

The best quality / price insulation testers



MW 9050A

Capabilities

- Insulation measurement up to 1000 VDC
- Test voltage (250, 500, 1000V)
- Resistance measurements : 500 Ω or 2KΩ
- AC Voltage measurement
- Robust case .
- IEC1010 600V CATIII



MW 9110

Capabilities

- Large display with bargraph
- Insulation measurement up to 1000VDC
- Test voltage (250, 500, 1000V)
- Resistance measurements : 4000 MΩ
- Carrying pouch.
- IEC 1010 : 600 V CAT II



MW 9050D

Capabilities

- Test voltage 250, 500, 1000V
- Resistance measurements : 8 Gohms
- Automatic measurements
- Continuity test with buzzer
- IEC 1010 : 600 V CAT III



MW 9070D



Technical Specification	MW 9050A	MW 9050D	MW 9070D	MW 9110
Insulation resistance	100 / 200 / 400 MΩ	200 / 2000 MΩ	0 to 8 GΩ	4 / 40 / 400 / 4000 MΩ
Accuracy*	± 5% full range	± (1,5% + 5d)	± (1,5% + 5d)	± (3% + 5d)
Test voltage	250 / 500 / 1000 VDC	250 / 500 / 1000 VDC	250/500/1000 VDC	250 / 500 / 1000VDC
Continuity - low Ohm	3 Ω to 500 Ω (test current >200mA)	20 to 2KΩ (test current >200mA)	0-20 Ω (test current >200mA)	0-40 Ω (test current > 200mA)
Resistance	3 / 500 Ω	20 / 2 KΩ	-	400 Ω / 4000 Ω
Accuracy*	± 1% full range	± (1,5% + 3d)	-	± (1% + 5d)
AC voltage	0-600V	0-600V	0-700V, 0-950VDC	0-600 V
Accuracy*	± 3% full range	± (1,5% + 3d)	± (1,5% + 5d)	± (1% + 3d)
<b>General Specification</b>				
Display	Analogue	2000 cts	Digital (2 lines of 16 characters)	2000 cts
Power supply	8 x 1,5V (AA LR6)	8 x 1,5V (AA LR6)	8x1,5V ( alkaline)	8 x 1,5V (LR6)
Dimensions, weight	170 x 165x 92 mm, 1100 g	170 x 165 x 92 mm, 1040 g	175 x 85 x 75 mm, 655g	196 x 112 x 64 mm, 700 g
IEC1010	600V CAT III	600V CAT III	600V CAT III	600V CAT II

Supplied with : 1 set of test leads, 2 alligators clips, batteries  
 Optional accessories : see page 54, 55, 56, 57.

# Insulation tester up to 10KV



MW 9180

### Capabilities

- Insulation measurement up to 10KVDC
- Test voltage (500, up to 10KV) in 500V steps.
- Bargraph indicates test voltage, decay can be observed during discharge.
- Measures insulation test time.
- Display warning of external voltage.

Technical Specification		MW 9180
Test voltage		500 / 10KV in 500V steps
Resistance		800 K $\Omega$ to 500 G $\Omega$
Accuracy*		$\pm$ (10% $\pm$ 2 counts)
Test current		1,5mA
Short circuit current		Electronic limited to 1W
Transfer time		Automatic through test voltage
Circuit discharge		Automatic display on bargraph
Timer		to 99,9 secondes
Protection		Voltage detection < 300 VAC
General Specification		
Display		2 lines of 16 characters
Power supply		8 x 1,5V (LR14)
Dimensions, weight		320 x 270 x 170 mm, 3,6Kg

Supplied with : With a connection Kit (SE 715), including a probe, two safety test leads, two safety alligators clips and one alligator test lead.

Optional accessories : see page 54, 55, 56, 57.

## For your circuit breaker testing, in total safety

### Capabilities

- Check circuit breakers, measuring the trip current , trip time and contact voltage
- AC/DC voltage measurement
- Frequency measurement
- RS-232 Interface
- 500 measurements memory
- Display 2000 counts.

Technical Specification		MW 9200		
• RCCB test	RCCB type	AC, general, Selective		
	Nominal current	10, 30, 100, 300, 500 mA		
Tripping time	Test voltage	1N	2N	5N
	Ranges (ms)	0-1000	0-200	0-50
Tripping current	Ranges	(0,5 to 1,4) 1N		
	Contact voltage	Ranges	0-99,9 V	
• AC,DC voltage	Ranges/ accuracy	0-250 V / $\pm$ (2% + 2d)		
• Frequency	Ranges	25 - 500 Hz		
General Specification				
Power supply		4 x 1,5 V (LR14)		
Autonomy		1200 meas.		
Dimensions, weight		110 x 65 x 290 mm, 750 g		
IEC 1010		300 V CAT II		

Supplied with : A mains test cable EURO/SHUKO ( SE701) and 4 batteries.

Optional accessories : see page 54, 55, 56, 57.



MW 9200

# The easiest Earth measurement tester

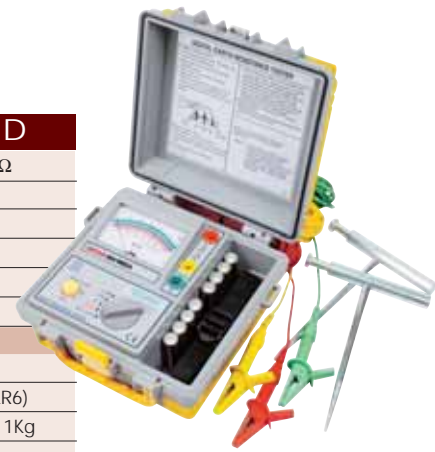
### Capabilities

- Measures earth resistance with 2 or 3 rods.
- Measures ground voltage
- Robust case



MW 9452 D

Technical Specification	MW 9452A	MW 9452D
Earth resistance	0/10/100/1000Ω	0/20/200/2000Ω
Accuracy*	± 2,5 % full range	± (2% + 2d)
Measurement current	2 mA Approx.	2 mA Approx.
Short circuit	Yes (LED)	Yes (LED)
Earth voltage	0 to 30 VAC	0 to 200 VAC
Accuracy*	± 3 % full range	± (1%+2d)
General Specification		
Display	Analog	2000 cts
Power supply	8 x1,5 V type AA ( LR6)	8 x1,5 V type AA ( LR6)
Dimensions & Weight	170 x 165 x 92 mm, 1Kg	170 x 165 x 92 mm, 1Kg
IEC 1010	300 V CAT II	300 V CAT II



MW 9452 A

Supplied with : A set of 3 cables (SE 713), 3 alligators clips and 2 rods.

## For rapid and comprehensive earth loop resistance testing

Technical Specification	MW 9300	
Impedance P-N/P-P	0 to 2000 Ω	Accuracy : ± (2% + 2d)
Short circuit current P-N / P-P	0,06 A to 40 kA	Accuracy : ± (2% + 2d)
Earth loop resistance P-N/P-E	0 to 200 Ω	
Accuracy	± (2%L + 2d)	
AC,DC voltage	0- 440 V	Accuracy : ± (2%L + 2d)
Frequency	25 - 500 Hz	
General Specification		
Power supply	4 x 1,5 V (LR14)	Dimensions 110 x 65 x 290 mm
Autonomy	1200 meas.	Weight 750 g
IEC1010	300 V CAT II	

Supplied with : A mains test cable SHUKO curly type (2m) (SE 704) and 4 batteries

Optional accessories : see page 54, 55, 56, 57.

- SE 705 - Set of 3 bananas plugs and 3 alligators clips.



MW 9300

### Capabilities

- Measures earth loop resistance without rods and short circuit current.
- AC/DC Voltage measurements
- Frequency measurements
- RS-232 interface
- 500 measurements memory .
- Display 2000 counts

## Phase sequence indicator

### Capabilities

- Indicates phase rotation
- Indicates phase presence
- Easy to use
- Small and robust enclosure
- Delivered with holster
- IEC1010: 600V - CAT III



Sefram 80

### Capabilities

- Indicates phase rotation
- Indicates phase presence
- Easy to use
- LCD display
- Small and robust enclosure
- Delivered with holster
- IEC1010: 600V - CAT III



Sefram 82



SEFRAM 86

Technical Specification	SEFRAM 80	SEFRAM 82	SEFRAM 86
AC voltage input	200-600V AC	40 - 700V AC	100 - 600V
Bandwidth	50-60 Hz	15 - 400 Hz	45 - 70 Hz
General Specification			
Power supply	-	-	Battery 9V
Dimensions, weight	134 x 85 x 45 mm, 350g	150 x 72 x 34 mm, 160g	153 x 72 x 35mm, 182g
IEC1010	600V - CAT III	600V - CAT III	600V - CAT III

Supplied with : SE 710, kit of 3 bananas plugs, 3 alligators clips and 1 battery (Sefram 86 only).

### Capabilities

- Indicates phase rotation
- Indicates phase presence
- Indicates battery status, motor rotation
- Indication works as low as 1Vac
- Small and robust enclosure
- Delivered with holster
- EC1010: 600V - CAT III

# Comprehensive electrical installation testing



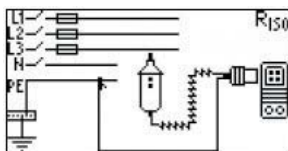
MW 9600

### Capabilities

- Insulation tester
- Looptester
- Earth resistance with rods (MW 9650 only)
- RCCB. Tester
- Continuity and frequency measurement
- Phase sequence indicator
- Lux meter (MW 9650)
- External software (MW 9650 only)
- **IEC 1010 : 600 V CAT III**

## Easy to use

Thanks to the large display with backlight, the units display all schematics.



## Complete units

The MW9600, MW9650 allows all single and three phases measurements

Technical Specification	MW 9600	MW 9650
RCCB tester	Type A, AC , general, selective	Type A, AC , general, selective
Leakage current	10, 30,100, 300,500,1000 mA	10, 30,100, 300,500,1000 mA
Tripping time	test current 0,5IΔN, 1IΔN, 2IΔN, 5IΔN	test current 0,5IΔN, 1IΔN, 2IΔN, 5IΔN
Contact voltage	0 to 99,9V	0 to 99,9V
Earth Loop tester	yes	yes
Earth Loop resistance	0 to 2000 Ω	0 to 2000 Ω
Nominal voltage	100 - 264 V	100 - 264 V
Loop impedance	0 to 20 KOhms	0 to 20 KOhms
short circuit current	0 to 24,4 KA	0 to 24,4 KA
Insulation resistance	0 to 999 MOhms	0 to 999 MOhms
Open circuit voltage	100, 250, 500, 1000V	100, 250, 500, 1000V
Low ohm continuity	0 to 20 Ω	0 to 20 Ω
AC voltage	0 to 440 V	0 to 440 V
Frequency	45 to 65Hz	45 to 65Hz
Phase rotation	yes	yes
Earth resistance	no	yes
Luxmeter	no	option
Leakage current measurement	no	option
Memory	yes	yes
General Specification		
Display	LCD with backlight. 128 x 64 dots	LCD with backlight. 128 x 64 dots
RS-232 and USB interface	-	yes
Power supply	9VDC (6x1,5V)	9VDC (6x1,5V)
Dimensions, Weight	230 x 103 x 115 mm, 1,32 Kg	230 x 103 x 115 mm, 1,32 Kg
IEC 1010	600V CAT III	600V CAT III

Supplied with : A carrying bag, complete set of accessories

**OPTIONS FOR MW9650 :** SE 717 : luxmeter probe B,  
SE 718 : luxmeter probe C,  
A1018 and SP 210 and SP 222 : Leakage current clamp

