

# M3195

## SELECTIVE MEASURING DEVICE



### OVERVIEW

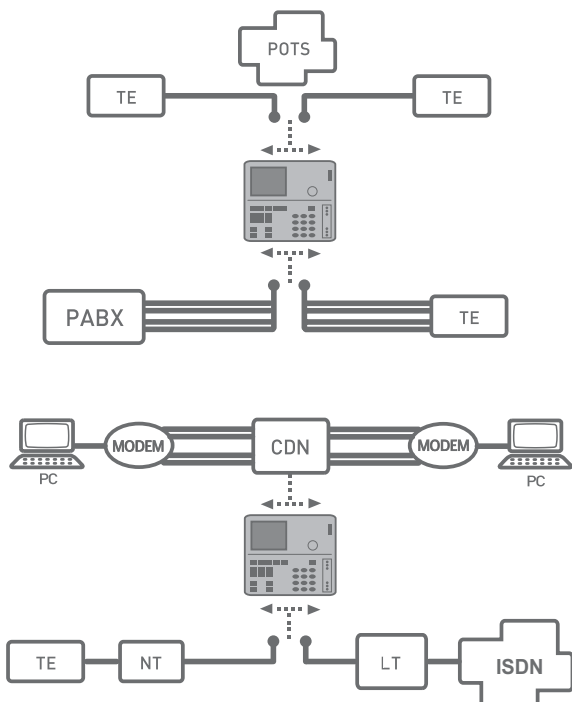
The M3195 Selective Measuring Device, is a very powerful tool used to perform a wide range of measurements in order to test the main characteristics of the circuits used in telecommunication networks, both during the installation and the maintenance purposes with particular reference to the distribution network.

The instrument provides selective level meter and tone generator in a single compact portable, lightweight and reliable instrument.

Transmission and measurement configuration can be carried out with either 2 wires and 4 wires.

Moreover, M3195 can simulate a telephone both with pulse and DTMF dialling so to keep under control and measure the POTS line.

### OPERATING MODES



#### All in one

Level measuring device and tone generator

#### Complete measurement device

Exhaustive list of results to qualify the line

#### Integrated telephone features

In order to perform measurements over POTS line

### STANDARD FEATURES

- Balanced input.
- Measurements:
  - frequency, selective level, wide band level, level of transient signals, crosstalk noise, psophometric noise according to CCITT 0.71 Rec, return loss, impedance, impulsive noise according to CCITT 0.61 Rec, DC voltage
- Graphic representation of return loss, impedance, and "M" series level attenuation mask.
- Pass-band filters.
- Synthesized tone generator (20Hz - 200kHz)
- Extended range for output level (+10dBm - -59dBm)
- Balanced output
- Telephone function

## TECHNICAL SPECIFICATIONS

### GENERATOR

• Nominal impedances	10, 150, 200, 600 Ω
• Frequency range	20 Hz ... 200 kHz
• Resolution in frequency	10 Hz
• Frequency step	
From 20 Hz to 200 kHz	1.0 Hz
• Level of generated signal	
From 20 Hz to 200 kHz	-59 ... +10 dBm
• Level resolution	
From -59 to +10 dBm	0.1 dB

### LEVEL AND NOISE MEASURING DEVICE

• Nominal impedance	150, 200, 600Ω
• Nominal frequency band	
600Ω	from 20 Hz to 20 kHz
150Ω	from 500 Hz to 200 kHz
200Ω	from 500 Hz to 200 kHz
• Measuring range	+10 ... -90 dBm

### FREQUENCY MEASURING DEVICE

• Measurement range	20 Hz - 200 kHz
• Resolution	
50 Hz < f < 1000 Hz	0.1 Hz
1 kHz < f < 40 kHz	1 Hz
40 kHz < f < 100 kHz	10 Hz
f > 100 kHz	100 Hz

### PEAK VALUE MEASURING DEVICE

### NOISE MEASUREMENTS

#### FILTERS

• Psophometric filter	
Weighing	Compliant with CCITT 0.41
• Filter 0.2 - 4.8 kHz	18dB/oct. - 24 dB/oct.
• Filter 0.2 - 15 kHz	18dB/oct. - 24 dB/oct.
• Filter 0.2 - 80 kHz	18dB/oct. - 24 dB/oct.
• Filter 0.2 - 160 kHz	18dB/oct. - 24 dB/oct.
• Filter Notch	

### IMPULSIVE NOISE MEASURING DEVICE

• Measurement method	compliant with CCITT 0.71
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### MICRO-INTERRUPTION MEASURING DEVICE

• Measurement method	compliant with CCITT 0.62
• Measurement classes	
Class 1	from 300 μs to 3 ms
Class 2	from 3 ms to 10 ms
Class 3	from 10 ms to 30 ms
Class 4	from 30 ms to 300 ms
Class 5	from 300 ms to 60 s
Class 6	> 60 s

### RETURN LOSS MEASUREMENTS

• Nominal impedance	600, 150 Ω
• Measurement dynamics	0 ÷ 40 dB

### IMPEDANCE MEASUREMENTS

• Measurement dynamics	50 ÷ 3000 Ω
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### CONTINUOUS VOLTAGE MEASUREMENT

• Measurement dynamics	0 ÷ 100 V <sub>dc</sub>
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### ENVIRONMENTAL CHARACTERISTICS

• Dimension	
Weight, with battery	3 Kg
Dimensions (W x D x H)	240 x 170 x 90 mm
• Power	
Battery type	Rechargeable, Ni-MH/Pb
Battery life	≈ 4 hours @ 25 °C, LCD back-lit off
• External AC/DC adapter	198 ÷ 242 V @ 50 Hz
• Temperature	
Operating, nominal	-5 ÷ +40 °C
Humidity, non-condensing	10 ÷ 75 %
Storage/Transport	-20 +60 °C
Humidity, storage	+10 +90 %

### MISCELLANEOUS

• LCD display	300x240 graphic display wide, bright and back-lit
• Internal microphone & loud.	
• Upgradable firmware	By RS232
• CE Marking	Class B (residential devices)

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