

HTE-610-Y/M/I

Low voltage detector

volcheck®

AC 50~600V

Audio signaling and light emitting

Contact tip
Conductive rubber

Sensitivity adjustment

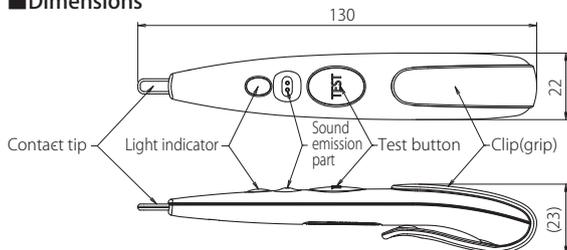
Voltage detection through covering (sheath)

CE

RoHS

Color code HTE-610-□
Y: Yellow/M: Marine blue/I: Ivory**■ Features**

- Conductive rubber provides a high level of safety. Conductive rubber is adopted for Contact tip, which prevents accidents due to a short-circuit.
- It is possible to adjust sensitivity. It is possible to use it according to the intended purpose, by adjusting the sensitivity volume knob.
- A detector with minimum sensitivity variance between bare and covered parts is adopted.

■ Dimensions

Standard Model of the Low Voltage Detector

HTE-610-M
(Marine blue)

HTE-610-Y(Yellow)

HTE-610-I
(Ivory)**■ Specifications**

Working voltage range	50 VAC to 600 VAC common use for 50/60 Hz
Operation starting voltage (Voltage to ground)	Adjustable detection sensitivity At shipment from the factory (default): 40 VAC ± 10 VAC (In state with detector making contact with the company's standard insulated wire (600 V - IV. 2 mm2))
Battery	LR44(1.5V) × 2 pcs
Life of the battery	New battery : In continuous operation About 10 hours : In stotage 1.5 years
Weight	22g (including batteries)

* Without the casing

HTE-610L-R

Low voltage detector

volcheck®

AC 50~600V

Audio signaling and light emitting

Contact tip
Conductive rubber

Sensitivity adjustment

Voltage detection through covering (sheath)

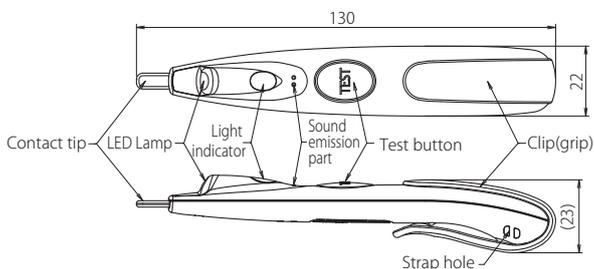
LED lighting

CE

RoHS

■ Features

- The LED light is provided with an auto power-off function. There is no risk of the battery draining if the user forgets to turn off the instrument.
- The LED light can also be used to check the residual life of the battery. When the residual life of the battery becomes low, the LED lamp does not light. Therefore, replace the battery.

■ Dimensions

Volcheck Lineup with a LED Light

**■ Specifications (Those relating to LED light portion; The basic specification is same as that of HTE-610.)**

Lighting	Each time the test button is pressed, the light repeats ON and OFF operation. It turns off automatically after approx. 30 sec (auto power-off function). *The voltag detector operates regardless of whether or not the light is ON/OFF.
Life of the battery	New battery : In continuous operation About 10 hours (with LED OFF) About 5 hours (with LED ON) : In stotage 1.5 years
Weight	22g (including batteries)

* Without the casing

How to use the voltage detector for AC low voltages

■ Perform voltage detection while holding the grip firmly.

The contact area with the hand affects the sensitivity of the low voltage detector. So, appropriate sensitivity cannot be obtained unless it is held firmly.

● Good example



● Bad example (1)



Holding only with finger tips

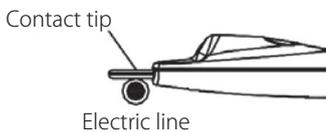
● Bad example (2)



Holding rear part of the grip

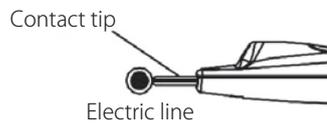
■ How to make contact with the detector

● Correct



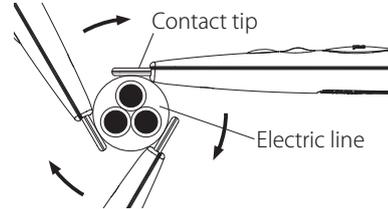
Make contact with Electric line so that the contact area of the detector increases.

● Wrong



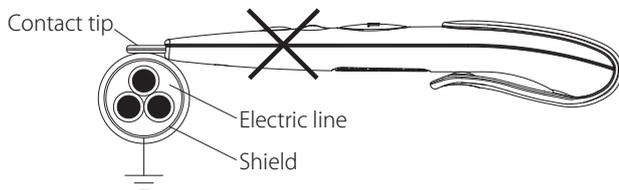
Making contact at a tip of the detector (Capacitance decreases, and operating sensitivity becomes low.)

● In the case of detecting the voltage of a multicore cable with two or more lines



Perform voltage detection throughout the circumference.

■ Voltage detection for shielded cables is not possible.



The voltage detector does not operate because the shielding (conduction shielding layer) is grounded.

■ Sensitivity adjustment (Applicable products: HTE-610, HTE-610L, HT-670) * Sensitivity adjustment is to be done with the volume knob after detaching the clip.

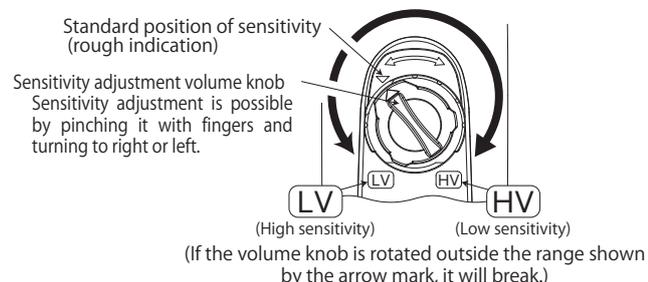
The products are adjusted to the standard sensitivity at shipment (as default). However, if sensitivity adjustment is required, such as: "Although confirmation of voltage from outer surface of the cable is required, the product does not operate;" "It is required to reduce the influence of induction voltage," etc., perform the adjustment.

When the volume knob is turned to the LV side (left turn), sensitivity increases (responds with lower voltage), and when turned to the HV side (right turn), sensitivity decreases (responds with higher voltage).

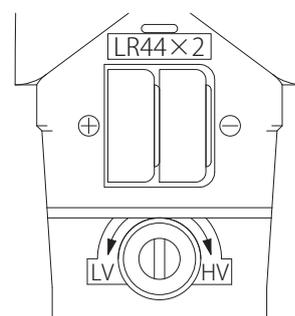
* The volume knob can be turned only about half a rotation. Overturning may cause damage.

* Pay attention to excessively high or low sensitivities. If it is excessively high, there is a risk that an accurate judgment will not be possible, because the product responds to miniature voltage, static electricity, etc.

■ HTE-610/610L



■ HT-670



HT-680D/DS/DB/DBS

Low voltage detector

AC 50~600V

DC HT-680D/DS: 50~600V
HT-680DB/DBS: 12~600V

Audio signaling and light emitting

Contact tip
Conductive rubber

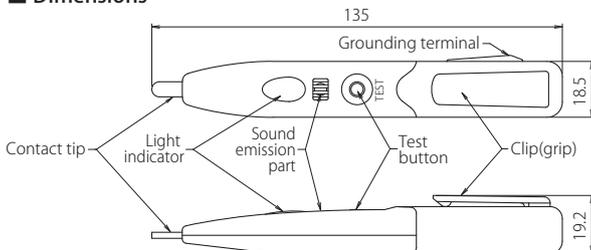
AC
DC

※HT-680D/DB

■ Features

- Contact tip is available in of two types: conductive rubber and metal.
- Operation starting voltage at DC consists of two types: from 12 V and from 50 V.

■ Dimensions



AC/DC Low Voltage Detector (exclusively for use with bare wires)



■ Specifications

Model		HT-680D	HT-680DS	HT-680DB	HT-680DBS
Working voltage range	AC	50~600V			
	DC	50~600V		12~600V	
Contact tip		Conductive rubber	Metal	Conductive rubber	Metal
Frequency		50/60Hz			
Operation starting voltage (Voltage to ground)	AC	30 ± 10V		15 ± 5V	
	DC	35 ± 10V		6 ± 3V	
Operation status display	Light emission	Continuous light emission in red; Verifiable at 8000 Lx			
	Sound volume	Continuous sound; 50dB or more (10cm apart)			
Battery		LR44(1.5V) × 2 pcs			
Life of the battery		About one year with normal use			
Weight		27g(including batteries)			

* Without the casing

HT-670

Low voltage detector

AC 50~600V

DC 50~600V

Audio signaling and light emitting

Contact tip
Conductive rubber

Sensitivity adjustment

※AC only
Voltage detection through covering (sheath)

AC
DC

■ Features

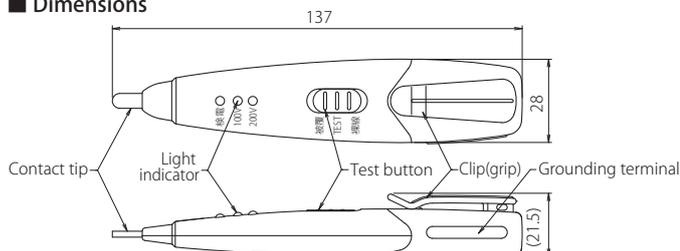
Sensitivity can be switched depending on the purpose use with the slider switch (bare wire/coated wire switching type)

■ Option Grounding wire/DF01027 (open price)

Possible issues when using the optional grounding wire:

- Voltage discrimination function (discrimination of 100 V, 200 V)
- Prevents unnecessary operation due to reverse induction voltage (Grounding wire is to be grounded.)

■ Dimensions



Ideal for Installation Work for Photovoltaic Facilities



Without grounding wire

With grounding wire

■ Specifications

		Without lead wire	With lead wire	
Working voltage range	AC	50~600V		
	DC	50~600V		
Frequency		50/60Hz		
Operation starting voltage (Voltage to ground)	Coated wire (sheathed wire)	AC	40 V with insulated wire (IV. 2 mm2) (intermittent operation)	
		DC	-	
	Bare wire	AC	30 ± 15 V (continuous operation)	
		DC	30 ± 15 V (continuous operation)	
(At connection of lead wire)	AC	100 V LED light	30 V ± 20 V (continuous operation)	
	DC	200 V LED light	140 V ± 30 V (continuous operation)	
Battery		LR44(1.5V) × 2 pcs		
Life of the battery		About one year with normal use		
Weight		26g (except for lead wire)		

* Without the casing

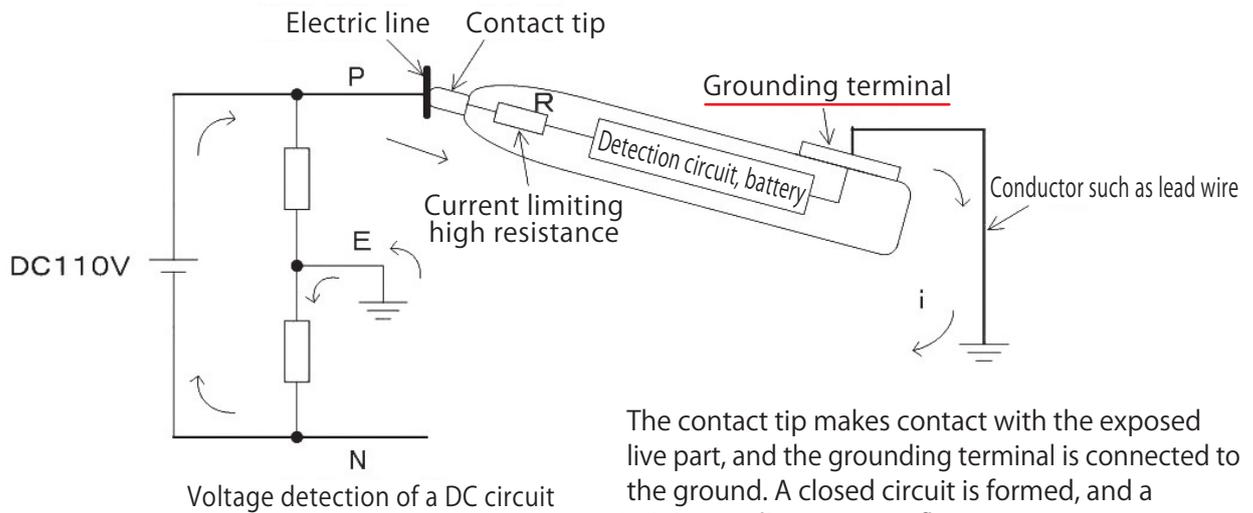
How to use the voltage detector for a DC low voltage

(For AC, refer to P.8.)

Points to note for DC voltage detection

When carrying out voltage detection with a DC circuit, the current does not flow through the capacitance, unlike the case of an AC circuit. Therefore, voltage detection becomes possible by making the detector contact an exposed part of the cableway (* (1)), then creating a closed circuit (* (3)) by connecting the earth terminal to the ground (* (2)) and applying direct current.

- (1) Voltage detection is not possible through the covering. (Direct contact of detector with exposed live part is necessary.)
- (2) It is necessary to ground the detection terminal with a conductor, such as a lead wire (option of HT-670) and/or the hand not holding the voltage detector, etc.

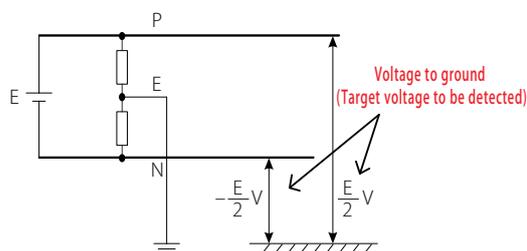


- (3) Because the voltage to the ground (target voltage to be detected) differs depending on the wiring and grounding method, it is necessary to securely hold the cableway whose voltage is to be detected. Voltage detection with an ungrounded circuit is not possible.

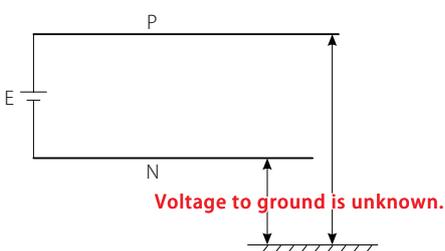
* However, when the lead wire of HT-670 is used, the line voltage can be detected.

(Pay sufficient attention to the handling of lead wires. If they come off during use, there is a risk of electric shock and/or short-circuit.)

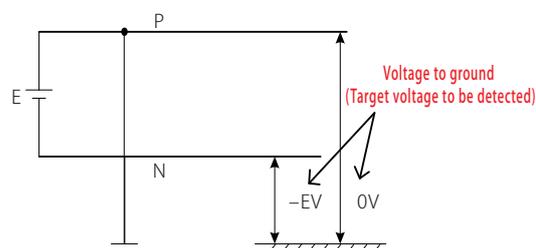
[Mid-point grounding type]



[Ungrounded type]

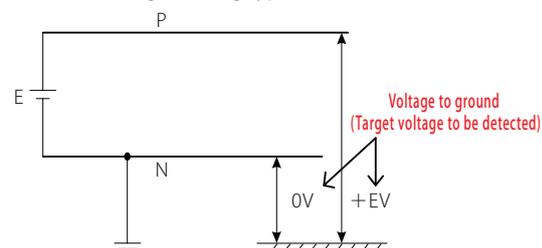


* Voltage detection is not possible.

[One-side line grounding type]
+ side grounding type

* Grounded plus (+) side does not operate.

Minus (-) side grounding type



* Grounded minus (-) side does not operate.