

# M1501P



- Measurement range  
Teraohmmeter from 4kΩ to 2.10<sup>15</sup>Ω  
Picoammeter from 0.01 pA to 20 mA
- Range selection manual or automatic
- Measurement voltage adjustable  
volt by volt from 1V to 1500VDC
- Measurement speed selectable from  
1 to 10 readings/sec
- Memorization of 10 configurations
- Humidity and temperature measurement
- Programmable via IEEE interface

This automatic teraohmmeter-picoammeter microprocessor designed is suited for quality control or incoming inspection departments. The MΩ x km option makes the operation on cables easier.

## TECHNICAL CHARACTERISTICS

### OUTPUT VOLTAGE

- Voltage adjustable volt by volt from 1VDC to 1500VDC
- Accuracy :  
± (0.5% + 0.5V) full scale
- Short circuit current : 20 mA
- Nominal current :  
10 mA from 1V to 1000V  
5 mA from 1000V to 1500V
- Polarity :  
Positive pole to HV terminal  
Negative pole to guard terminal
- Possibility to grounding positive or negative high voltage pole
- Temperature coefficient : 0.001%/°C
- Discharge resistance : 2.2 kΩ
- Voltage drift : microprocessor controlled, audio signal when out of tolerance

### Test time

- A temporization circuit allows to adjust the test time from 0 to 999 sec.

### Measurement speed

- 3 speeds can be programmed with measurement display:
 

Slow	1 reading/sec
Normal	3 reading/sec
Fast	10 reading/sec

### TERAHOHMETER

- Measurement range : 100Ω à 2.10<sup>15</sup>Ω
- Accuracy : ≤ (0.2% of reading + 0.1% of range ± 50/U test %)
- Temperature coefficient: ± 0.1%/°C
- Automatic or manual range selection

Ranges	Resolution
2.10 <sup>6</sup>	4 kΩ
2.10 <sup>7</sup>	10 kΩ
2.10 <sup>8</sup>	100 kΩ
2.10 <sup>9</sup>	1 MΩ
2.10 <sup>10</sup>	10 MΩ
2.10 <sup>11</sup>	100 MΩ
2.10 <sup>12</sup>	1 GΩ
2.10 <sup>13</sup>	10 GΩ
2.10 <sup>14</sup>	100 GΩ
2.10 <sup>15</sup>	1 TΩ

### Measurement on capacitive circuit

- An internal filter enables measurement on capacitive circuits
- Display indicates that measurement voltage has reached requested values

### Program memory

- Up to 10 configurations can be memorized (measurement speed, threshold, test voltage ...)

### PICOAMMETER

- Measurement range :  
0.01pA to 20 mA
- Accuracy :  
≤ (0.2% of reading + 0.1% of range)

### Measurement display

- 2000 digits LCD display

### Threshold

- A measurement value inferior to the predisplayed threshold value brings about an audio signal, a visual signal on the LCD and a contact on the instrument back panel will be available with option 03.

Ranges	Resolution
20 pA	0.01 pA (0.5 pA minimum)
200 pA	0.1 pA
2 nA	1 pA
20 nA	10 pA
200 nA	100 pA
2 μA	1 nA
20 μA	10 nA
200 μA	100 nA
2 mA	1 μA
20 mA	10 μA

### PROTECTION

- High voltage present only when safety loop is closed
- Current can be limited to 3 mA to conform to VDE0104

## GENERAL CHARACTERISTICS

### Presentation

- Table top metal case fitted with retractable feet

### Dimensions

- Height : 131 mm
- Width : 343 mm
- Depth : 332 mm

### Weight

- Approx. 10 kg

### Operating temperature

- 0°C to +50°C

### Storage temperature

- -20°C to +70°C

### Power

- 230V or 115V +/-10%, 47/63 Hz
- Consumption : 40 VA

## OPTIONS

### M1501U-01

Temperature and humidity measurement

- . Range : 0 to 100°C
- . Accuracy : 1% ± 1°C
- . Range : 0 to 100% HR
- . Accuracy : 2% from 5 to 95% HR

### M1501U-02

0-10V Analog output

### M1501U-03

Remote control by dry contacts (PLC)

### M1501U-04

Measurement output on rear panel

### M1501U-06

MΩ x km measurement display : allow on any length of cable, to display the insulation measure brought back on a 1km length

### M1501U-07

RS232C Interface

### M1501U-08

3 mA hardware current limitation

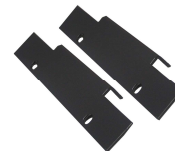
## AVAILABLE ACCESSORIES



**CO19**  
HV lead



**TE17**  
Current measurement probe



**KRMG3U**  
Rack mount kit

## CALIBRATION



**REM**  
Standard resistors



**BEM24**  
Calibration box

Specifications subject to change without notice

[www.sefelec.com](http://www.sefelec.com)

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