HIGH VOLTAGE DETECTOR

Model 1

Model 2

INSTRUCTION MANUAL

Index Page

1. Features

(1) Telescopic, compact, and light weight

The Model 1 length is extendable from 9" to 34".
The device is light weight 5 ounces, easy to handle, and handy to carry.
The Model 2 length is extendable from 14" to 41".
The device is light weight 6 ounces, easy to handle, and handy to carry.

(2) High-voltage detection

The equipment, whether in stretched state is available f or voltage detection in high-tension circuits (3.3kV, 6.6kV and 24kV) whether the wires involved are naked or insulated.

(3) Low-voltage detection

The equipment can be used for voltage detection in low-tension circuits (80V ~ 600V) by holding the nameplate portion of the detecting head.
Before use check can easily be done by plugging in an AC 100V plug socket, without using a tester.

(4) Easy to recognize indication

Intermittent lighting in red of a high intensity light emitting diode and intermittent audible sound of an electronic buzzer are readily recognizable at a full daylight, noisy location.

(5) Waterproof

The detecting head, being tightly enclosed, is free from any trouble due to dust, dirt, water or the like.

2. Ratings and Specifications

Working voltage range :

H.V.: 3kV~24kV AC, hold grip portion to detect.

L.V.: 80V~600V AC, hold nameplate portion to detect.

Frequency : 50Hz / 60Hz

Operation distance :

Distance at which operation starts when front metal is brought near 4 AWG wire with grip portion held by hand.

Where 24kV / 3 (voltage to ground) approximately 8".

Where 6.6kV / 3 (voltage to ground) approximately 1".

Where 3.3kV / 3 (voltage to ground) approximately 0.5".

Dielectric Strength :

Put high voltage on the parts listed below.

(a) Between Sensing tip ~ Grip portion :

50kV AC, 1 min (The detector has to be stretched)

(b) Between Sensing tip ~ Nameplate portion :

4kV AC, 1min.

Measure the insulation resistance :
Measure the insulation resistance with the high voltage insulation tester. The areas measured are the same as Dielectric strength test.

(a) Between Sensing tip ~ Grip portion :
1kV (The detector has to be stretched)
The insulation resistance has to be more than 2000 MΩ.

(b) Between Sensing tip ~ Nameplate portion :
1kV The insulation resistance has to be more than 2000 MΩ.

Construction :
Waterproof (detecting head impervious to water).

Leakage Current :
Put high voltage on the parts listed below.

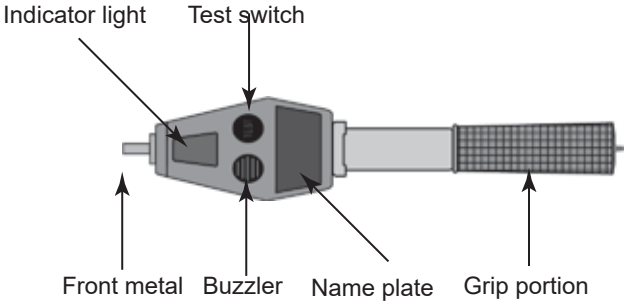
(a) Between Sensing tip ~ Grip portion :
50kV AC, 1 min (The detector is in fully extended position)The leakage current has to be 100 μA or less than 100 μA.

(b) Between Sensing tip ~ Nameplate portion :
4kV AC, 1min The leakage current has to be 100 μA or less than 100 μA

Working temperature range : -10 °C ~ +50 °C

Battery : DC 3V (CR2032) x 1

3. Construction

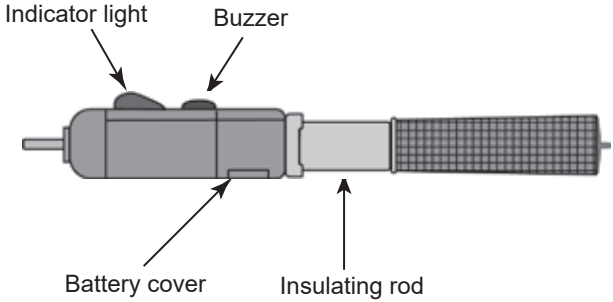


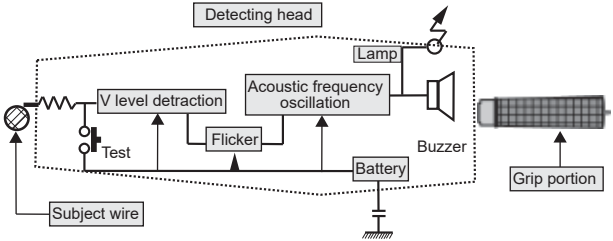
Front metal :
To be put in contact with wires for voltage detection.

Test switch :
For checking to see that internal electronic circuit is in order.

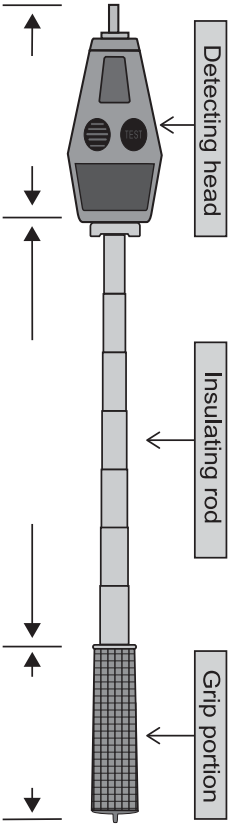
Nameplate portion :
For L.V. detection, this portion is to be held by hand.

Grip portion :
Don't touch any portion other than this during H.V. detection.

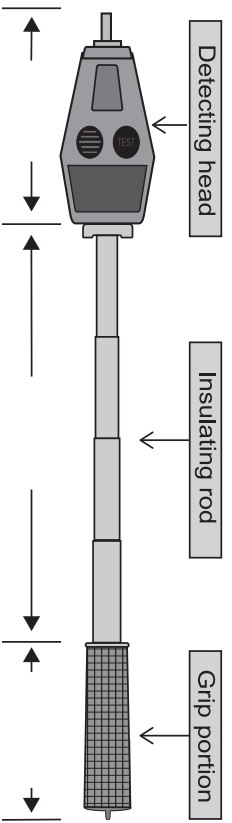

Indicator light
Buzzer
Battery cover
Insulating rod


Detecting head
Lamp
V level detraction
Acoustic frequency oscillation
Test
Flicker
Buzzer
Battery
Grip portion
Subject wire

Model 1



Model 2



4. How to use

Subject	High Voltage Detection (in strectched state)	Low Voltage Detection
	Naked/Insulated wires 3.3kV 6.6kV 24kV AC	Naked live part 80~600V AC
Method	Put the front metal in contact with the subject line to detect voltage, holding the grip portion. **IMPORTANT ! Don't touch any portion other than grip!** Please keep in your mind to wear high insulating gloves when you measure high voltage between 600V~24KV AC.	Put the front metal in contact with the subject line to detect voltage, holding the nameplate portion.

5. Handling and Maintenance

Before use for Voltage detection

(1) Check to see that nothing is wrong with the device in appearance and construction.

(2) Switch on test switch to verify proper function of internal circuit.

(3) If it is necessary at all to carry out voltage detection during rainfall, pay careful attention to the wet condition of the equipment surface.
Discontinue use under constant, heavy rain.

Handling and Safekeeping

(4) Do not subject the equipment to shock caused by dropping or placing under heavy objects.

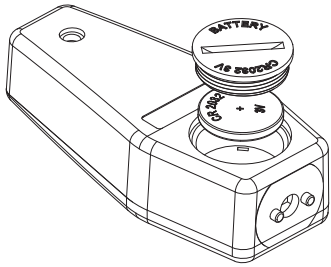
(5) Do not wipe it with any chemicals.

(6) Do not expose device to extreme heat.

(7) Be sure to keep it clean at all times. Store in a location away from direct sunlight for safe keeping.

(8) LED light is dim, audible sound is too low, or if the equipment does not operate, replace the battery.

(9) Remove the battery cover and replace with a new battery. Ensure the polarities are correct, if (+)(-) polarities are reverse, the equipment can not be operated.



(10) The battery is DC 3V (CR2032) x 1. If a battery of poor quality is used, the equipment may be damaged by liquid leak from the battery.

Testing and Maintenance

(11) Insulating performance (withstand voltage) test should be conducted periodically, i.e.,once in every six months.

(12) Check the voltage detecting performance of the device daily prior to use