Test
- Auto Power Off

General Specifications

Jaw Opening	: 23 mm approx. (Model 4680) 38 mm approx. (Model 4680B)
Battery Type	: 9V (Alkaline)
Display	: 4 Digit 9999 Counts LCD
Range Selection	: Auto
Overload Indication	: OL
Power Consumption	: 40mA (approx.)
Low Battery Indication	: 
Operating Environment	: $0^{\circ} \sim 50^{\circ}\text{C}$, RH < 85%
Storage Environment	: $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$, RH < 75%
Dimensions	: 257 x 100 x 47 mm (Model 4680) 276 x 102 x 51 mm (Model 4680B)
Weight	: 670 gms Including Battery (approx.) (4680)/ 790 gms Including Battery (approx.) (4680B)
Accessories	: Resistance Verification Plate x 1, Battery (installed) x 1, User Manual x 1, Carry Box x 1, Cleaning Brush x 1

Electrical Specifications ($23^{\circ}\text{C} \pm 5^{\circ}\text{C}$)

Ground Resistance (Auto Range)		
Range	Resolution	Accuracy of Reading ^{1,2}
0.025 \sim 0.250 Ω	0.002 Ω	$\pm 1.5\%\text{rdg} \pm 0.05\Omega$
0.251 \sim 1.000 Ω	0.02 Ω	$\pm 1.5\%\text{rdg} \pm 0.05\Omega$
1.001 \sim 10.00 Ω	0.02 Ω	$\pm 1.5\%\text{rdg} \pm 0.1\Omega$
10.01 \sim 50.00 Ω	0.04 Ω	$\pm 2.0\%\text{rdg} \pm 0.3\Omega$
50.01 \sim 100.0 Ω	0.04 Ω	$\pm 2.0\%\text{rdg} \pm 0.5\Omega$
100.1 \sim 200.0 Ω	0.4 Ω	$\pm 3.0\%\text{rdg} \pm 1.0\Omega$
200.1 \sim 400.0 Ω	2 Ω	$\pm 5.0\%\text{rdg} \pm 5\Omega$
400.1 \sim 600.0 Ω	5 Ω	$\pm 10\%\text{rdg} \pm 10\Omega$
600.1 \sim 1500 Ω	20 Ω	$\pm 20\%\text{rdg}$

1. Loop resistance noninductive, external field < 50A/m (4680) or < 200A/m (4680B), external electrical field < 1V/m, conductor centered.
2. Resistance Measurement Frequency : 3.333KHz

Ground & Leakage Current: Auto Ranging, 50/60Hz, TRMS, Crest Factor < 3.0 for (4680) or < 3.5 for (4680B)		
Range	Resolution	Accuracy of Reading
0.300 \sim 1.000 mA	0.001 mA	$\pm 2.0\%\text{rdg} \pm 0.05\text{mA}$
1.00 \sim 10.00 mA	0.01 mA	$\pm 2.0\%\text{rdg} \pm 0.03\text{mA}$
10.0 \sim 100.0 mA	0.1 mA	$\pm 2.0\%\text{rdg} \pm 0.3\text{mA}$
100 \sim 1000 mA	1 mA	$\pm 2.0\%\text{rdg} \pm 3\text{mA}$
0.200 \sim 4.000A	0.001A	$\pm 2.0\%\text{rdg} \pm 0.03\text{A}$
4.00 \sim 30.00A (4680)	0.01A	$\pm 3.0\%\text{rdg} \pm 0.03\text{A}$
4.00 \sim 35.00A (4680B)	0.01A	$\pm 3.0\%\text{rdg} \pm 0.03\text{A}$

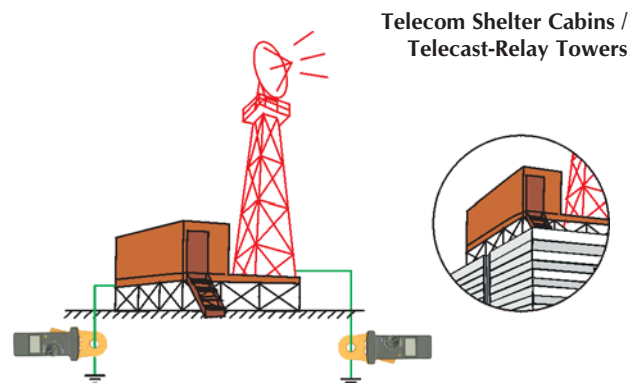
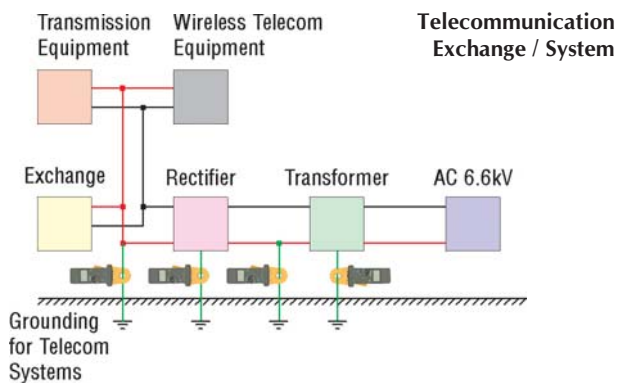
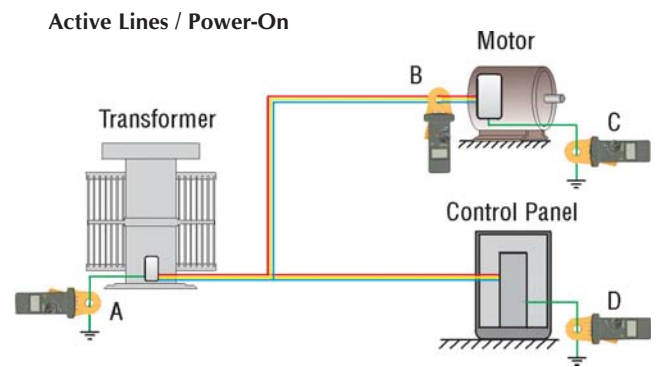
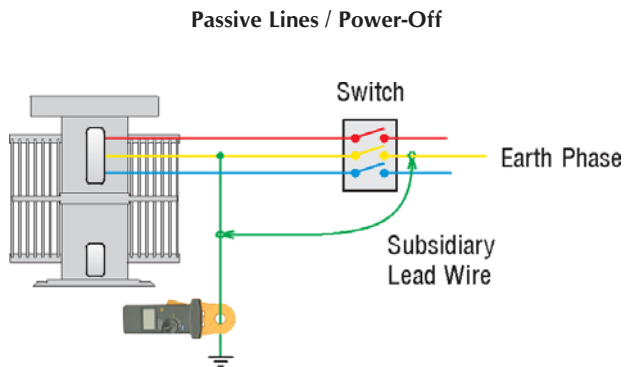
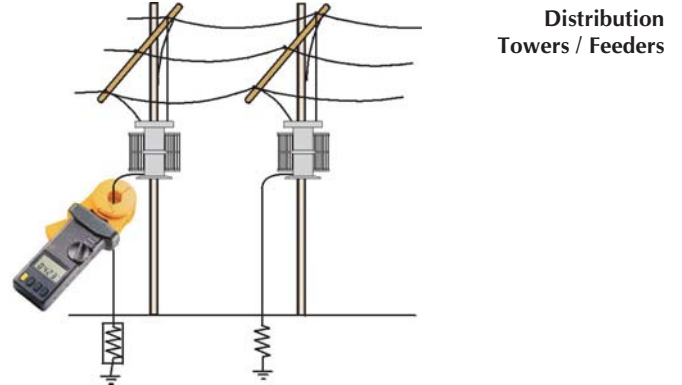
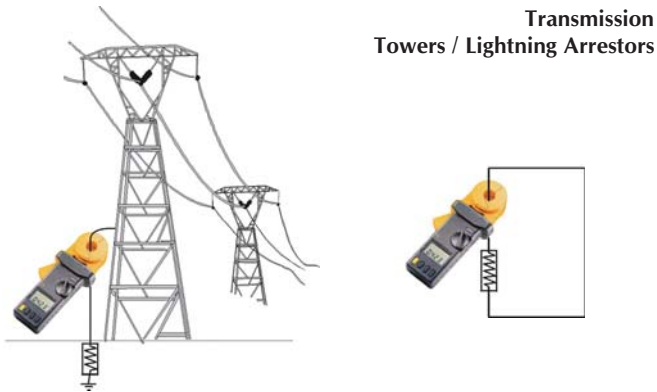
Accuracy of Resistance Calibration Plate : $\pm 1\%$
Data Logging Capacity : 116 Records
Data Logging Interval : 1 \sim 255 Seconds



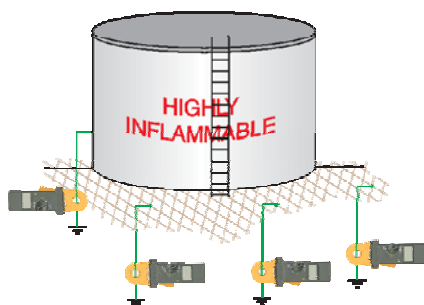
4680, 4680B

Applications

Hazards due to improper earth / ground happen around us everyday. Systems are becoming more and more complex and faults in any system are unavoidable. Every electrical equipment, appliance or network must be properly earthed to allow a low resistance path for dissipation of leakage current into the earth. MECO Clamp-On Earth / Ground Resistance Tester can measure accurately within a few minutes the ground resistance & AC current (load & leakage) of all types of installations by just clamping to the grounding lines without disconnecting the circuit or driving auxiliary electrodes. A few of the applications have been illustrated below :



Hazardous Storage Tanks for Petrol / Oil / Gas / Chemicals



Household Electrical Appliances

