



HASEGAWA

GENERAL CATALOGUE Vol.4-1

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HASEGAWA ELECTRIC CO., LTD.

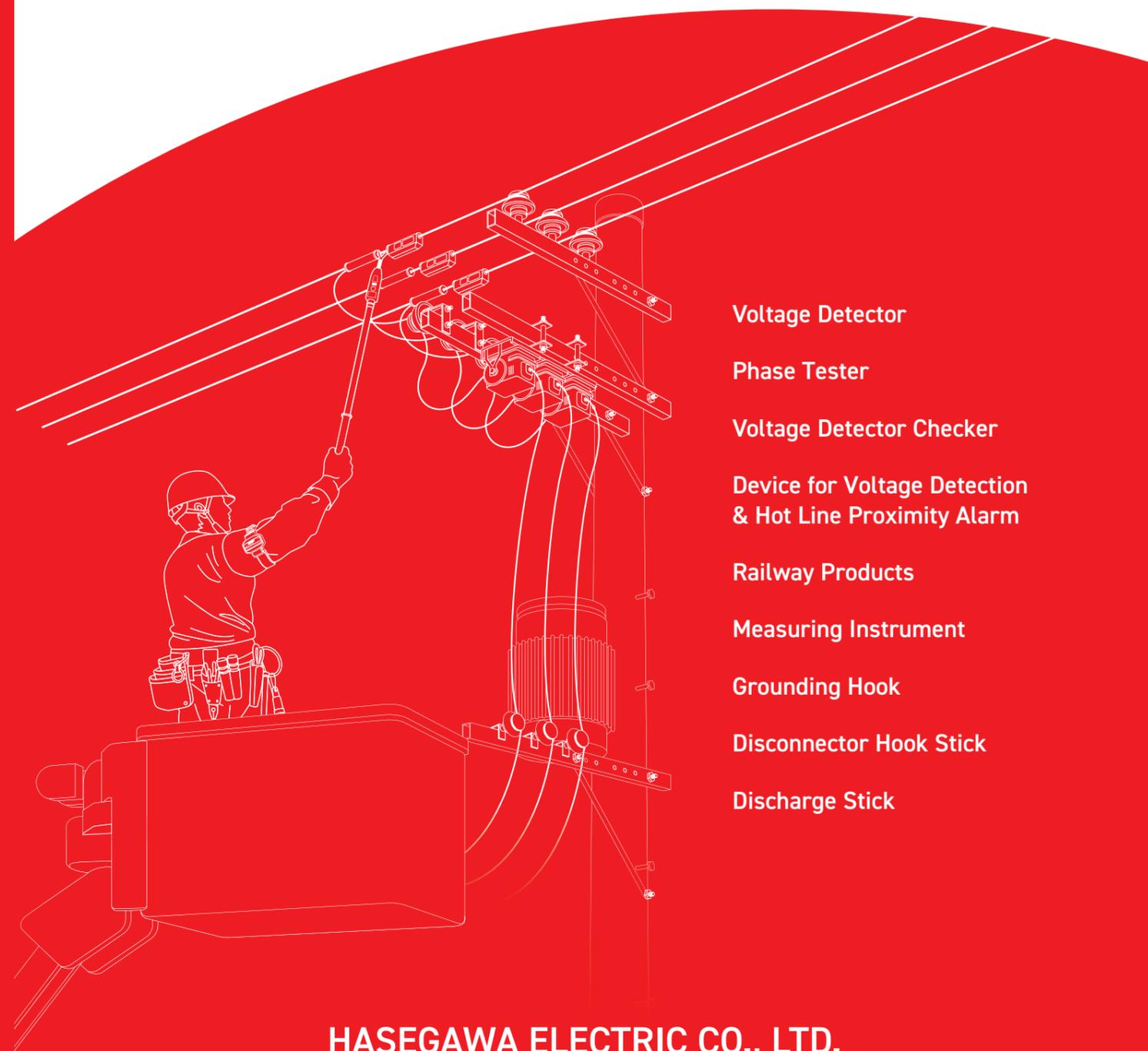
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- Voltage Detector
- Phase Tester
- Voltage Detector Checker
- Device for Voltage Detection & Hot Line Proximity Alarm
- Railway Products
- Measuring Instrument
- Grounding Hook
- Disconnecter Hook Stick
- Discharge Stick

HASEGAWA ELECTRIC CO., LTD.

<https://www.hasegawa-elec.co.jp/en>

A NEW CHALLENGE AS PIONEER

Rising to New Challenges as a Pioneer

HASEGAWA ground-fault relays, voltage detectors, phase testers, and measuring instruments are essential to protect the safety of human lives and our society.

In this age of electronics, one that continues to progress in complexity, the importance of these products are increasing at an alarming rate.

From extra-high voltage to low-voltage products and AC to DC products used in a variety of scenes from power companies, railway companies, and FA factories for manufacturing companies to various households, our company's products play a key role in creating safe electrical environments.

We contribute to "safe electricity" by providing high-level technical skills and wholehearted devotion. We make full use of our sensing technology to make greater leaps in our development.

Since its founding in 1925, our company has strived to develop and produce products that are key to creating safe electrical environments through products such as ground-fault relays, voltage detectors, and phase testers.

As a result, we have been able to establish ourselves as the top manufacturer in the voltage detector field, and through our original research and technology in both AC and DC relays, we have developed one-of-a-kind products and have received high praise. This is simply a result of our thorough application of "worksite principles", and it is precisely because our entire company takes a position of wholeheartedly responding to the demands of our customers under the motto of "the truth is in the worksite" that we have been able to grow as a total-solutions consulting company for "electrical safety".

Additionally, in recent years we have been grabbing attention in the overseas market and not just in Japan. Notably, in Southeast Asia, the HASEGAWA brand is recognized as proof of safety and reliability. We take pride in being able to contribute to our

customers, which include many infrastructure-related enterprises that support people's lives, such as power, gas, sewer, railroad, and communication companies, and in the future, we would like to make full use of our sensing technology to make great leaps in our development. We at Hasegawa believe that it is our social duty to create "a society free of electrical accidents", and it is our intention to continue this duty with untiring efforts. It is our hope that you will continue to support and guide us in our endeavors from now and into the future.



PRESIDENT

吉田洋一郎
Yojiro Yoshida

We are in constant pursuit of technological innovation in order to create a society of comfortable and safe electronics.

Society ever marches forward, and globally, changes are occurring at such an intensely rapid rate that even the words "IT" and "digital" are becoming obsolete in the world of electronics. HASEGAWA is able to respond to the changes of these times while continuing to be the top manufacturer of voltage detectors and relay-related products now and into the future.

To achieve this, we are resolved to never feel satisfied with our current knowledge and technology, and we are engaged in research and development with the aim of creating technology for the next generation and beyond.

The first step of creating ideas for the future starts from our "worksite". We begin by accurately understanding product usage and the demands of our customers. Following this, we continue to listen to our customers and implement their opinions through our processes of development and design, production, quality control, and sales...

Through this constant, cyclical workflow, HASEGAWA aims for greater heights and is working to make "a society free of electrical accidents" a reality.



At HASEGAWA, our work never stops. Through a never-ending cycle of activity, we respond to the demands of the next generation.

We walk in step with our customers and provide support through a 24-hour full-support system. We support our customers through reliable consulting.



Development

We develop our products after giving our full attention to the opinions of our customers and thoroughly analyzing what is being demanded by the market and the times.



Client



Design

We work with the ideas of the product being developed and proceed with design that considers a variety of applications. We also take universal design into account and pursue ease of use.



Sales

Not only do we sell products, we also regularly make proposals that can contribute to the work of our customers.



Production

We take the needs of our customers and when products will be used into account to realize a production system that is able to quickly get products on the market.



Quality

We implement strict product testing and checks that reflect the reliability of the HASEGAWA brand to deliver products with confidence.

Company Overview

Founded: July 1925
Established: September 20, 1971
Capital: 41.6 million yen
 (authorized capital: 64 million yen)
Representatives: Chairman: Osamu Yoshida
 President: Yojiro Yoshida

[Locations]

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[Business Contents]

Voltage detectors: Low voltage detectors, high voltage detectors, extra-high voltage detectors, DC voltage detectors, and other auxiliary devices for voltage detection
Phase testers: Low voltage phase testers, high voltage phase testers, extra-high voltage phase testers
Relays: Bus relays, ground-fault directional relays, ground-fault overvoltage relays, high voltage ground-fault relays, short-circuit relays, DC ground-fault relays, etc.
Current transformers: Zero-phase current transformers
Grounding transformers: Low voltage grounding transformers, high voltage grounding transformers
Measuring instrument-related: Leakage monitors, ωC measuring instruments, etc.
Grounding tools: Grounding hook sticks, discharge sticks
LED-related: Working lights, helmet lights, etc.
Other: Consulting related to ground-fault relay systems, measuring systems, etc.
 Research, design, and production for co-development with customers

[Major Clients]

Various power companies and related enterprises, various electrical safety associations, various electric construction firms, various companies related to Japan Railways and private railways, NTT, electronic material trading firms, etc.

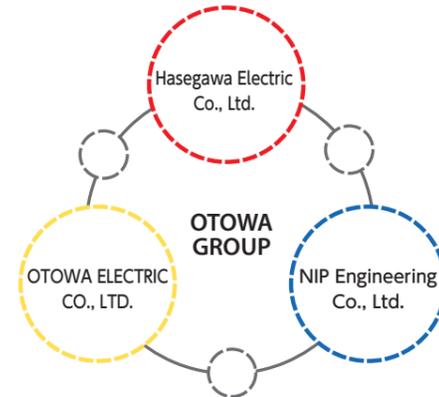
[Banks]

MUFG Bank, Amagasaki Ekimae Branch
 Resona Bank, Dojima Branch
 Sumitomo Mitsui Bank, Umeda Branch



We work with our group company to aid in providing stable electrical power.

We work with our group company to contribute to the stability and safety of electrical power supply with a focus on relays, voltage detectors, and other devices that are essential for the protection and maintenance of devices related to electrical power and industrial equipment as well as solar power generation.



OTOWA ELECTRIC CO., LTD.

Provides total solutions for lightning-related products, including lightning-resistant elements, the first SPDs for direct lightning hits in Japan, SPDs for power sources, and lightning-resistant transformers.

NIP Engineering Co., Ltd.

Provides total solutions for anti-lightning measures, including the manufacture, sales, design, construction, and lightning-damage solutions consultation for lightning arrester equipment (lightning rods), as well as the maintenance of solar power generation systems

Ceraon Co., Ltd.

Manufactures and sells ceramic devices

Meneon Co., Ltd.

Performs electrical work as well as maintenance and management for electrical facilities

Geological Assessment Tech Co., Ltd.

Geological survey and water quality survey, grounding design, grounding resistance reduction work and consulting, planning, design, and consultation of external and internal lightning protection measures

Otowa Korea Co., Ltd.

Sells various lightning arrestors as well as other electronic machinery and devices.

Our Company's Journey

[Company History]

- 1925 Founded in Osaka as the Hasegawa Toshihiko Trading Company Imports and sells relays, fuses, and voltage detectors
- 1942 Moves to Higashi Yodogawa, Osaka. Begins development and manufacture of bus relays and other ground-fault protection relays as well as voltage detectors
- 1949 Reorganizes as Hasegawa Electric Co., Ltd. (Hasegawa Denki)
- 1971 Changes trade name to Hasegawa Electric Co., Ltd. (Hasegawa Denki Kogyo) Kametaro Yoshida becomes President and Representative Director
- 1975 Begins sale of the "HS-7 audible, light-emitting voltage detector"
- 1986 Osamu Yoshida becomes President and Representative Director
- 1995 Issues "The Great Hanshin Earthquake for Our Company"
- 1996 Begins sale of the "HT-610 α low voltage detector"
- 1997 Begins sale of the "RRG-1 ωC measurement type ground fault protection relay"
- 1999 The HT-600 series of low voltage detectors achieves 1 million units in sales
- 2001 Receives ISO 9001 certification
- 2003 Receives ISO 14001 certification
- 2008 Main factory moves to Shioe, Amagasaki City
- 2011 Issues the technical periodical "Understanding ωC Ry"
- 2013 Establishes Sendai Sales Office
- 2014 Tatsuo Matsuoka becomes President and Representative Director
- 2015 First appearance at the Korea Expo (actively participates in international exhibitions after this)
- 2017 Head office and factory moves to new building
- 2018 Yojiro Yoshida becomes President and Representative Director

[Awards Received]

- 1981 "HS Series" wins award at the Japan Electrical Construction and Materials Fair
- 1983 "HP Series" wins award at the Japan Electrical Construction and Materials Fair
- 1986 "HT-600 voltage detector" selected for the Good Design Award G Mark
- 1988 "HSS-6 voltage detector" wins award at the Japan Electrical Construction and Materials Fair
- 1989 "HT-610 voltage detector" selected for the Good Design Award G Mark
- 1990 "HPI-A6 phase tester" wins award at the Japan Electrical Construction and Materials Fair
- 1993 "HX-6 hot line proximity alarm" wins award at the Japan Electrical Construction and Materials Fair
- 1993 "HST Series voltage detector" selected for the Good Design Award G Mark
- 1994 "VG-UI2T instant ground-fault directional relay" wins award at the Japan Electrical Construction and Materials Fair
- 1995 "Research and development of wireless voltage detectors and phase testers" wins the Shibusawa Award
- 1996 "Development of ωC measurement type ground fault protection relay equipment" wins Ohm Technology Award
- 1996 "HT-610 α voltage detector" wins Good Design Award Commissioner's Special Prize for Products of Small and Medium Enterprises
- 1999 "Development of lead-less voltage detectors" wins the Shibusawa Award
- 1999 "RRG-1B relay" wins award at the Japan Electrical Construction and Materials Fair
- 2000 "Lead-less phase tester" wins award at the Japan Electrical Construction and Materials Fair
- 2001 "Development of extendable voltage detectors" wins the Shibusawa Award
- 2003 "HSE-7T voltage detector for high voltage" wins award at the Japan Electrical Construction and Materials Fair
- 2005 "RRG-3 ωC measurement type ground fault protection relay" wins the Shibusawa Award
- 2007 Selected as one of the Small and Medium Enterprise Agency's "300 Small and Medium Enterprises Engaged in Spirited Manufacturing"
- 2007 "HT-610 α voltage detector" wins Good Design/Long Life Design Award
- 2010 Recognized as a leading technology enterprise in the Southern Hanshin area
- 2013 "Development of contactless AC voltage detectors" wins Railway Electrical Engineering Award
- 2013 "HXR contactless AC voltage detector" wins award at the Japan Electrical Construction and Materials Fair
- 2014 Presented with a "Certificate of Excellence in Declaration as a Corporation" by the Amagasaki Tax Office



Shibusawa Awards



Various awards from the Japan Electrical Construction Association



The Small and Medium Enterprise Agency's 300 Small and Medium Enterprises Engaged in Spirited Manufacturing



Ohm Technology Award



Good Design Commissioner's Special Prize for Products of Small and Medium Enterprises

High voltage

- Voltage detector P.24 to 29
- Phase tester P.31 to 32
- Portable live part detector P.35
- Grounding hook P.50 to 57
- Disconnecter hook stick P.58

For electric substation equipment

Extra-High Voltage Detecting System (VOLTECT) P.47 to 48

Hydroelectric power plant

high voltage substation

154kV~187kV

Wind force power generation system

Primary substation

275kV~500kV

Nuclear power plant

Thermal electric power plant

Low voltage

- Voltage detector P.17 to 20
- Phase tester P.30

For photovoltaic power generation system (DC)

Voltage detector P.19 to 20, 23

Medium voltage

66kV~77kV

Substation for electric power distribution

6.6kV~36kV

6.6kV~36kV

Factories

Buildings

- Voltage detector P.21 to 29, 35
- Phase tester P.31 to 32
- Portable live part alarm P.35
- Hot line proximity alarm P.37 to 39

- Grounding hook P.50 to 57
- Disconnecter hook stick P.58
- Discharge stick P.59 to 60

100~440V

Shopping street

Residences

For railways (conventional railroad lines, bullet train, monorail)

- Voltage detector P.41 to 45
- Grounding hook P.46

Medium voltage hot line proximity alarm P.45

For receiving plant equipment

Extra-High Voltage Detecting System (VOLTECT) P.47 to 48

Common

Voltage detector checker P.34 to 35



APPLICATIONS

HST series
Medium Voltage and High Voltage Detector | **P.25**

HXA-6
Hot Line Proximity Alarm
(Armband type) | **P.38**

HTE-610W
Low Voltage Detector
volcheck | **P.17**

HPL-200
LV Phase Checker
(Insulated wire clamping type) | **P.30**

APPLICATIONS

HPRseries
Medium Voltage Phase Tester
Wireless Type | **P.32**

HXA-6S
Hot Line Proximity Alarm
(Helmet fixing type) | **P.38**

Type H
Grounding Hook Set
Universal Type for Cubicle | **P.51**

HPI-A6
Medium Voltage Phase Tester
(Optical fiber type) | **P.31**

HXW-6W
Hot Line Proximity Alarm
(Wrist band type) | **P.37**

APPLICATIONS

DC railway

HSN-6A2
Voltage Detector for LV and MV | P.23

HVC-1.5N3(For railways)
Voltage Detector for DC Railway | P.41

Grounding Hook
for Railway | P.46

APPLICATIONS

AC railway

HST-L series
Voltage Detector for MV and HV | P.26

HXR-25J(For Shinkansen)
Medium Voltage Hot-line Proximity Alarm | P.45

HST-W80JS
Voltage Detector for AC Railway | P.45

- ① **HTE-610W**
Low Voltage Detector
- ② **volcheck**
- ③ **AC 50~1000V**
- ④

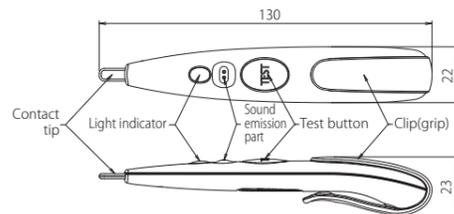
Low Voltage Detector Standard Model



■ Features

1. Highly convenient
 - Voltage detection through covering (sheath)
 - Sensitivity adjustment
2. Designed with user safety and security in mind
 - Conductive rubber provides a high level of safety
 - CAT III 1000V

■ Dimensions: HTE-610W



■ Specifications

Model	HTE-610W
Working voltage range	AC50V~1000V 50/60Hz
Insulation resistance	Between contact tip and clip (grip): 100MΩ minimum with a 500V megger
Dielectric strength	Ditto: 2000V-1 minute
Leakage current	Ditto: 100 μA maximum
Impulse withstand	Ditto: 8000V-10 cycles of positive / negative (IEC61010-1 CAT III 1000V equivalent)
Lighting (HTE-610WL only)	The light is switched "ON" or "OFF" by pushing the test button. The light is turned off automatically about 30 seconds after the light is turned on. (Automatic power off) ※ The voltage detector operator regardless of the light turned ON or OFF.
Operation starting voltage (Voltage to ground)	Maximum sensitivity: AC40V maximum Minimum sensitivity: Not operation at AC100V Operation at AC200V Ex-Factory: AC40V ± 10V (when the contact tip is in contact with an internal standard insulated cable (600V-IV2mm ²))
Operation status display	Light: Intermittent red light visible in 8000lx ambient Sound: Intermittent sound of 50dB minimum in 30cm distance
Operating temperature range	0°C ~ +40°C
Weight	22g (including batteries)
Battery	2 alkaline button cells LR44 (1.5V)
Battery life	New battery : In continuous operation 10 hours : In storage 1.5 years

① Product type ② Product name ③ Working voltage range

④ Marking

Audio signaling and light emitting Action is notified by sound and light.	AC DC The product is usable for both AC and DC.	Telescopic type The operating rod is telescopic.	CE This marking is for products for the EU market, conforming relevant standard.
Contact tip - Conductive rubber Conductive rubber tip prevents accident of short circuit	Voltage detection over insulation Voltage can be detected over the insulation sheath. (Not possible for shielded cables.)	Waterproof equivalent to IPX4 and so on Protection against splashes	RoHS The marking is to confirm satisfaction of the RoHS regulation.
Contact tip - made of Conductive resin Short circuit prevention. Conductivity is easy to be maintained.	Voltage detection over the insulation *AC only Voltage detection over the insulation not possible for DC	Waterproof Water-resistant structure for rain and water drops	IEC In Conformity to IEC
Contact tip - Replaceable Detector tips are sold	only for bare wire Can be used for bare conductor only. Can not be used for insulated conductor.	Battery-less No battery is used for operation.	
Sensitivity adjustment Sensitivity can be adjusted by turning the volume knob.	LED lighting LED lamp is equipped to light the target location of voltage detection.	Auxiliary device for voltage detection The product is not a voltage detector, but is used to assist voltage detection work.	

⑤ **Battery life** -----The battery supplied with product is for testing, this battery life shall not be applied.

General Catalog of Voltage Detectors

INDEX

How to read this catalog	11
INDEX	12
Voltage Detectors as per working voltages	14
Section Table for Detectors	15~16
Voltage Detector	17~29
Phase Tester	30~32
Voltage Detector Checker	33~34
Device for Voltage Detection & Hot Line Proximity Alarm	35~39
Railway Products (except for voltage detector, grounding hook)	41~46
Measuring Instrument	47~48
Grounding Hook	51~57
Disconnecter Hook Stick	58
Discharge Stick	59~60
In order to use the voltage detector correctly	63~66
Confirming dead-line work	67~68
Product warranty, maintenance	69~70

Voltage Detector

- Voltage Detector P.17
- Phase Tester P.30
- Voltage Detector Checker P.33
- Device for Voltage Detection & Hot Line Proximity Alarm P.35

■ For Low Voltage to Medium Voltage

Model	Feature	Voltage							Listed page
		0V 50V/100V	600V	1000V	7000V 11,400V	20000V 25000V 30000V			
HTE-610W		AC50~1000V							17
HTE-610WL	With LED lighting	AC50~1000V							17
HTE-700D/DL		AC50~600V							19
		DC12~750V							
HT-670	Voltage discrimination function of 100 V-200 V (* When option is used)	AC50~600V							19
		DC50~600V							
HSF-11		AC80~11,400V							21
HSE-7G		AC60~7,000V							21
HSS-25B1	Telescopic type	AC 80 ~ 25,000V							22
HSS-36B1	Telescopic type	AC80~36,000V							22
HSN-6A2	Telescopic type	AC80~7,000V							23
		DC50~7,000V							
HST-1.5N		AC600~7,000V							23
		DC600~7,000V							

■ For Medium Voltage to High Voltage

Model	Feature	Voltage							Listed page
		3kV	6kV	22kV	66kV	154kV	275kV	500kV	
HST-20N		AC3kV~25kV							24
		DC3kV~25kV							
HST-30W	Telescopic type	AC3kV~42kV							25
HST-30L	Telescopic type	AC3kV~34.5kV							26
HST-70L	Telescopic type	AC20kV~80.5kV							26
HST-W80L	Telescopic type	AC20kV~80.5kV							26
HSR-500	Telescopic type	AC250kV~550kV							27
HSR-90N		AC6kV~90kV							27
		DC6kV~90kV							
HWB-35	Non-contact type	AC6kV~35kV							28
HWB-138	Non-contact type	AC66kV~138kV							28
HWB-550	Non-contact type	AC210kV~550kV							28
WM-22	Pinwheel type / Telescopic type	AC6kV~22kV							28
WM-33	Pinwheel type / Telescopic type	AC6kV~33kV							28
WM-77A/B/C	Pinwheel type / Telescopic type	AC11kV~77kV							28
WM-154A/B	Pinwheel type / Telescopic type	AC11kV~154kV							28
WM-275	Pinwheel type / Telescopic type	AC33kV~275kV							28
HWA-33X	IEC61243-1	AC11kV~33kV							29
HWA-33P	Universal joint type	AC1kV~35kV							29

■ For Railway (for trolley wire)

Model	Feature	Voltage					Listed page
		0V	300V	600V	7000V	20000V	
HVC-1.5N3	Digital display Function for checking earth wire disconnection	DC750~2000V * Measurement range is 0 to 1999 V					41
HVC-750N3	Digital display Function for checking earth wire disconnection	DC300~2000V * Measurement range is 0 to 999 V					42
HVC-1.5N3S	Digital display Function for checking earth wire disconnection	DC750~2000V * Measurement range is 0 to 1999 V					43
HVC-1.5N3M	Digital display Function for checking earth wire disconnection	DC300~2000V * Measurement range is 0 to 1999 V					43
HSR-1.5NJ		AC6600V					44
		DC600~7000V					
HSR-1.5NR	Residual electric charge checking function Standby display function	AC6600V					44
		DC1000~7000V					

Model	Feature	Voltage							Listed page
		3kV	6kV	22kV	66kV	154kV	275kV	500kV	
HST-W80JS	Telescopic type / Standby display function	AC20kV~80.5kV							45

Index etc.
 Voltage Detector
 Phase Tester
 Voltage Detector Checker
 Device for Voltage Detection & Hot Line Proximity Alarm
 Railway Products
 Measuring Instrument
 Grounding Hook
 Disconnector Hook Stick
 Discharge Stick
 Information Materials

Section Table for Detectors

For Low Voltage

Model	For AC Low Voltage Detector	For AC Low Voltage Detector	For AC & DC Low Voltage Detector	For AC & DC Low Voltage Detector	For AC & DC Low Voltage Detector
	HTE-610W	HTE-610WL	HTE-700D	HTE-700DL	HT-670
Working voltage range	AC50V~1000V	AC50V~1000V	AC50V~600V DC12V~750V *bare wire only (AC/DC)	AC50V~600V DC12V~750V *bare wire only (AC/DC)	AC50V~600V DC50V~600V
AC	●	●	●	●	●
DC	—	—	●	●	●
Sensitivity adjustment	●	●	—	—	●
Electricity detection over coated wire (AC)	●*	●*	—	—	●*
function of LED light	—	●	—	●	—
Waterproof	—	—	●	●	—
Voltage Discrimination Function	—	—	—	—	● With insulated wire
Battery	2 alkaline button cells LR44(1.5V) ◦ Standard model	2 alkaline button cells LR44(1.5V) ◦ With LED	AAA battery (R03/LR03 1.5V) × 1pce ◦ AC/DC type (only for bare wire)	AAA battery (R03/LR03 1.5V) × 1pce ◦ With LED	LR44(1.5V) × 2pcs ◦ Switchable sensitivity (AC only)

※Cables with a shield, conductive shielding layer, cannot be detected.

For Medium/Low Voltage

Model	For AC Voltage Detector for Medium/Low Voltage	For AC Voltage Detector for Medium/Low Voltage	For AC Voltage Detector for Medium/Low Voltage	For AC Telescopic Type of Voltage Detector for Medium/Low Voltage	For AC & DC Telescopic Type of Voltage Detector for Medium/Low Voltage	For AC & DC Medium Voltage Detector
	HSF-11	HSE-7G	HSS-25B1	HSS-36B1	HSN-6A2	HST-1.5N
Working voltage range	AC80~11.4kV	AC60V~7000V	AC80~25000 V	AC80~36000 V	AC80 to 7000 V (at withstand voltage test of 10.5 kV) DC50 to 7000 V (at withstand voltage test of 21 kV)	AC600V~7000V DC600V~7000V
AC	●	●	●	●	●	●
DC	—	—	—	—	●	●
Telescopic type	—	—	●	●	●	—
Battery	R03(1.5V) × 2pcs	LR44(1.5V) × 2pcs	LR44(1.5V) × 2pcs	LR44(1.5V) × 2pcs	LR44(1.5V) × 2pcs	LR44(1.5V) × 2pcs
Accessory	Storage case ◦ Easy to handle and carry	Storage case ◦ Recommended for telecom workers	Storage case ◦ Easy to handle and carry	Storage case (option) ◦ Wide range type	Bag for housing grounding wire (3m) ◦ AC/DC type	Bag for housing grounding wire (7m) ◦ Robust and lightweight FRP for insulating stick

※Cables with a shield, conductive shielding layer, cannot be detected.

For Medium/High Voltage

Model	For AC & DC Medium Voltage Detector	For AC Medium Voltage & High Voltage Detector	For AC Medium Voltage & High Voltage Detector	For AC Medium Voltage & High Voltage Detector	For AC & DC Medium Voltage & High Voltage Detector	For AC High Voltage Detector	For AC Pinwheel Type Voltage Detector	For AC Non-contact Voltage Detector	For AC Medium Voltage Detector	For AC Medium Voltage Detector
	HST-20N	HST-V series	HST series	HST-L series	HSR-90N	HSR-500	WM series	HWB series	HWA-33X	HWA-33P
Working voltage range	AC3kV~25kV DC3kV~25kV	HST-35V AC 6kV~35kV HST-138V AC 66kV~138kV HST-550V AC210kV~550kV	HST-30 AC 3kV~34.5kV HST-30W AC 3kV~42kV HST-70 AC 20kV~80.5kV HST-170 AC 60kV~195.5kV HST-250 AC150kV~287.5kV	HST-30L AC 3kV~34.5kV HST-70L AC20kV~80.5kV HST-W80L AC20kV~80.5kV	AC6k~90kV DC6k~90kV	AC250k~550kV	WM-22 AC 6kV~22kV WM-33 AC 6kV~33kV WM-77 AC11kV~77kV WM-154 AC11kV~154kV WM-275 AC33kV~275kV	HWB-35 AC 6kV~35kV HWB-138 AC 66kV~138kV HWB-550 AC210kV~550kV	AC 11kV~33kV	AC 1kV~35kV
AC	●	●	●	●	●	●	●	●	●	●
DC	●	—	—	—	●	—	—	—	—	—
Accessory	Bag for housing grounding wire (7 m)	Bag for housing	Bag for housing	Bag for housing	Bag for housing grounding wire (7 m)	Bag for housing	Bag for housing	—	Trunk case	Trunk case
Waterproof	●	●	●	●	●	●	●	●	●	●
Telescopic type	—	—	●	●	—	●	●	—	—	—
Battery	LR44(1.5V) × 2 pcs ◦ AC/DC type	LR44(1.5V) × 2pcs ◦ Universal joint type	LR44(1.5V) × 2pcs ◦ Lightweight & outstanding in operability	LR44(1.5V) × 2pcs ◦ Long insulating stick type	2 AAA batteries ◦ Wide range type for AC/DC	2 AAA batteries ◦ Voltage detector for 500kV transmission lines	Battery-less ◦ Battery-less voltage detector operating with energy	R03 (1.5V) × 2pcs ◦ Non contact type, universal joint	AAA alkaline batteries (LR03 1.5 V): 2 pieces * Use of rechargeable batteries not allowed ◦ IEC61243-1	AAA alkaline batteries (LR03 1.5 V): 2 pieces * Use of rechargeable batteries not allowed ◦ Detector with 4 voltage indication

※Cables with a shield, conductive shielding layer, cannot be detected.

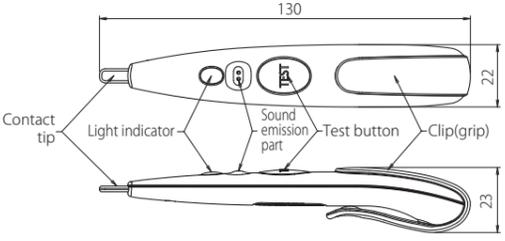
HTE-610W

Low Voltage Detector
volcheck
AC 50~1000V



- Features**
- Highly convenient
 - Voltage detection through covering (sheath)
 - Sensitivity adjustment
 - Designed with user safety and security in mind
 - Conductive rubber provides a high level of safety
 - CAT III 1000V

Dimensions: HTE-610W



Low Voltage Detector Standard Model



Specifications

Model	HTE-610W
Working voltage range	AC50V~1000V 50/60Hz
Insulation resistance	Between contact tip and clip(grip): 100MΩ minimum with a 500V megger
Dielectric strength	Ditto:2000V-1 minute
Leakage current	Ditto:100 μA maximum
Impulse withstand	Ditto:8000V-10 cycles of positive / negative (IEC61010-1 CAT III 1000V equivalent)
Lighting (HTE-610WL only)	The light is switched "ON" or "OFF" by pushing the test button. The light is turned off automatically about 30 seconds after the light is turned on. (Automatic power off) ※The voltage detector operator regardless of the light turned ON or OFF.
Operation starting voltage (Voltage to ground)	Maximum sensitivity: AC40V maximum Minimum sensitivity: Not operation at AC100V Operation at AC200V Ex-Factory: AC40V±10V (when the contact tip is in contact with an internal standard insulated cable (600V-IV2mm ²))
Operation status display	Light: Intermittent red light visible in 8000lx ambient Sound: Intermittent sound of 50dB minimum in 30cm distance
Operating temperature range	0°C~+40°C
Weight	22g(including batteries)
Battery	2 alkaline button cells LR44(1.5V)
Battery life	New battery : In continuous operation 10 hours : In storage 1.5 years

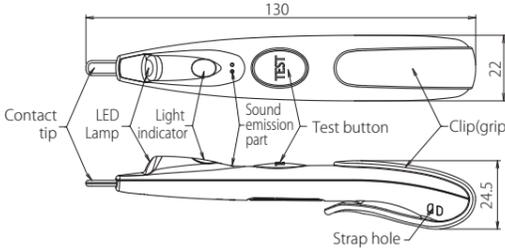
HTE-610WL

Low Voltage Detector
volcheck
AC 50~1000V



- Features**
- Highly convenient
 - Voltage detection through covering (sheath)
 - Sensitivity adjustment
 - Designed with user safety and security in mind
 - Conductive rubber provides a high level of safety
 - CAT III 1000V
 - LED light type with more functions
 - Built in LED light with auto power-off function
 - The LED light also serves as a battery lever checker

Dimensions: HTE-610WL



Low Voltage Detector Standard Model



Specifications

Model	HTE-610WL
Working voltage range	AC50V~1000V 50/60Hz
Insulation resistance	Between contact tip and clip(grip): 100MΩ minimum with a 500V megger
Dielectric strength	Ditto:2000V-1 minute
Leakage current	Ditto:100 μA maximum
Impulse withstand	Ditto:8000V-10 cycles of positive / negative (IEC61010-1 CAT III 1000V equivalent)
Lighting (HTE-610WL only)	The light is switched "ON" or "OFF" by pushing the test button. The light is turned off automatically about 30 seconds after the light is turned on. (Automatic power off) ※The voltage detector operator regardless of the light turned ON or OFF.
Operation starting voltage (Voltage to ground)	Maximum sensitivity: AC40V maximum Minimum sensitivity: Not operation at AC100V Operation at AC200V Ex-Factory: AC40V±10V (when the contact tip is in contact with an internal standard insulated cable (600V-IV2mm ²))
Operation status display	Light: Intermittent red light visible in 8000lx ambient Sound: Intermittent sound of 50dB minimum in 30cm distance
Operating temperature range	0°C~+40°C
Weight	22g(including batteries)
Battery	2 alkaline button cells LR44(1.5V)
Battery life	New battery: In continuous operation 10 hours (with LED Lamp OFF) 5 hours (with LED Lamp ON) : In storage 1.5 years

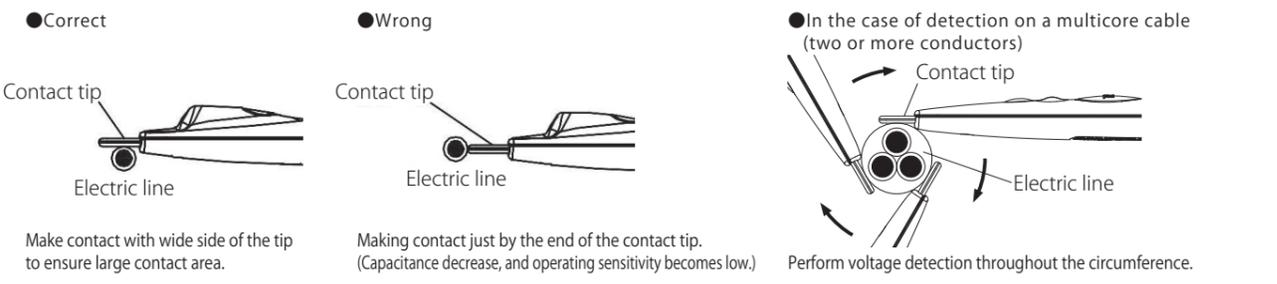
How to use the LV voltage detector for AC

Perform voltage detection while holding the grip firmly.

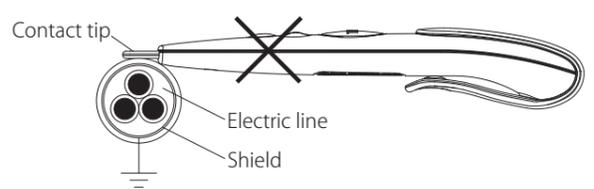
The contact area with the hand affects the sensitivity of the low voltage detector. So, appropriate sensitivity cannot be obtained unless it is held firmly.



How to make contact with the detector



Voltage detection for shielded cables is not possible.



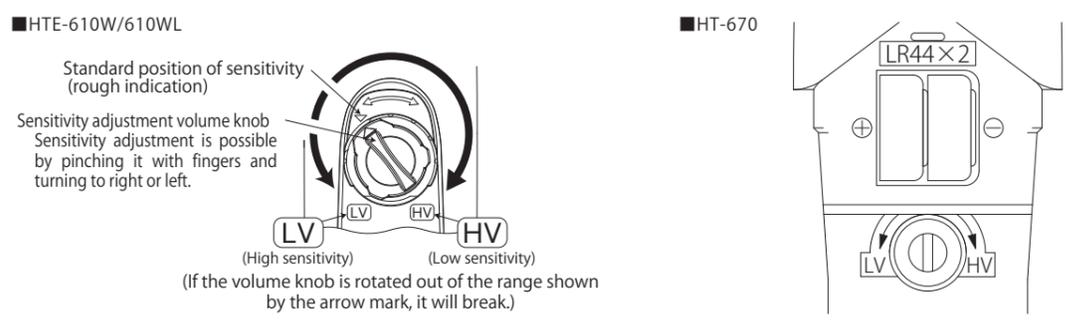
The voltage detector does not work because of the electrical shielding layer which is grounded.

Sensitivity adjustment (for HTE-610W, HTE-610WL, HT-670) * Adjustment is made by the volume knob after detaching the clip.

The products are adjusted to the standard sensitivity at shipment (as default). However, sensitivity adjustment can be made when it is required for some reasons such as: When the detection is not possible over the outer surface of the insulated cable; When it is required to reduce the influence of induced voltage of the area etc.

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

* The volume knob can be turned only about half a rotation. Overturning may cause damage.
* Pay attention to excessively high or low sensitivity. If it is excessively high, there is a risk that a correct judgment would not be possible, because the product responds to too small voltage and static electricity etc.



HTE-700D/DL

Low Voltage Detector

AC 50~600V
DC 12~750V



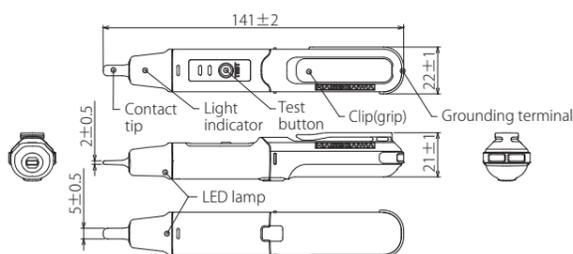
The New release equipped waterproof as a successor of HT-680 Series



■ Features

- Waterproof equivalent to IPX4

■ Dimensions



■ Specifications

Model	HTE-700D	HTE-700DL
Working voltage range	AC	50~600V
	DC	12~750V
Frequency	50/60Hz	
Operation starting voltage (Voltage to ground)	AC	15V±5V
	DC	6V±3V
function of LED light	Light	Continuous light emission in red : Verifiable at 8000lx
	Sound	Continuous sound : 50dB or more (10cm apart)
Operation temperature range	-10°C~+40°C	
Waterproof	equivalent to IPX4	
Battery	AAA battery (R03/LR03 1.5V) × 1pce (Can not use rechargeable battery)	
Battery life (with new battery)	about 10hr (under continuously operating state without LED)	
Weight		about 1.5years (in unused state)
		about 25g (except battery)

HT-670

Low Voltage Detector

AC 50~600V
DC 50~600V



Switchable sensitivity (AC only)



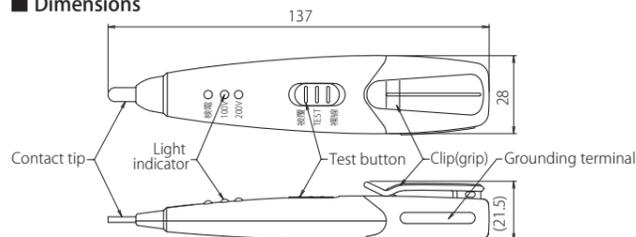
■ Features

Sensitivity switch-over by slider switch depending on the detection (bare conductor/insulated conductor)

■ Option Lead wire/DF01027

- Optional lead wire can be used for
 - Voltage discrimination function (discrimination of 100 V, 200 V)
 - Prevents unnecessary detection due to reverse induction voltage (Lead wire should be contacted to grounded metal)

■ Dimensions



■ Specifications

Model	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 mm ²) (intermittent operation)
	Bare wire	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	
Battery life	About one year with normal use	
Weight	26g (except lead wire)	

* Without the casing

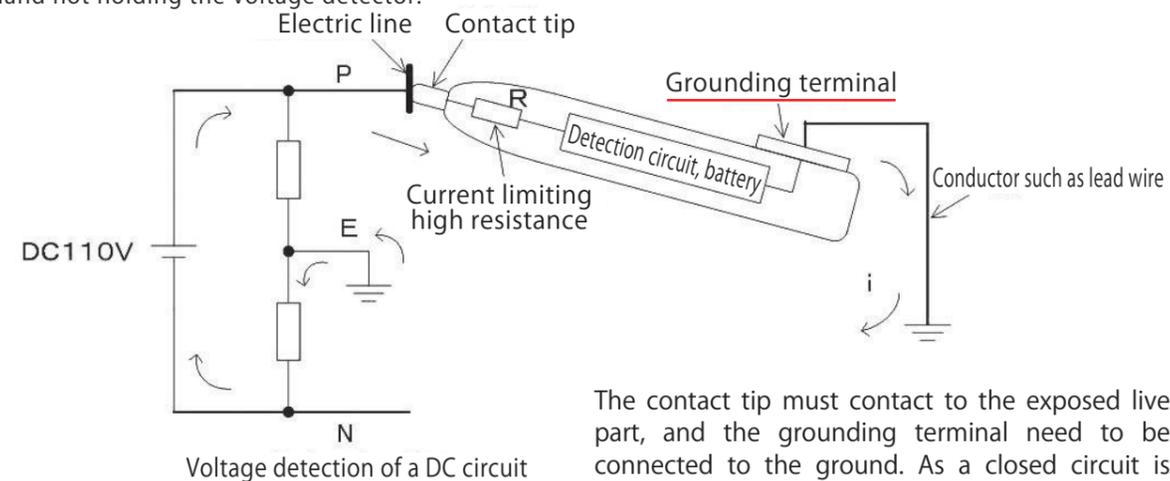
How to use the LV Voltage Detector for DC

(For AC, refer to P.16.)

■ Key points of 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, DC voltage detection becomes possible when the DC current flow through the detector by contacting the detector to an exposed charged conductor (*①), connecting the earth terminal to the ground (*②) and therefore creating a closed circuit (*③).

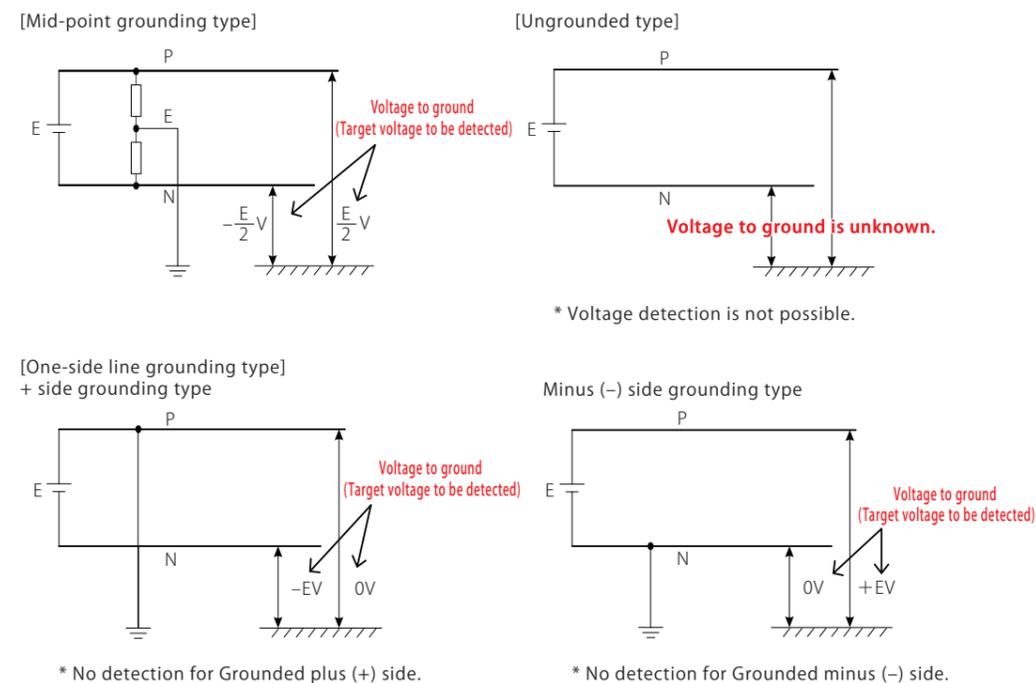
- Voltage detection is not possible over the insulation. (Direct touch of contact tip to an exposed live part is necessary.)
- It is necessary to connect the Grounding terminal to earth with lead wire (option of HT-670) and/or with the free hand not holding the voltage detector.



The contact tip must contact to the exposed live part, and the grounding terminal need to be connected to the ground. As a closed circuit is formed, a minute direct current flows.

- Since the detected voltage between the live part and ground is depending on the condition of connection from grounding terminal to earth, it is necessary to understand about the circuit formed for detection. (cf. Voltage detection for un-earthed circuit is not possible.)

* When HT-670 lead wire is used, the line-to-line voltage can be checked. (Pay sufficient attention to the handling of lead wires. There is a risk of electric shock and/or short-circuit if misused.)



* No detection for Grounded plus (+) side.

* No detection for Grounded minus (-) side.

HSF-11

Medium Voltage & Low Voltage Detector

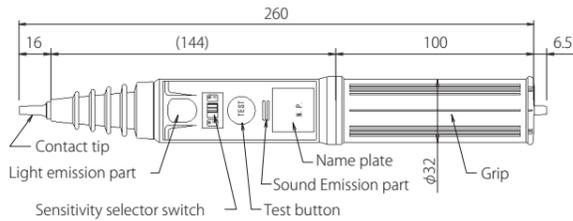
AC 80~11.4kV



Features

- Extremely small and light weighted, so easy to handle and carry.
- Voltage detection can be done by both light and sound, so no misconception happens.
- Testing system is equipped to Voltage Detector itself.
- By inner electric circuit, consumption is saved when not used.

Dimensions



Standard Model for 11.4kV



Accessory



Storage case

Specifications

Working voltage range	AC80~11.4kV
Operation starting voltage (Voltage to ground)	Low voltage: Exposed live part 65 ± 15V (in contact with live part)
	High voltage: Exposed live part 2000 ± 200V (in contact with live part)
Electric line	For Bare wire only
Frequency	Both 50Hz and 60Hz
Dielectric strength	20kV for 1 minutes between the contact tip and the grip
Leakage current	0.1mA or less on dielectric strength
Operation status display	Light emission: Verifiable at 8000 Lx of brightness (Red LED)
	Sound emission: 50 dB or more (2m apart)
Operating temperature range	-10°C ~ +40°C
Waterproof	Equivalent to IPX3 (No harmful water entering inside)
Battery	R03(1.5V) 2pcs
Battery life	About 6 hr. under continuously operating state (with new battery)
Weight	About 150 g

HSE-7G

For communication

Medium Voltage & Low Voltage Detector

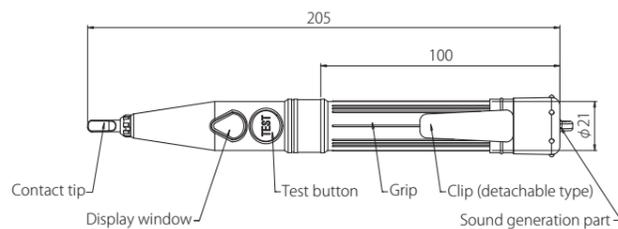
AC 60~7000V



Features

- Working voltage range from AC 60V as per Telecom standard in Japan
- Successor of HSC-7G (certified product as per NTT spec.)

Dimensions



Recommended for Telecom workers on the pole



Accessory



Storage case

Option



Contact tip for replacement (UH05004)

Specifications

Working voltage range	AC60V~7000V
Operation starting voltage (Voltage to ground)	Low voltage: Exposed live part 60 V (in contact with live part)
	High voltage: Exposed live part 400 V (in contact with live part) (φ5mm OE wire) 3,000 V
Frequency	50/60Hz
Dielectric strength	20 kV for 1 min between contact tip and grip
Leakage current	0.5 mA or less at dielectric strength test
Battery	LR44(1.5V) × 2 pcs
Battery life	3 hr. in continuously operating state; about 2 years in unused state
Operating temperature range	-10°C ~ +40°C
Weight	About 55 g

HSS-25B1

Medium Voltage & Low Voltage Detector

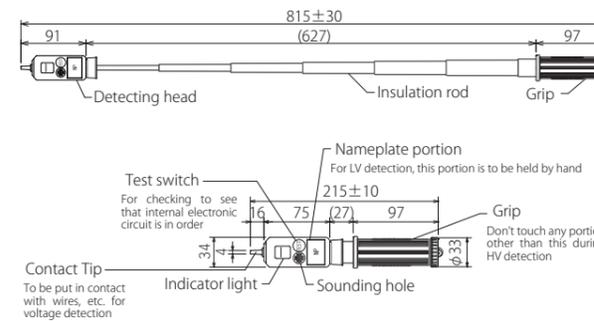
AC 80~25000V



Features

- Voltage detection from a remote place is possible by extending it
- * Low voltage cannot be detected on stick extension mode.

Dimensions



Telescopic type, Standard model for Medium Voltage



Accessory



Storage case

Detecting at low voltage



Specifications

Working voltage range	AC80~25000V
Operation starting voltage (Voltage to ground)	Low voltage: Bare wire : AC 80V or below (Detect holding nameplate portion)
	High voltage: Bare wire (φ3mm) : AC 250V ± 50V OC wire (φ5mm) : AC 1000V ± 200V (Detect holding the grip)
Frequency	50/60Hz
Dielectric strength	Between contact tip and grip: Extended state 50 kVAC, 1 min
	Between contact tip and name plate portion: 4 kVAC, 1 min
Leakage current	0.1 mA or less at dielectric strength test
Battery	LR44(1.5V) × 2 pcs
Battery life	8 hr. in continuously operating state; about 1.5 years in unused state
Operating temperature range	-10°C ~ +50°C
Weight	About 140 g

HSS-36B1

Medium Voltage & Low Voltage Detector

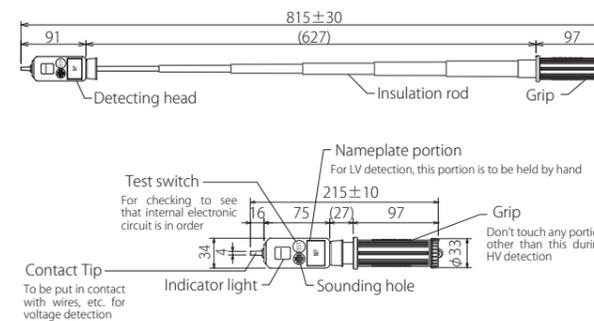
AC 80~36000V



Features

- Voltage detection from a remote place is possible by extending it
- * Low voltage cannot be detected on stick extension mode.

Dimensions



New release with expanded voltage range



Option



Storage case

Detecting at low voltage



Specifications

Working voltage range	AC80~36000V
Operation starting voltage (Voltage to ground)	Low voltage: Bare wire : AC 80V or below (Detect holding nameplate portion)
	High voltage: Bare wire (φ3mm) : AC 250V ± 50V OC wire (φ5mm) : AC 1000V ± 200V (Detect holding the grip)
Frequency	50/60Hz
Dielectric strength	Between contact tip and grip: Extended state 72 kVAC, 1 min
	Between contact tip and name plate portion: 4 kVAC, 1 min
Leakage current	0.1 mA or less at dielectric strength test
Battery	LR44(1.5V) × 2 pcs
Battery life	8 hr. in continuously operating state; about 1.5 years in unused state
Operating temperature range	-10°C ~ +50°C
Weight	About 140 g

HSN-6A2

Medium Voltage & Low Voltage Detector

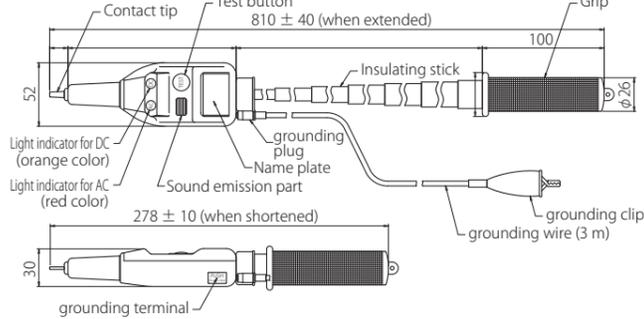
AC 80 to 7000 V (at withstand voltage test of 10.5 kV)
DC 50 to 7000 V (at withstand voltage test of 21 kV)



■ Features

- It can be used for withstand voltage tests with high-voltage equipment. It can be used up to 10.5 kVAC, 21 kVDC, only for application of withstand voltage test.
- Discriminate AC and DC
- Checking residual electric charge, and discharging it. (Refer to P.66.)

■ Dimensions



Voltage Detector of Dual Use for AC/DC



■ Accessory



Storage case

■ Detecting at low voltage



■ Specifications

Working voltage range	Without grounding wire	AC	80 V to 600 V (Voltage detection by touching the name plate with a hand)
	With grounding wire	AC	3 kV to 7 kV (With extended insulating stick)
	Without grounding wire	DC	80 V to 7000 V (Usable up to 10.5 kV for withstand voltage test)
	With grounding wire	DC	50 V to 7000 V (Usable up to 21 kV for withstand voltage test)
Frequency			50/60Hz
Dielectric strength & Leakage current	Between contact tip and name plate		4 kVAC, 1 min, 0.5 or less (Insulating stick: Shortened) 20 kVAC, 1min, 0.5 or less (Insulating stick: Extended) 50 kVAC, 1min, 0.5 or less
	Between contact tip and grip		21 kVDC, 1 min, 0.5 or less
	Between contact tip and grounding clip		21 kVDC, 1 min
	Between core of the grounding plug and outside the covering		21 kVDC, 1 min
Battery			LR44(1.5V) × 2 pcs
Operating temperature range			-10°C ~ +50°C
Weight			About 290 g

HST-1.5N

Medium Voltage Detector

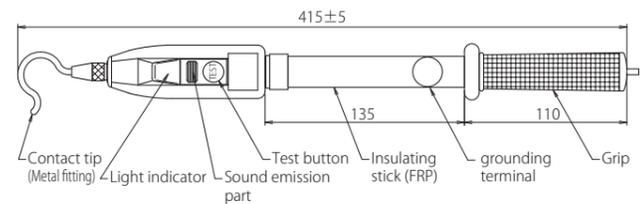
AC 600~7000V
DC 600~7000V



■ Features

- With 7-m grounding wire

■ Dimensions



Robust and Lightweight, FRP for Insulating Stick



■ Accessory



Bag for housing



grounding wire (7 m)

■ Specifications

Working voltage range	AC	600V~7000V
	DC	600V~7000V
Frequency		50/60Hz
Dielectric strength		Between contact tip and grounding terminal 14000 VAC, 5 min
Leakage current		1 mA or less at dielectric strength test
Battery		LR44(1.5V) × 2 pcs
Battery life		4 hr. under continuously operating state
Operating temperature range		-10°C ~ +40°C
Weight		About 340 g (main body only)

HST-20N

Medium Voltage Detector

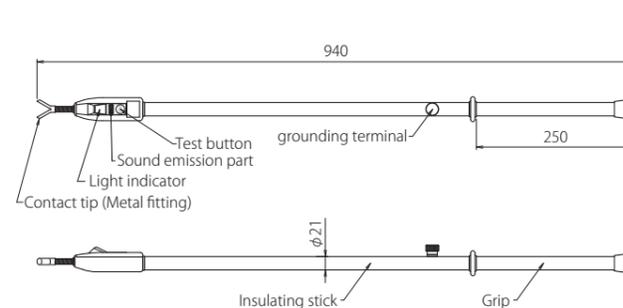
AC 3k~25kV
DC 3k~25kV



■ Features

- New model with reduced weight of HS-20N

■ Dimensions



Voltage Detector of Dual Use for AC/DC



■ Accessory



Bag for housing



grounding wire (7 m)

■ Specifications

Working voltage range	AC	3kV~25kV
	DC	3kV~25kV
Operation starting voltage (Voltage to ground)	AC	1000V ± 20%
	DC	1000V ± 20%
Frequency		50/60Hz
Dielectric strength		Between contact tip and grounding terminal, AC 50kV, 1 min
Leakage current		0.5 mA or less at dielectric strength test
Battery		LR44(1.5V) × 2 pcs
Battery life		About 4 hr. in a continuously operating state
Operating temperature range		-10°C ~ +40°C
Weight		About 610 g (main body only)

HST-V series

HST-35V/HST-138V/HST-550V
 Medium Voltage & High Voltage Detector

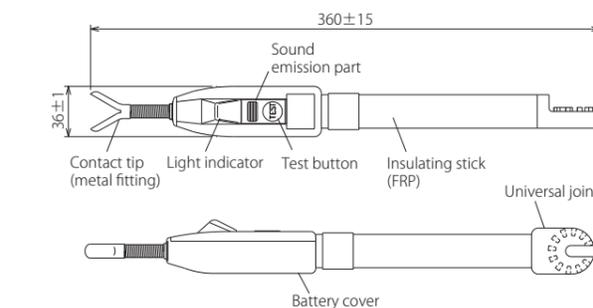
AC HST-35V 6kV~35kV
 HST-138V 66kV~138kV
 HST-550V 210kV~550kV



■ Features

- This product is for AC current, and it indicates the presence of charge in circuits with an electronic buzzer that is easy to hear and a high-luminance light emitting diode. It is light-weight and easy to handle.

■ Dimensions



Universal Joint Type



■ Accessory



Bag for housing

■ Specifications

Model	HST-35V	HST-138V	HST-550V
Working voltage range	6kV~35kV	66kV~138kV	210kV~550kV
Indication	Sound	Intermittent sound 70dB or more	
	Light	Verifiable at 8,000Lx of brightness (Red LED)	
Frequency		50/60Hz	
Water proof		Equivalent to IPX3	
Operating temperature range		-10°C ~ +50°C	
Battery		LR44 (1.5V) × 2pcs.	
Accessory		Bag for housing	
Weight		About 220 g	

HST series

HST-30/HST-30W/HST-70/HST-170/HST-250
Medium Voltage & High Voltage Detector

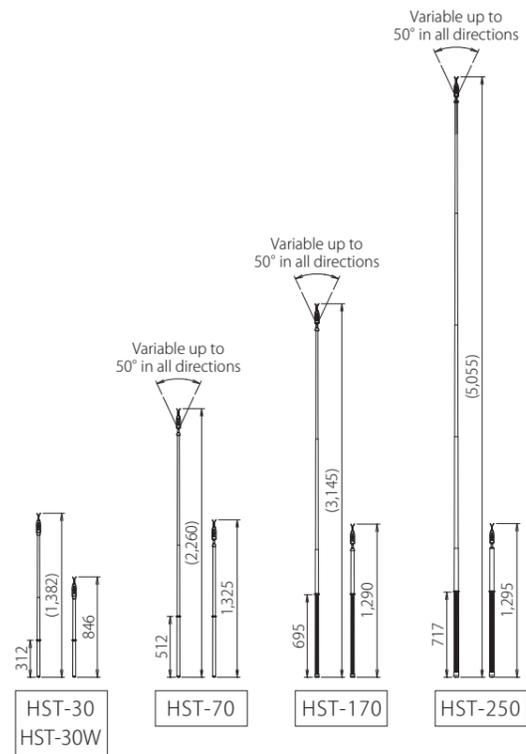
AC	HST-30	3kV~34.5kV
	HST-30W	3kV~42kV
	HST-70	20kV~80.5kV
	HST-170	60kV~195.5kV
	HST-250	150kV~287.5kV



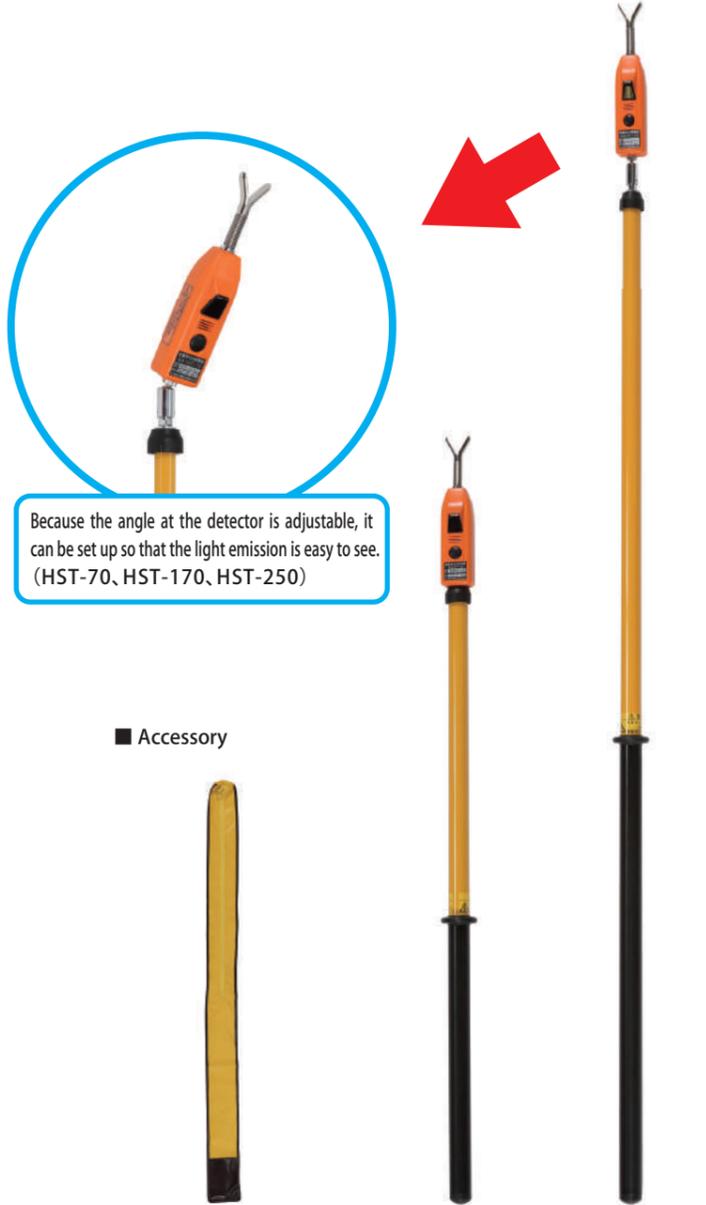
Features

- FRP is used for the insulating stick. It is lightweight and outstanding in operability.
- Tip metal fitting consists of a shock-absorbing spring.

Dimensions



For Medium voltage and High voltage, light weight and easy to use



Because the angle at the detector is adjustable, it can be set up so that the light emission is easy to see. (HST-70, HST-170, HST-250)

Accessory



HST-30 (Shortened state) HST-170 (Shortened state)

Operating rod can be changed to a longer one. (* Changing to a shorter one is not possible from the viewpoint of safety.)

Model	Standard product	Model after changing the operating rod		
		Changed to operating rod of HST-70 (2,260 mm)	Changed to operating rod of HST-170 (3,145 mm)	Changed to operating rod of HST-250 (5,055 mm)
HST-30		HST-30G	HST-30H	HST-30J
HST-70		—	HST-70H	HST-70J
HST-170		*	—	HST-170J

Specifications

Model	HST-30	HST-30W	HST-70	HST-170	HST-250
Working voltage range	AC 3kV~34.5kV	3kV~42kV	20kV~80.5kV	60kV~195.5kV	150kV~287.5kV
Operation starting voltage	Bare wire 500V±20%	AC 500 ± 100 V (bare wire)	3kV±20%	10kV±20%	20kV±20%
(Voltage to ground)	φ5mm-OC wire 3 kV or less	—	—	—	—
Frequency	50/60Hz				
Dielectric strength	Contact tip – Grip 70 kVAC, 1 min	On insulating rod AC 75kV/300mm for 1minute. (2 places)	Insulating stick 75 kVAC/300 mm, 1 min (following positions except for the electrode and joint portions)		
			3 locations	6 locations	8 locations
Battery	LR44(1.5V) × 2 pcs				
Operating temperature range	-10°C~+50°C				
Weight	About 340 g	About 530 g	About 600 g	About 1030 g	

HST-L series

HST-30L/HST-70L/HST-W80L
Medium Voltage & High Voltage Detector

AC	HST-30L	3kV~34.5kV
	HST-70L	20kV~80.5kV
	HST-W80L	20kV~80.5kV



Features

- FRP is used for the insulating stick. It is lightweight and outstanding in operability.
- Tip metal fitting consists of a shock-absorbing spring.

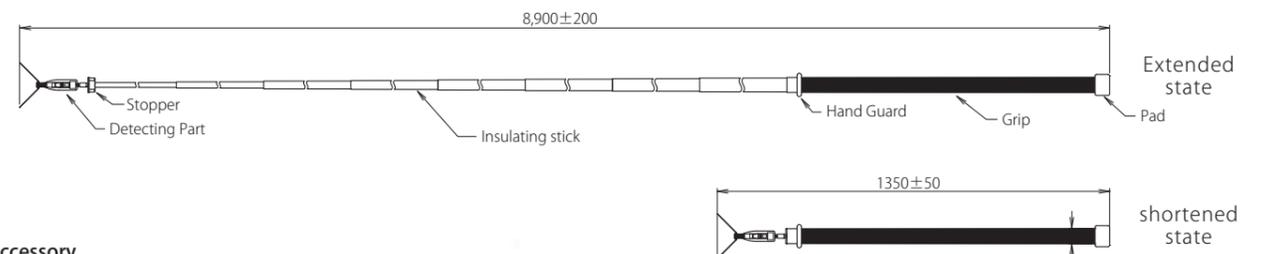


Detecting part

Detector with long insulating stick



Dimensions



Accessory



Bag for housing (DA14006)

Specifications

Type	HST-30L	HST-70L	HST-W80L
Working voltage range	AC 3kV~34.5kV	20kV~80.5kV	20kV~80.5kV
Operation starting voltage	AC 500V±100V	3,000V±600V	5,000V±1,000V
Frequency	50/60Hz		
Dielectric strength	on insulating stick AC 75kV/300mm for 1minute. (insulating stick excluding contact tip and joint)		
	1 place	3 places	3 places
Leakage current	0.1mA or less during dielectric strength test (1 place)		
Battery	LR44(1.5V) × 2 pcs		
Life of the battery	About 4 hr. under continuously operating state		
Operating temperature range	-10°C~+50°C		
Weight	About 3kg	About 3kg	About 3kg

HSR-90N

Medium Voltage and High Voltage Detector

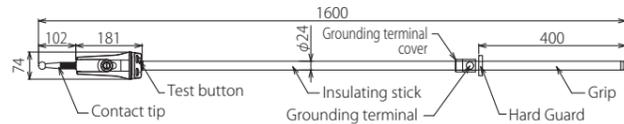
AC 6kV~90kV
DC 6kV~90kV



Features

- It operates over wide range from medium voltages to high voltages

Dimensions



Wide Range type for both AC and DC



Accessory



Specifications

Working voltage range	AC	6kV~90kV
	DC	6kV~90kV
Operation starting voltage (Voltage to ground)	AC	1000V ± 20%
	DC	3000V ± 20%
Frequency	50/60Hz	
Dielectric strength	Between contact tip and grounding terminal, AC 180kV, 1 min	
Battery	2 AAA batteries	
Operating temperature range	-10°C ~ +40°C	
Weight	About 1.5 kg (main body only)	

HSR-500

High Voltage Detector

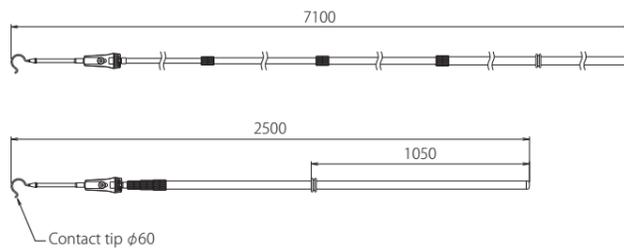
AC 250kV~550kV



Features

- Voltage detector for the highest voltage T/L in Japan
- Sound and light indications can be confirmed outdoors in daytime, even in high level of noise.

Dimensions



Voltage Detector for 500 kV Transmission Lines



Accessory



Specifications

Working voltage range	AC250kV~550kV
Operation starting voltage (Voltage to ground)	20 kVAC ± 20% (in contact with exposed live part)
Dielectric strength	Insulation pole 75 kVAC/300 mm, 1 min
Battery	2 AAA batteries
Operating temperature range	-10°C ~ +40°C
Weight	About 4.5 kg

WM series

WM-22/WM-33/WM-77A/WM-77B
WM-154A/WM-77C/WM-154B/WM-275

Pinwheel Type Voltage Detector

AC 6.6kV~500kV



Features

- Battery-less voltage detector operating with energy to be detected.

Specifications

model No.	Working Voltage Range (kV)	Length / parts (m)	quantity of parts	Length[Max] (m)	Length[Min] (m)	Rod Diameter (φ)	Weight (g)
22	6~ 22	0.7	2	1.51	0.91	20	340
33	6~ 33	1.0	2	2.11	1.21	20	440
77A	11~ 77	1.0	2	2.11	1.21	20	430
77B	11~ 77	1.2	2	2.51	1.41	20	490
77LB	11~ 77	1.3	2	2.71	1.51	20	530
77C	11~ 77	1.2	3	3.65	1.41	25	780
154A	11~154	1.0	3	3.04	1.21	25	660
154B	11~154	1.3	3	3.95	1.51	25	840
154D	11~154	1.2	4	4.78	1.41	30	1140
154E	11~154	1.2	5	5.81	1.41	35	1520
275	33~275	1.2	4	4.78	1.41	30	1130
275E	33~275	1.2	5	5.81	1.41	35	1510
275F	33~275	1.2	6	7.03	1.42	40	2030
500LF	154~500	1.3	6	7.61	1.52	40	2170
500G	154~500	1.2	7	8.16	1.42	45	2560

Voltage Detection Check with Rotation of Pinwheel.



Contact tip (Metal fitting): Spring

HWB series

Non-contact Voltage Detector

AC HWB-35 6kV~ 35kV
HWB-138 66kV~138kV
HWB-550 210kV~550kV



Features

- FRP is used for the insulating stick. It is of light-weight and has outstanding operability.
- Universal joint type

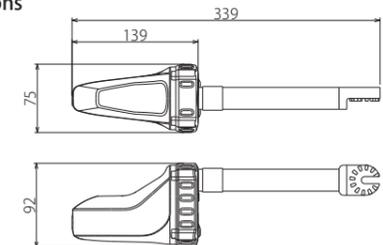
Specifications

Model	HWB-35	HWB-138	HWB-550
Working voltage range	AC 6kV~35kV	AC 66kV~138kV	AC 210kV~550kV
Operation distance	5 ~ 10cm (at AC 6kV)	5 ~ 10cm (at AC 66kV)	5 ~ 10cm (at AC 210kV)
Indication	Sound	Intermittent sound 80dB or more	
	Light	Stand-by state : Green LED light (Automatically turns off in about 2minutes) Operation state : Red LED flash light (Flashing red light, distinguishable in brightness of 50,000lux)	
Frequency	50/60Hz		
Water proof	Equivalent to IP45		
General design	Separate device		
Shock resistance	This device has Shock resistance by Pendulum method (Pendulum method : IEC 61243-1 Shock resistance)		
Operating temperature range	-10°C ~ +50°C		
Battery	R03 (1.5V) × 2pcs.		
Weight	About 400 g (Include batteries)		
Accessory	Bag for housing		

Non-Contact Type



Dimensions



HWA-33X

Medium Voltage Detector

AC 11kV~33kV

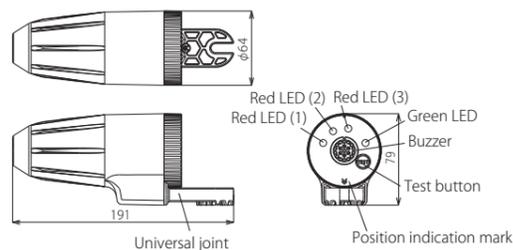


Features

This product emits light and sounds in **three stages** depending on the **distance** to the object.

Dimensions

191 mm × 79 mm × φ64 mm
*Length of the Y-shaped contact tip (metal fitting): 27 mm



Specifications

Applicable voltage	11 kV to 33 kV AC (With proximity alarm function)
Frequency	50/60 Hz
Battery	AAA alkaline batteries (LR03 1.5 V): 2 pieces * Use of rechargeable batteries not allowed
Sound volume	70dB or more
Weight	About 350 g (excluding the contact tip)
Accessory	Trunk case

* HXA-33X includes the main unit and storage bag. The insulating stick is not included.

IEC61243-1 standard voltage detector



HWA-33P

Medium Voltage Detector

AC 1kV~35kV

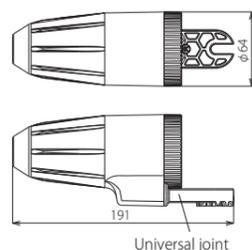


Features

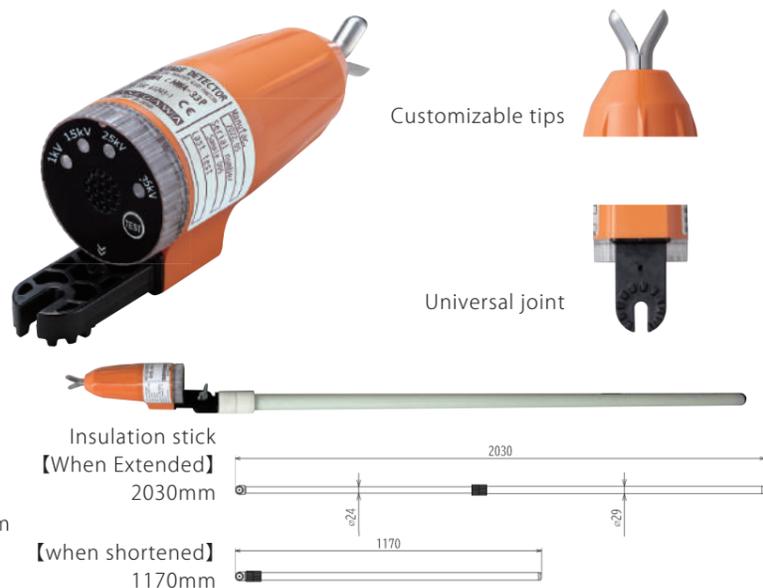
This product emits light and sounds in **four stages** depending on the **voltage** of the object.

Dimensions

191 mm × 79 mm × φ64 mm
*Length of the Y-shaped contact tip (metal fitting): 27 mm



Detector with 4 voltage indication



Specifications

Applicable voltage	1 kV to 35 kV AC (4-step detection 1kV-15kV-25kV-35kV)
Frequency	50/60 Hz
Battery	AAA alkaline batteries (LR03 1.5 V): 2 pieces * Use of rechargeable batteries not allowed
Sound volume	70dB or more
Weight	About 1.2kg (Including insulating stick)
Accessory	Trunk case

* HXA-33P includes the main unit, storage bag and insulating stick.

HPL-200W

Low Voltage Phase Checker
Insulated Wire Clamping Type

AC 70~1000V (Three-Phase)

Features

- Non-contact type: Phase rotation and in-phase/different phase can be checked from above insulated cables
- Electric line size: Wide range from 2 mm² - 100 mm² (Finished external diameter φ2.8 mm - 22 mm)
- The magnet attached on the rear of the product makes hands-free checking possible

Specifications

Working voltage range	3-phase 70~1000V AC (Sinusoidal wave, continuous)
Dielectric resistance	100 MΩ or more, using 500 V megger (Between clip and case)
Dielectric strength	AC 2,000 V, one minute (Between clip and case)
Leakage current	During dielectric strength testing, 100 μA or less
Power supply display	Red LED × 1 (Automatic power OFF approx. 5 minutes)
Sound volume	50 dB or more (50 cm apart)
Battery	LR03(1.5V) × 2 Continuous use approx. 15 hours
Electric line	IV, DV, OW 2 mm ² to 100 mm ² (Finished external diameter φ2.8 mm to 22 mm)
Weight	About 190 g (including batteries)

Indications

Charge indication	LED color	Charged state (Voltage to ground of 80 V or higher)	
		R (Yellow), S (Yellow), T (Yellow)	Power cut state, or *1, *2
	LED indication	Lighting	—

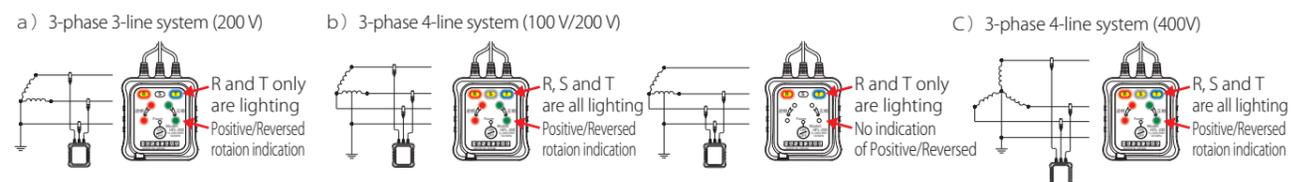
*1 If voltage to ground is 80 V or lower *2 If ground phase or open-phase

Phase rotation indication	LED Flashing/Color	Positive rotation	Reversed rotation
		Green	Red
	Buzzer sound	—	Intermittent sound

In-phase and different phase indication (Charge indication)	LED color	In-phase	Different phase
		R (Yellow), S (Yellow), T (Yellow)	Flashing
	LED indication	Flashing	Lighting

※Display of two clips used, light off when unused

Example indications

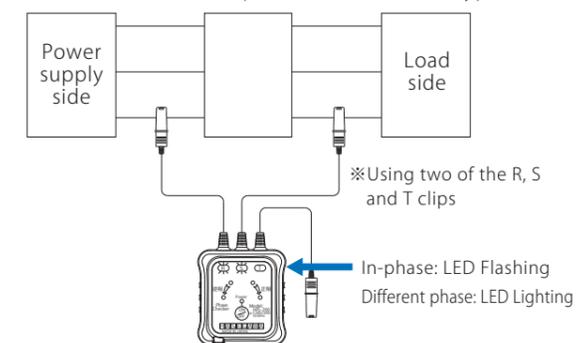


This one unit can be used for both in-phase and different phase checks

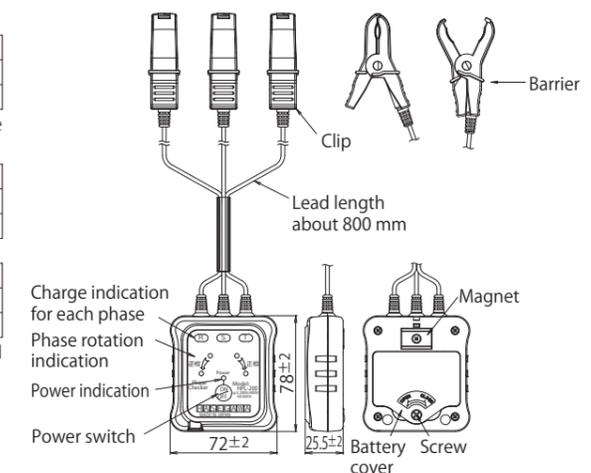


Connection method for in-phase and different phase checks

Electric meter replacement work without power cut (Phase test before in-phase attachment of bypass cable)



Dimensions



HPI-A6/S6/S20W

Medium Voltage & High Voltage Phase Tester, Optical Fiber Type

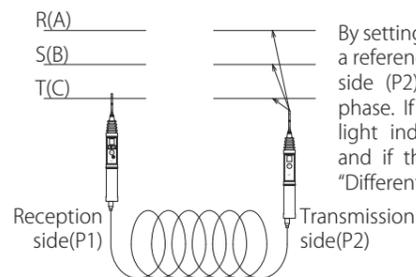
HPI-A6 AC 3kV~7kV
 HPI-S6 AC 6.6kV
 HPI-S20W AC 22~42kV

Alarm pairs insulated with optical fiber

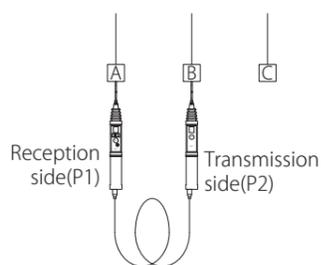


Features

- Multi-functional phase tester: Voltage Detection by single detector use, Phase detection / phase sequence check with pair detector use
- Measurement is possible on the insulated wire sheath. Testing operation is possible through voltage detection terminals or on the wire insulation. * Cannot be used on the shielded cable.
- In-phase/different phase, and phase sequence are indicated by sound and light indications.

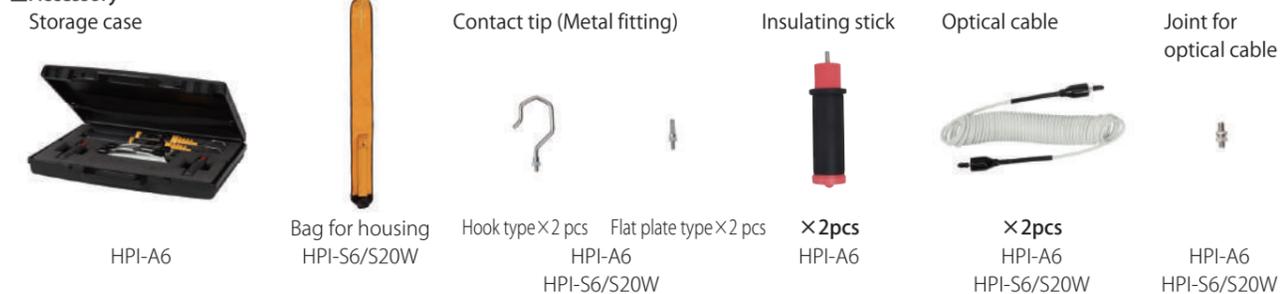


By setting the reception side (P1) as a reference, check the transmission side (P2) corresponding to each phase. If there are no sound and light indications, it is "In-phase," and if there are indications, it is "Different phase."

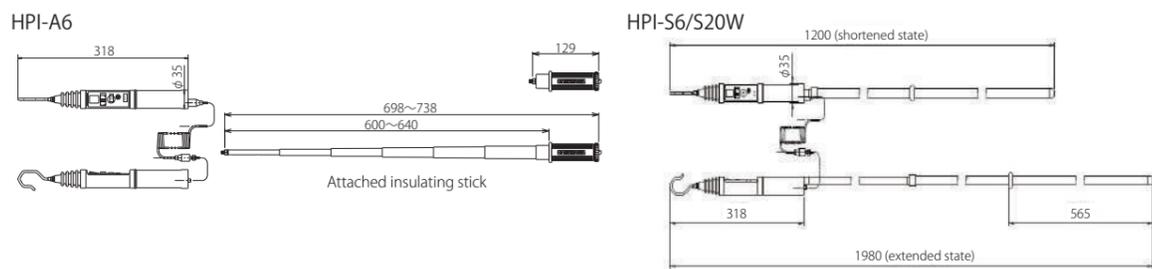


When detectors contact two out of three phases, and if there are no sound and light indications at the reception side (P1), this indicates "positive rotation," and if there are, this indicates "inverse rotation."

Accessory



Dimensions



Specifications

Model	HPI-A6	HPI-S6	HPI-S20W
Working voltage range	AC 3kV~7kV	AC 6.6kV	AC 22kV~42kV
Target	For cubicles	For overhead lines	
Frequency	50/60Hz		
Insulation resistance	2000MΩ or more		
Operating temperature range	-10°C~+40°C		
Indication of operation	Light	It shall be able to confirm luminance of 8,000 lux.	
	Sound	50 dB or more at a distance of 1 m from the sound-generating part (intermittent sound generation)	
Phase test function	Detection of in-phase or different phase of 120°		
Phase sequence function	Detection of advance or delay of 120°		
Possible distance of phase test	Distance between transmitter and receiver, with standard optical cable: 6 m (3m x 2) It can be used at up to 30 m with the optional optical cable.		
Battery	R1(1.5V), each 2 pcs		

Option

Optical fiber cable



10m (DF01066-1)
 20m (DF01066-2)
 30m (DF01066-3)

* Use extended with a joint is not possible.

HPR Series

High Voltage Phase Tester Wireless Type

AC 20kV~42kV

Easy-to-use with Wireless Pair Renewed with phase sequence function

Features

- When used alone, it becomes a power detection function, and when used in combination, it becomes a phase detection and phase

*Universal joint type



Model HPR-U20: Universal joint type

Model HPR-S20: Straight type

Specifications

Model	HPR-S20	HPR-U20
Construction	Straight type	Universal joint type (for both horizontal and vertical arrangements)
Working voltage range	AC 20kV~42kV	
Frequency	50/60 Hz	
Phase test function	Phase test	Determines whether the phase of P2 is in phase with or different from P1 by 120°
	Phase sequence	Determines whether the phase of P2 is advanced or retarded from P1
Distance for phase test	Distance between P1 and P2: 5 m or less	
Overall length	In a stretched state	1,245 mm
	In a shrunken state	870 mm
Operation status display	Light	Visible at a luminance of 8,000 lx
	Sound	50 dB or greater at a distance of 3 m
Batteries to use	Two AAA batteries for P1 and P2 each (LR03 or R03)	
Operating temperature range	-10 to +40°C	
Water resistance	Waterproof structure (IPX4 or equivalent)	
Weight	Approx. 900 g x 2	Approx. 2,200 g x 2
Accessories	Bag case	Trunk case

Dielectric strength	30 cm intervals between creeping surface and creeping surface of insulating stick. (2 locations) *Except for the antenna portion	AC 75 kV for 1 min	HPR-S20, HPR-U20
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Operation display

Combination test Press test button of P1 and P2 and check the operation

P1 : combination test → No sound emission center LED (yellow) lit

P2 : combination test → Light emission (red)

In-phase
 P1 does not emit sound and LED (center) is lit → Electric lines of P1 and P2 are in phase

P1: No sound or light emission (center) P2: Light emission (red)

Phase sequence

P1: Sound and light emission (green) P2: Light emission (red)

Out of phase
 P1 emits sound and light → Electric lines of P1 and P2 are out of phase

P1: Sound and light emission (green or red) P2: Light emission (red)

HLA-1A

Voltage Detector Checker

Handy Type with Built-in Battery



■ Features

- Easy to use at the site
- Checking low/high voltage is possible.
- Compact size and lightweight make it convenient to carry

■ Specifications

Output voltage	H terminal ----- 400 VAC ±20% L terminal ----- 100 VAC ±20%
Output frequency	55Hz ±10Hz
Short-circuit current	0.5 mA or less
Operating temperature range	-10°C ~ +50°C
Battery	LR03(1.5V) × 4 pcs Battery life ----- Total operating time: About 1 hr.
Dimensions	65mm × 120mm × 40mm
Weight	430g

HLA-2G

Voltage Detector Checker

Handy Type with Built-in Battery



■ Features

- Ideal for checking voltage detectors for communication use

■ Specifications

Output voltage	H terminal ----- 1,200 VAC ±20% L terminal ----- 70 VAC ±20%
Output frequency	55Hz ±10%
Short-circuit current	0.5 mA or less
Operating temperature range	0°C ~ +50°C
Battery	6R61 or 6F22(9V) × 2 pcs Battery life ----- Total operating time: About 2 hr.
Dimensions	80mm × 150mm × 50mm
Weight	700g

HLA-N2

DC voltage Detector Checker

Handy Type with Built-in Battery



■ Features

- Exclusive use for DC high voltage detector (Optimum for HS-1.5NR & HS-1.5NJ voltage detectors)

■ Specifications

Output voltage	DC1000V ±400V
Load resistance	50 MΩ or more
Short-circuit current	0.5 mA or less
Operating temperature range	-10°C ~ +50°C
Battery	LR03(1.5V) × 4 pcs
Dimensions	72mm × 114mm × 45mm
Weight	280g

HLA-3

Voltage Detector Checker

Handy Type with Built-in Battery



■ Features

- Recommend for CL-1-06
- Handy type with built-in battery

■仕様

Output voltage	4,000 V AC ±15%
Output lamp	Red LED (if the battery is low, turn off the lamp)
Output frequency	55 Hz ±10 Hz
External dimensions	100mm × 200mm × 70mm
Short-circuit current	0.5 mA or lower
Weight	About 1,200g (battery not included)
Operating temperature range	0°C to +50°C
Built-in battery	9V (6LR61 or 6LF22) × 2 pcs Life of the battery: cumulative operating hours of approx. 2 hours *6F22 batteries are not usable.

■ Corresponding table of detector checkers

MODEL		HLA-1A	HLA-2G	HLA-N2	HLA-3
HTE-610W/WL		○	○		
HTE-700D/DL	AC	○	○		
	DC				
HT-670	AC	○	○		
	DC				
HSF-11		○	○		○
HSE-7G		○	○		○
HSS-25B1		○	○		○
HSG-6		○	○		○
HSN-6A2	AC	○	○		○
	DC			○	
HST-1.5N	AC		○		○
	DC			○	
HST-30W					○
HST-20N					○
HST-30/30L	AC				○
	DC				○
HST-70/70L/W80L					○
HST-170					○
HST-250					○
HSR-90N	AC				○
	DC				○
HSR-500					○

HXG-1

Portable Live Part Detector

AC 3.3kV ~ 77kV



[Attention]

This device is not a voltage detector.

Determine whether the Substation Facilities are charged



■ Accessory



Storage case

■ Specifications

Working voltage range	3.3 kV to 77 kV	
Frequency	50/60Hz	
Dielectric strength	Between contact tip and grip: Extended state 20 kVAC, 1 min	
Detection performance	Operation Voltage-Distance: 3.3kV - 0.2m * Operation Voltage-Distance are theoretical value.	
Operation status display	Light	Can be confirmed at the distance of 50 cm in the luminance of 8,000 lux.
	Sound	50dB or more (1m apart)
Battery	LR44(1.5V) × 2 pcs	
Operating temperature range	-10°C ~ +40°C	
Weight	85g	

■ Voltage & distance to be separated, and detectable distance

Voltage (kV)	3.3	6.6	11	22	33	66	77
Detectable distance (m)	0.2	0.5	1.0	1.7	2.2	2.9	3.0

Operation distance is varied depending on the actual surrounding environment. Please confirm operation distance in actual use environment before using.

HXC-3K

Portable Live Part Detector

AC 3.3kV ~ 77kV



[Attention]

This device is not a voltage detector.

Determine whether the Substation Facilities are charged



■ Specifications

Working voltage range	3.3 kV to 77 kV (Non-contact type for 11 kV or higher)	
Frequency	50/60Hz	
Dielectric strength	Between tip part and grip of detector 20 kVAC, 1 min (Leakage current: 1 mA or less)	
Detection performance	Operation starting voltage: 400 V ± 20% Detectable distance: 5 cm at 3.3 kV, 10 cm at 6.6 kV	
Operation status display	Light	Can be confirmed at the distance of 50 cm in the luminance of 8,000 lux.
	Sound	50dB or more (1m apart)
Dimensions	155mm	
Battery	LR44(1.5V) × 2 pcs	
Operating temperature range	-20°C ~ +40°C	
Weight	35g	

* Without the casing

■ Voltage & distance to be separated, and detectable distance

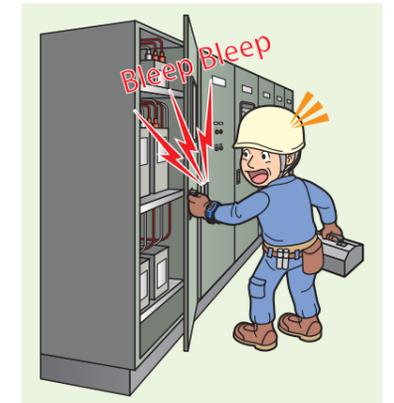
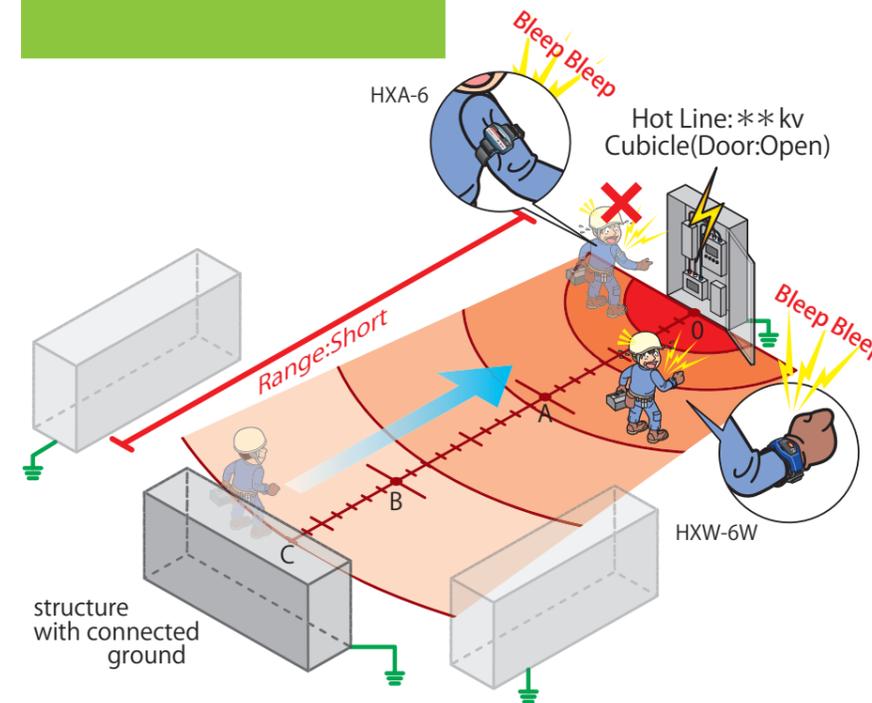
Voltage (kV)	3.3	6.6	11	22	33	77
Necessary distance to be separated (cm)	—	—	15	25	35	76
Detectable distance (cm)	5	10	33	90	120	230

■ Features

- Compact size and lightweight make it convenient to carry

Hot Line Proximity Alarm

Auxiliary voltage detection device that gives alarm sounding at a distance when approach to a live line.



Hot Line Proximity Alarm

■ What is a Hot line proximity alarm?

- It is a product that generates an alarm when it detects a voltage at a distance to prevent accident of electric shock. Unintended access due to human errors such as preconception or misconception can be prevented.
- This product cannot be used as a voltage detector.

■ Precautions before purchasing the Hot line proximity alarm

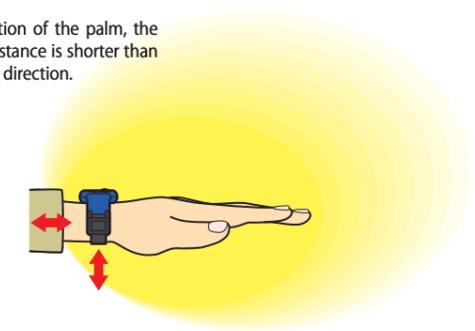
- Please use proper model according to the applications, because detection sensitivity has been adjusted for cubicle works and overhead line works respectively assuming the general site conditions.
- The specification "○V-○cm" of this product is a distance under the "standard condition" set in the factory. At actual sites, the operation distance may become shorter, depending on environment, wiring conditions, etc. (*1) (*1) e.g.: When a grounded structure exists nearby, etc.
- The sensitivity of this product is directional. Sensitivity is reduced at the back of the product (in the case of HXW-6W, direction of the palm).

● Image of operating distance

Detection is easier in the direction of fingertips and lateral direction.



In the direction of the palm, the detecting distance is shorter than in the upper direction.



HXW-6WL

WRIST ALARM

AC 400V to 22kV



Applicable from low voltage to high voltage



* Rubber band is attached to the product.

Option

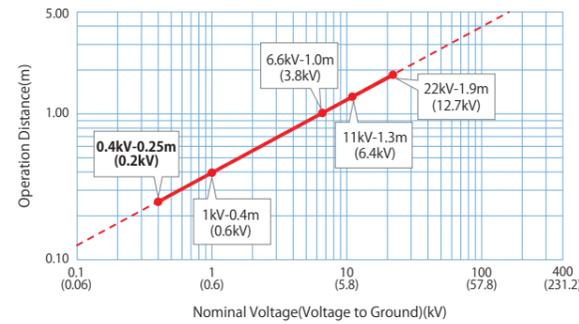


Silicone band

Specifications

Model	HXW-6WL
Working Voltage range	400V to 22kV
Standard distance for operation	25cm against 400V (230V to ground) * Under Hasegawa's standard conditions.
Frequency	Both 50Hz and 60Hz
Sound volume	65dB or more (60cm apart)
Battery	Coin type Lithium battery (CR1620) 1 piece
Operating temperature range	-10°C ~ +40°C
Dimensions	(W) 77mm × (D) 40mm × (T) 14mm
Weight	About 35g

Operation Voltage Distance graph (Theoretical value)



Operation Voltage Distance Table (Theoretical value)

Normal Voltage	Operation Distance
0.4kV	0.25m
1kV	0.4m
6.6kV	1.0m
11kV	1.3m
22kV	1.9m

Operation Voltage-Distance Table and graph are theoretical value. Operation distance is varied depending on the actual surrounding environment. Please confirm operation distance in actual use environment before using.
* When used with overhead distribution lines, the operating distance will be longer.
* HXW-6WL is the customized model which is specialized in detecting low voltage. It may begin to operate at longer distance than necessary when using in the field of Mid-High voltage. If it may begin to operate at longer distance than necessary, consider using the original model.

HXW-6W

(Both 50Hz and 60Hz)

WRIST ALARM

AC 1kV to 42kV



Exclusively for cubicle works



* Rubber band is attached to the product.

Option

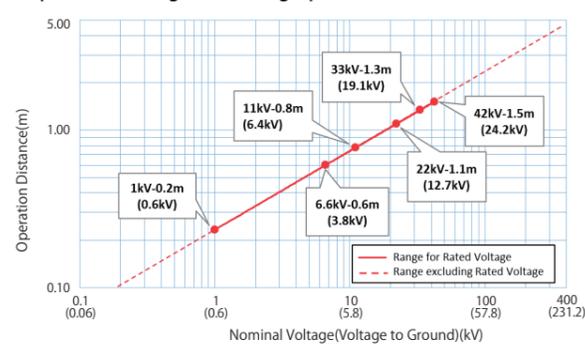


Silicone band

Specifications

Model	HXW-6W
Working Voltage range	1kV to 42kV
Alarm starting distance (Under standard condition)	60cm against 6.6kV (3.8kV to ground)
Frequency	Both 50Hz and 60Hz
Sound volume	65dB or more (60cm apart)
Battery	CR1620 (3V) × 1 pcs
Battery life (with new battery)	Continuously operating state: About 15 hr. Unused state: About 10 months
Operating temperature range	-10°C ~ +40°C

Operation Voltage Distance graph (Theoretical value)



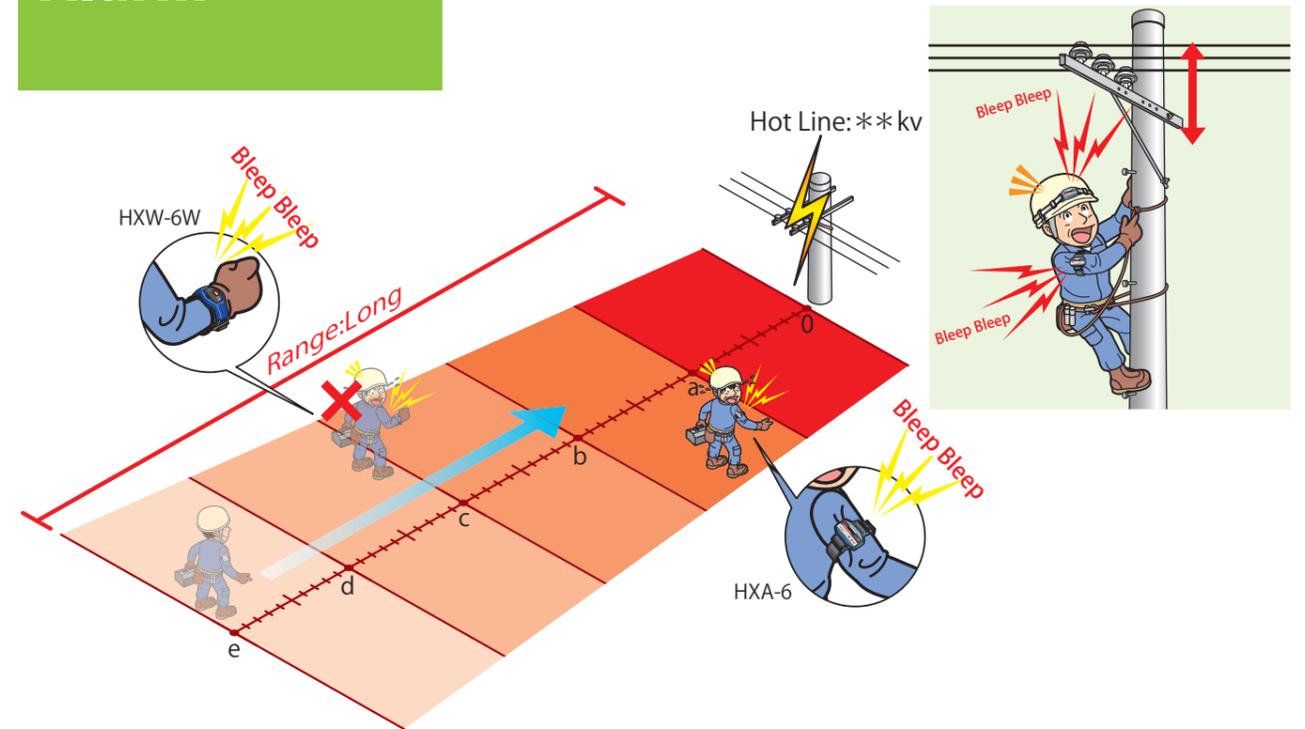
Operation Voltage Distance Table (Theoretical value)

Normal Voltage	Operation Distance
6.6kV	0.6m
11kV	0.8m
22kV	1.1m
33kV	1.3m

Operation Voltage-distance table and graph are theoretical value. Operation distance is varied depending on the actual surrounding environment. Please confirm operation distance in actual use environment before using.

Hot Line Proximity Alarm

Auxiliary voltage detection device that gives alarm sounding at a distance when approach to a live line.



HXA-6 HXA-6S

AC 6.6kV to 33kV



Hot line proximity detector exclusively for overhead line works

[Attention]
This is not suitable for cubicle works.

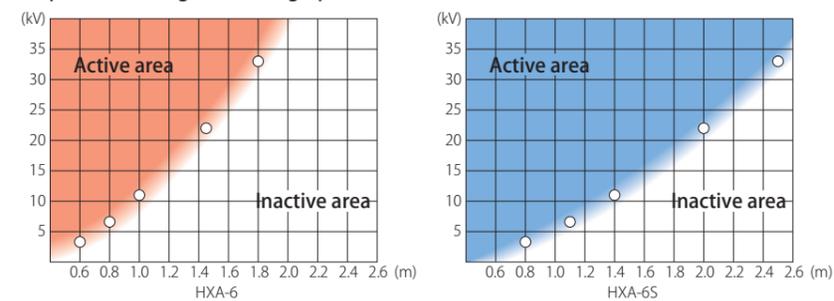
HXA-6 (Upper arm fitting type) HXA-6S (Helmet fitting type)



Specifications

Model	HXA-6	HXA-6S
Location of use	Exclusive for work with overhead lines	
Alarm starting distance (Under standard condition)	80cm	110cm
Frequency	Either 50 Hz or 60 Hz, whichever is designated	
Sound volume	65dB or more (1m apart)	
Battery	JIS CR2032(3V) × 1 pcs	
Battery life (with new battery)	Continuously operating state: About 15 hr.	Unused state: About 10 months
Operating temperature range	-10°C ~ +40°C	

Operation Voltage Distance graph (Theoretical value)



Operation Voltage Distance Table (Theoretical value)

Normal Voltage	Operation Distance	
	HX-6	HX-6S
6.6kV	0.8m	1.1m
11kV	1.0m	1.4m
22kV	1.5m	2.0m
33kV	1.8m	2.5m

Operation Voltage-distance table and graph are theoretical value. Operation distance is varied depending on the actual surrounding environment. Please confirm operation distance in actual use environment before using.

HXA-30 HXA-30S

Hot line proximity detector exclusively for overhead line works

* Please designate the frequency (50 Hz or 60 Hz).

[Attention]

This is not suitable for cubicle works.

AC 11kV to 66kV



HXA-30 (Upper arm fitting type) HXA-30S (Helmet fitting type)



■ Specifications

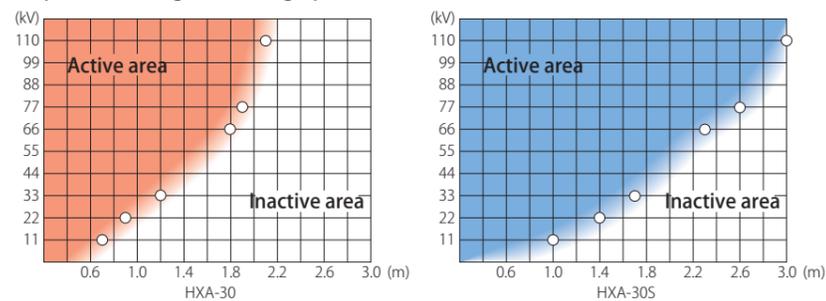
Model	HXA-30	HXA-30S
Standard operation start distance	11 kV (Voltage to ground: 6.4 kV) - 70 cm (under normal conditions)	11 kV (Voltage to ground: 6.4 kV) - 100 cm (under normal conditions)
Frequency	50 Hz / 60 Hz	
Sound volume	65 dB or more	
Battery for use	JIS CR2032 (3V) x 1	
Allowable temperature range	-10°C to +40°C (with no surface or internal condensation)	
Weight	About 45 g (body only)	
External dimensions	(W) 78 × (D) 82 × (T) 25	(W) 94 × (D) 48 × (T) 27.5
Accessories	Fixing band	Fixing band, Holder (2pcs)

■ Operation Voltage Distance Table (Theoretical value)

Normal Voltage	Operation Distance	
	HXA-30	HXA-30S
11kV	0.7m	1.0m
22kV	0.9m	1.4m
33kV	1.2m	1.7m

Operation Voltage-distance table and graph are theoretical value.
Operation distance is varied depending on the actual surrounding environment.
Please confirm operation distance in actual use environment before using.

■ Operation Voltage Distance graph (Theoretical value)



HXA-70 HXA-70S

Hot line proximity detector exclusively for overhead line works

* Please designate the frequency (50 Hz or 60 Hz).

[Attention]

This is not suitable for cubicle works.

AC 66kV to 110kV



HXA-70 (Upper arm fitting type) HXA-70S (Helmet fitting type)



■ Specifications

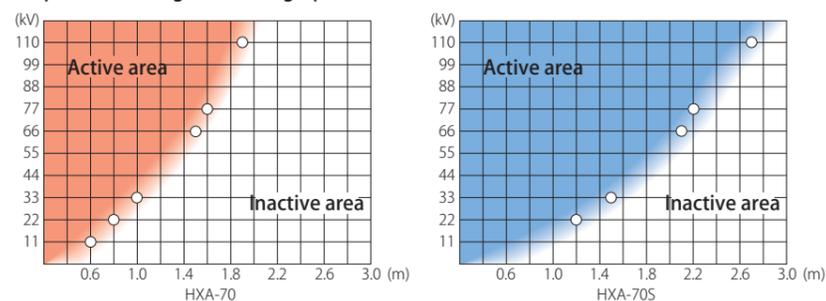
Model	HXA-70	HXA-70S
Standard operation start distance	66 kV (Voltage to ground: 38 kV) - 150 cm (under normal conditions)	66 kV (Voltage to ground: 38 kV) - 150 cm (under normal conditions)
Frequency	50 Hz / 60 Hz	
Sound volume	65 dB or more	
Battery for use	JIS CR2032 (3V) x 1	
Allowable temperature range	-10°C to +40°C (with no surface or internal condensation)	
Weight	About 45 g (body only)	
External dimensions	(W) 78 × (D) 82 × (T) 25	(W) 94 × (D) 48 × (T) 27.5
Accessories	Fixing band	Fixing band, Holder (2pcs)

■ Operation Voltage Distance Table (Theoretical value)

Normal Voltage	Operation Distance	
	HXA-70	HXA-70S
66kV	1.5m	2.1m
77kV	1.6m	2.2m
110kV	1.9m	2.7m

Operation Voltage-distance table and graph are theoretical value.
Operation distance is varied depending on the actual surrounding environment.
Please confirm operation distance in actual use environment before using.

■ Operation Voltage Distance graph (Theoretical value)



Railway Products

- Railway Products P.41
- Measuring Instrument P.47

HVC-1.5N3

Voltage Detector for DC Overhead Contact Wire

DC 750V~2000V



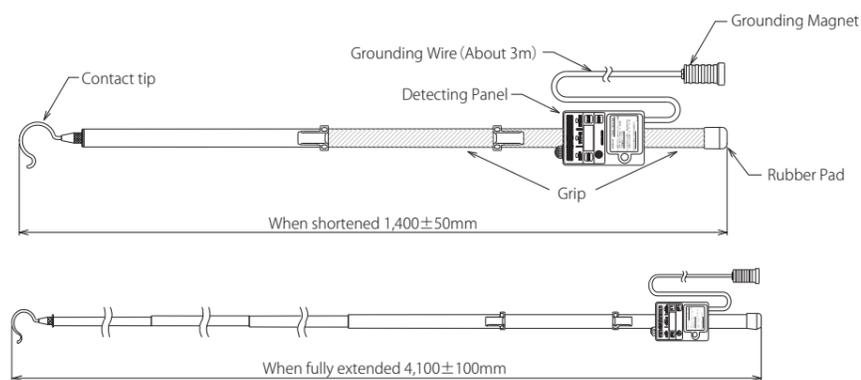
■ Features

- Light weight body [About half weight compared with previous product.]
- Promote the checking before detect the voltage.
- Memorize the setting of volume control.
- Simplified the checking before detect the voltage.
- Adopt a strong Grounding magnet.
- Large Indication.

Voltage Detector for DC 1500V Contact Wires, Visualization of decreasing Residual Voltage



■ Dimensions



■ Specifications

Working voltage range	DC 750V~2000V (Bare conductors) * Voltage detection of negative potential is not possible.	
Operation starting voltage (Voltage to ground)	DC750V±50V	
Display	Operation display (charging)	Red LED and buzzer
	Check of earth wire (Earth wire is OK)	Green LED
Voltage display	Range: 0 VDC to 1999 VDC Resolution: 1 V, Accuracy within ±5%±5V	
Volume adjustment for buzzer sound	Each time when the sound volume push-button switch is pressed, the cycle of High → Medium → Low → High ---- is repeated. Sound volume at a distance of 1 m High: 75 dB or more Medium: 55 to 70 dB, Low: 50 dB or less	
Output voltage at test	DC1000V±200V	
Dielectric strength	Contact tip (Metal fitting) – Grounded part 4 kVAC, 1 min	
Leakage current	1 mA or less at dielectric strength test	
Battery	R6 or LR6(1.5V) × 4 pcs	
Operating temperature range	0°C ~ +50°C	
Weight	About 2.3kg	

■ Accessory



Bag for housing

HVC-750N3

Voltage Detector for DC Third Rail

DC 300V~2000V



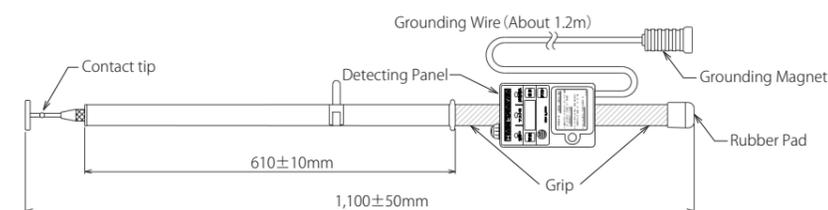
■ Features

- Promote the checking before detect the voltage.
- Memorize the setting of volume control.
- Simplified the checking before detect the voltage.
- Adopt a strong Grounding magnet.

Voltage Detector for DC 750V Contact Wires, Visualization of decreasing Residual Voltage



■ Dimensions



■ Specifications

Working voltage range	DC300V~2000V (Bare conductors) * Voltage detection of negative potential is not possible.	
Operation starting voltage (Voltage to ground)	DC300V±20V	
Display	Operation display (charging)	Red LED and buzzer
	Check of earth wire (Earth wire is OK)	Green LED
Voltage display	Range: 0 VDC to 1999 VDC Resolution: 1 V, Accuracy within ±5%±5V	
Volume adjustment for buzzer sound	Each time when the sound volume push-button switch is pressed, the cycle of High → Medium → Low → High ---- is repeated. Sound volume at a distance of 1 m High: 75 dB or more Medium: 55 to 70 dB, Low: 50 dB or less	
Output voltage at test	DC500V±100V	
Dielectric strength	Contact tip (Metal fitting) – Grounded part 4 kVAC, 1 min	
Leakage current	1 mA or less at dielectric strength test	
Battery	R6 or LR6(1.5V) × 4 pcs	
Operating temperature range	0°C ~ +50°C	
Weight	About 1.4kg	

■ Accessory



Bag for housing

HVC-1.5N3S

Voltage Detector for DC Substation

DC 750V~2000V

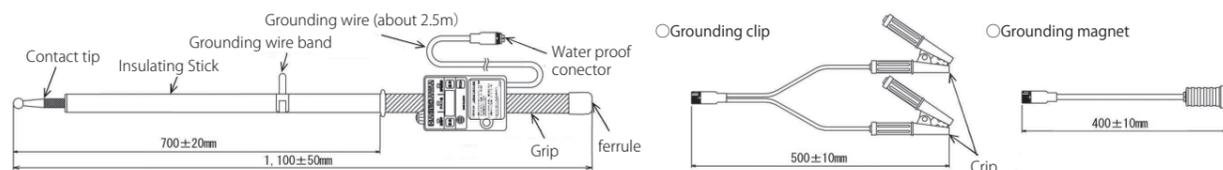


HVC-1.5N3S
The plate is attached to grounding clip
Inspection before use



It can be grounded in various place;etc cubicle
Please use two clips at the same time.

Dimensions



Voltage detector for DC 1500V substation



Accessory

Bag for housing

Option



HVC-1.5N3S
Grounding magnet
(UH20004)

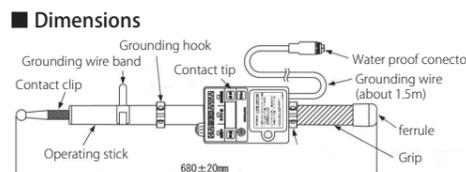
HVC-1.5N3S
Grounding clip
(UH20003)

HVC-1.5N3S
The plate is attached to
grounding clip
Inspection before use
(DH18007)

HVC-1.5N3M

Voltage Detector for Monorail

DC 300V~2000V



Dimensions

Voltage detector for monorail



Accessory

Bag for housing

Option



HVC-1.5N3M
Grounding magnet
(UH20004)



HVC-1.5N3M
Grounding clip
(UH20003)



HVC-1.5N3M
The plate is attached to
grounding clip
Inspection before use
(DH18007)

Specifications

Model	HVC-1.5N3S	HVC-1.5N3M
Working voltage	DC750V~2000V	DC300V~2000V
	Max DC2,000V (in contact with bare wire) *Voltage detection of negative potential is not possible.	
Operation starting voltage (Voltage to ground)	DC750V±50V	DC300V±20V
Insulation resistance	contact tip-grounding clip 10MΩ±10%(with 1,000Vmega measuring instrument)	
Dielectric strength	contact tip-grounding magnet AC4,000V,1 min	
Leakage current	1 mA or less at dielectric strenght test	
Operating temperature range	0°C~+50°C	
Volume adjustment for buzzer sound	Sound volume at a distance of 1m High:75dB Miidium:60dB or more 75dB or less Low:60dB or less	
Output voltage at test	DC1,000V±200V	DC500V±100V
Battery	R6 or LR6(1.5V) x 4 pcs	
Structure	Dustproof,Waterproof(Equivalent toIP44)	
Weight	About 1.8kg(with grounding clip)	About 1.6kg(with grounding clip)

HSR-1.5NJ HSR-1.5NR

Medium Voltage Detector

AC 6600V

DC HSR-1.5NJ:600~7000V
HSR-1.5NR:1000~7000V



Voltage Detector of Dual Use for DC Contact Wire and AC 7kV



HSR-1.5NJ



HSR-1.5NR

Features

- Grounding wire options : Clip Type (HSR-1.5NJ) and Magnet Type (HSR-1.5NR)
- Discharging state of residual charge after power outage can be distinguished (HSR - 1.5 NR)

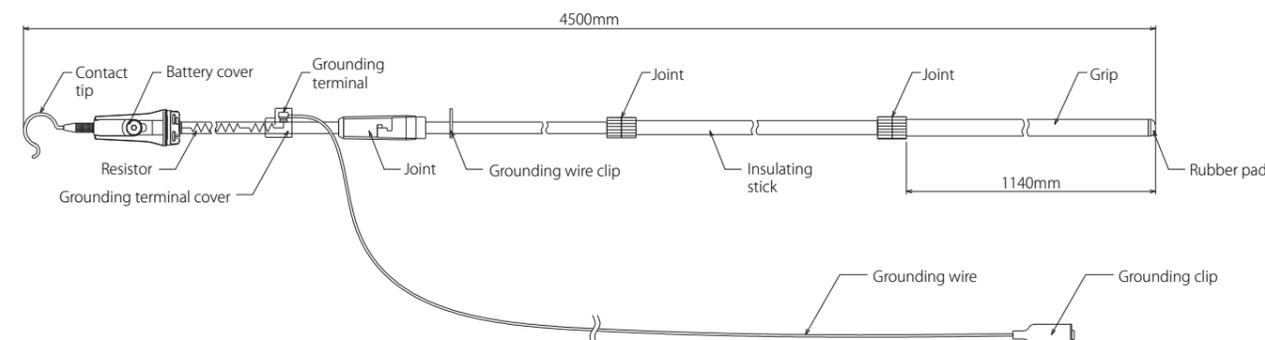
Operation display (HSR-1.5NR)

Voltage	Green LED		Red LED and buzzer	
	Lighting	Flashing	Lighting	Sound generation
DC				
After test and after voltage detection (not charged)	○	—	—	—
Approx. 350 to Approx. 750 V	—	○	—	—
Approx. 1,000 to Approx. 2,000 V	—	—	—	—
Approx. 750 V or more	—	—	—	○
Approx. 2,000 V or more	—	—	—	○

- When the green LED is flashing, a residual electric charge within the range of working voltages is being discharged.
- A stand-by display function is provided. When the test button is pressed, the green LED lights for about 30 sec. (Voltage detection is possible, even if the green LED is turned off.)

○ : Operation
— : No operation

Dimensions



Accessory



Common bag for HSR-1.5NJ/NR

Clip-type grounding wire (7 m)
for HSR-1.5NJ

Magnet-type grounding wire (7 m)
for HSR-1.5NR

Specifications

Model	HSR-1.5NJ	HSR-1.5NJ1	HSR-1.5NR
Working voltage range	AC	6600V	1000~7000V
	DC	600~7000V	
Operation starting voltage (Voltage to ground)	AC	2000V±20%	
	DC	400V±20%	800V±100V
Frequency	50/60Hz		
Grounding system	Clip		Magnet
Indication of operation	Light	It can be confirmed in the luminance of 8,000 lux.	
	Sound	Intermittent sound	Continuous sound
Battery	2 AAA batteries		
Accessory	Clip type grounding wire (7 m)		Magnet type grounding wire (7 m)
Weight	About 3.2 kg		
Dielectric strength	Between contact tip (metal fitting) and grounding terminal: 14,000 VAC, 1 min		

HST-W80JS

Voltage Detector for AC Overhead Contact Wire

AC 20kV~80.5kV



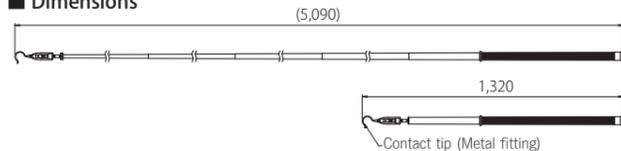
Features

- Standby display function is provided. After pressing the test button, the green LED lights up even after voltage detection. * The green LED automatically turns off in 1 to 2 min.
- Voltage detection is possible even after turning off (in case there is no problem with battery level)



Charged indication (Red LED lit) Uncharged indication (Green LED lit)

Dimensions



Voltage Detector for AC Overhead Contact wires of normal Railways and Shinkansen



Accessory



Bag for housing

Specifications

Working voltage range	AC20kV~80.5kV	
Operation starting voltage (Voltage to ground)	5 kV ± 20% (bare wire)	
Frequency	50Hz/60Hz	
Indication of operation	Light	It can be confirmed in the luminance of 8,000 lux.
	Sound	50 dB or more at a distance of 2 m
Dielectric strength	Insulating stick, AC 75 kV/300mm x 1 min. (6 locations on the insulating stick, except for electrode and joints)	
Leakage current	100 μA or less at dielectric strength test/1 location	
Battery	LR44(1.5V) × 2 pcs	
Battery life	About 4 hr. continuous operation	
Operating temperature range	-10°C to +50°C (However, there shall be no dew condensation inside.)	
Weight	About 1 kg	

* HST-W80JS-Y1 (spec. with Y-type Contact tip (Metal fitting) also exists.

HXR-20J (For normal railways) HXR-25J (For high speed rail)

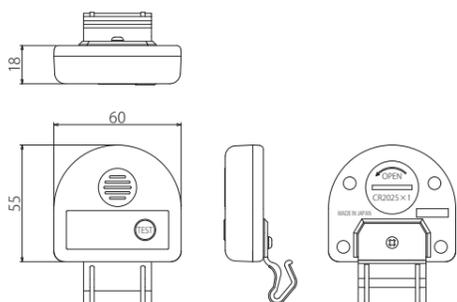
Medium Voltage Hot-line Proximity Alarm

AC HXR-20J 20kV
HXR-25J 25kV

Features

- Alarm is generated at a distance of about 2 m from the energized overhead contact lines, normal railways (AC 20kV) and High Speed Railway (AC 25kV).
- It has directionality to identify overhead contact lines in a charged state.
- It is compact, lightweight, and can be fitted to a helmet with a one-touch operation

Dimensions (common to Model HXR-20J & Model HXR-25J)

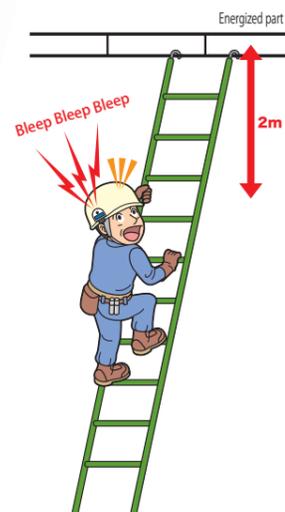


Specifications

Operating sensitivity (Electric field intensity)	HXR-20J : AC20kV HXR-25J : AC25kV
Standard operation starting distance	About 2 m (It differs depending on the environment.)
Sound volume	80dB/10cm or more
Frequency	50/60 Hz
Operating temperature range	-10°C ~ +40°C
Battery	CR2025(3V) x 1 pcs
Battery life	About two years in unused state
Dimensions	60mm x 55mm x 18mm
Weight	About 40g

Non-contact Detection of Charging State of AC Overhead Contact Lines

Jointly developed with JR EAST (East Japan Railway Company)



Grounding Hook for Railways

Custom production is possible with combination of tip metal fitting, length of operating rod, length and size of earth wire, and grounding metal fitting.

Tip metal fitting

External appearance	Model name	Range of use (mm)	Dimension	Weight
	SA106-A Insertion type	φ10~25		630g
	SA106-C Slanted insertion type	φ10~25		720g
	SA106-S Compact insertion type	φ4~10		400g

Operating stick

Type	Length	Length	Type	Length	Number of connections
Type 5	0.5m	Single rod	Type 35	3.5m	Connection of 2 rods (1.5 m + 2.0 m)
Type 10	1.0m		Type 40	4.0m	Connection of 2 rods (2.0 m + 2.0 m)
Type 15	1.5m		Type 45-A	4.5m	Connection of 2 rods (2.0 m + 2.5 m)
Type 20	2.0m		Type 45-B	4.5m	Connection of 3 rods (1.5 m + 1.5 m + 1.5 m)
Type 25	2.5m		Type 50	5.0m	Connection of 2 rods (2.5 m + 2.5 m)
Type 30	3.0m		Type 60-A	6.0m	Connection of 2 rods (3.0 m + 3.0 m)
			Type 60-B	6.0m	Connection of 3 rods (2.0 m + 2.0 m + 2.0 m)

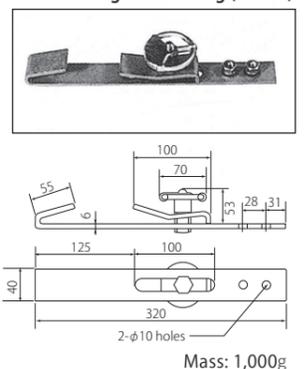
Grounding wire

Cross-sectional area	38mm ²	60mm ²	100mm ²
Wire configuration	19/38/0.26	19/60/0.26	37/51/0.26
Mass	455g/m	680g/m	1120g/m
Finished outside diameter	12.9mm	15.2mm	19.0mm

Standard model

Type	Tip metal fitting	Grounding wire	Operating rod	Grounding metal fitting	Bag for housing
SA106A Type 45-A	SA106A	60mm ² × 7m	4.5 m, connection of 2 rods (2.0 m + 2.5 m)	SA120	Sold separately
SA106A Type 45-B	SA106A	60mm ² × 7m	4.5 m, connection of 3 rods (1.5 m + 1.5 m + 1.5 m)	SA120	Sold separately

Grounding metal fitting (SA120)



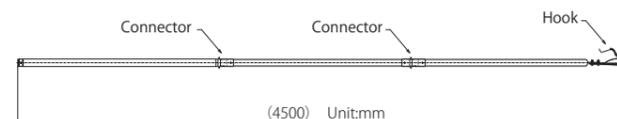
Type R

DC 1500V

Features

- No sagging of the ground wire because the operating rod and conductor are integrated.
- Grounding hardware can be securely fastened without passing under the rail.

Dimensions

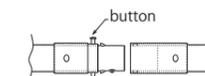


Grounding hook for DC train lines

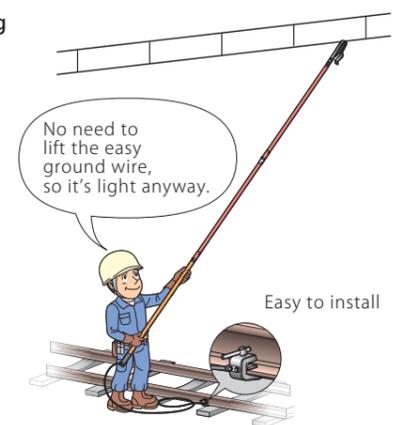
Grounding metal fitting



Connection



Metal head fitting



Easy to install

Specifications

Type	R
Target voltage range	Less than DC1500V
Grounding wire	transparent coated vinyl wire 60mm ² - 3m
Energizing performance	4000A AC/Within 0.2 seconds
Hook attachable range	A: φ60, B: φ15~φ25(unit:mm)
Grounding bracket attachable range	15~25(unit:mm)
Dielectric strength	Surface of FPR-Between ground wire connection 5400VAC-for 1minute
Weight	About 10.2kg

VOLTECT

Extra-High Voltage
Detecting System

AC 3.3kV~550kV

* This apparatus is produced and sold by our company, having inherited inheriting technologies of former Million Electric Mfg. Co. Ltd.

Features

- Economical as it can be simply installed without using PT, PD.
- Easy installation and maintenance.

Protector
•HG7-P1B
(for single phase)
•HG7-P2B
(for two-phase)



Controller
•HG7-SM○○
•HG7-DM○○
* Refer to the following Rating table.
Voltage Meter
•DVF-11M



Detector
•(DD type) HG7-DD-○m
•(CT type) HG7-CTA-○m

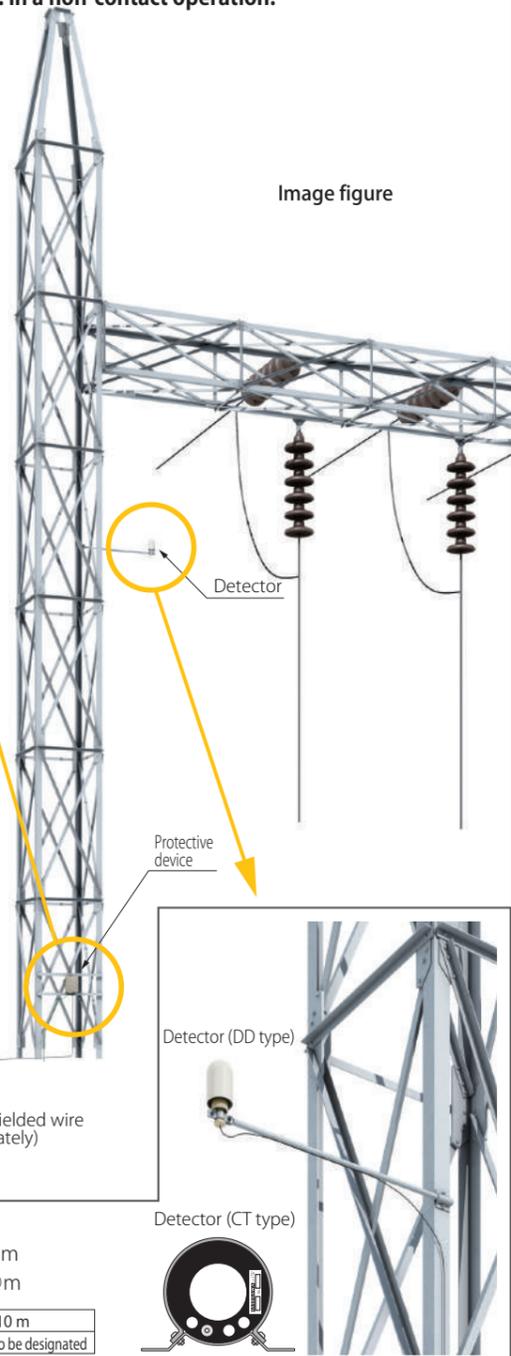
Attached cable	Standard 10 m
	20, 30, 40, 50, or 60 m to be designated

Detector (CT type)



This indication and warning apparatus detects the presence or absence of a charged state of special high voltage substations, electric power transmission lines, power receiving equipment, etc. in a non-contact operation.

Image figure



Rating table

Indicating type of the measuring instrument	Voltage switching indication		Indication proportional to voltage
Type of Controller (*1)	Single-phase detection	SM1AH(high sensitivity) SM1A(standard sensitivity)	DM1A
	Two-phase detection	SM2AH(high sensitivity) SM2A(standard sensitivity)	DM2A
Line voltage (50/60 Hz)	3.3~550 kV		
Operating time at charging/power failure	0.5 sec or less (However, ratio of operating point setting: 70% or less)		
Configuration	1c (for single phase), 1c x 2 (for two-phase)		
Switching capacity/100 VDC	Resistance load: 0.5 A, Induction load: 0.1 A		
Max. allowable circuit voltage	180V, DC, 140V, AC		
Output	0~1mA, DC		
Internal resistance	Less than 5 kΩ		About 1.5kΩ
Operation indication lamp	Charging: Red light, Power failure: Green light, No power: Extinguished (milky white)		
Power supply voltage	Standard: 110 V, DC (Others: 24 V, 220 V)		
Power supply current	75 mA (for single phase), 100 mA (for two-phase)		
Withstand voltage, insulation resistance (*2)	2 kV, AC-1 min; 10 MΩ or more/500 V, DC		
Impulse withstand voltage	±7 kV, 1.2 x 50 μS (between terminals in a lump ~ terminal E & case)		

*1. DM1A & DM2A in the table are of standard sensitivity. In addition to these, there is the low-sensitivity type SM (L).
*2. Between terminals in a group and case. However, terminal E could be included in the terminal group or excluded during the test.

How to decide the specification

Installation site of detector	Outdoors		Indoor		Inside the cubicle	
	Nominal line voltage	Control equipment	Detector	Control equipment	Detector	Control equipment
3.3kV	—	—	H	CT	H	CT
6.6kV	H	—	H, ST	CT	H, ST	CT
11kV			H	—	—	—
22kV	H, ST	—	H, ST	DD	H	DD
33kV			ST		—	
40~160kV	ST	—	—	—	—	—
161kV~550kV	Low sensitivity (L)	—	Low sensitivity (L)	—	—	—

* As for H, use high sensitivity (H) of the type SM.

* As for ST, use standard sensitivity of type SM or type DM.

VOLTECT SPECIFICATION TABLE

VOLTECT SPECIFICATION TABLE

Note: When your receipt of client order or when your offering quotation to the client, please write its q'ty and check in for your confirmation.

Date:

Order: <input type="checkbox"/>	Quotation: <input type="checkbox"/>	Delivery date:
Customer' name and address:		Delivery place:
Tel/Fax:	Tel/Fax:	
The person in charge(Name & Sec.)		Installation place name & address:
Tel/Fax:		

Normal line voltage _____ kV	Detector insallation place:	Outdoor <input type="checkbox"/>	Indoor <input type="checkbox"/>
		In board <input type="checkbox"/>	
		Internal GIS sensor equipped <input type="checkbox"/>	

※Check instruction manual P.12 (Notice for Interval Distance Table), and please select the sensitivity of the controller.

In case changing a installed Voltect, please write its controller' manufacturing number and so on for avoiding its mis-specification and for its confirmation;	
Installed controller type: HG7- M A	Manufacturing No.
Q'ty set	Made by: date and year

Controller:	Type	Controller Sensitivity	Q'ty	Operation power	Color	Special specification
Single	HG7-SM1A	Standard	set	(Standard) 110V.DC <input type="checkbox"/> (75~143V)	(Standard) 5Y7/1(Glossy) <input type="checkbox"/> (Non standard)	English name plate <input type="checkbox"/> Convertor in side <input type="checkbox"/>
	HG7-SM1AH	High	set	(Non standard) 24V.DC <input type="checkbox"/> (21~32V)	7.5BG6/1.5(Glossy) <input type="checkbox"/>	Others: <input type="checkbox"/>
	HG7-SM1AL	Low	set	Below, built-in converter	N7(Glossy) <input type="checkbox"/>	
	HG7-DM1A	Standard	set	110V.DC <input type="checkbox"/> (90~170V)	Others <input type="checkbox"/>	
Two phase	HG7-SM2A	Standard	set	220V.DC <input type="checkbox"/> (110~250V)		
	HG7-SM2AH	High	set	110V.AC <input type="checkbox"/> (85V~132V)		
	HG7-SM2AL	Low	set			
	HG7-DM2A	Standard	set			

Protector:	Type	Q'ty	Color	Special specification
Single	HG7-P1B	set	(Standard)5Y7/1(Glossy) <input type="checkbox"/> (Non standard) N7(Glossy) <input type="checkbox"/>	English name plate <input type="checkbox"/> Others: <input type="checkbox"/>
Two phase	HG7-P2B	set	7.5BG6/1.5 (Semi Glossy) <input type="checkbox"/> Others: <input type="checkbox"/>	

Detector:	Type	Q'ty	Lengths of shield cable	Color(Only for DD Type)
HG7-DD-	m	set	Write in Type'lined m. (Standard) 10m	(Standard)N7(Glossy) <input type="checkbox"/> (Non standard) 5Y7/1 (Glossy) <input type="checkbox"/>
	m	set	Example :HG7-DD-10m	Others <input type="checkbox"/>

Wide range AC Voltmeter	Type	Scale	Q'ty	Cover color
	DVF-11M	It's different depending on the line voltage, so please refer to a wide angle meter specification (VHG07-S-001).	set	(Standard) N1.5 <input type="checkbox"/> (Non standard)7.5BG4/1.5 <input type="checkbox"/>

Shield Cable	Type	Conductor's section area	Conductor'inner core	Length	Piece
	CVV-SB	3.5mm2	1c	m	pc.

Grounding Hook

- Grounding Hook P.51
- Disconnecter Hook Stick P.58
- Discharge Stick P.59

Type H

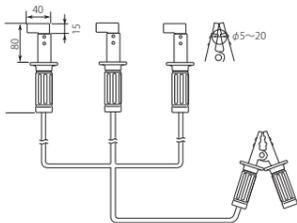
Universal Type for Cubicle

With Bag for housing

■ Features

- The clip is L-shaped
- It's easily install and hard to detach.
- Soft and clear coated grounding wire.

■ Dimensions



Standard model for Cubicle and high voltage receiving equipment.



■ Accessory



Bag for housing

■ Specifications

Type	Tip metal fitting	Grounding wire	Grounding metal fitting	Hammer-in type grounding bar	Bag for housing	Weight
H	Clip	22mm ² ×1.2m×3 wires 8mm ² ×5 m×1 wire	Clip	None	Portable type 300×360×110	About 3.5kg

Type HA-W

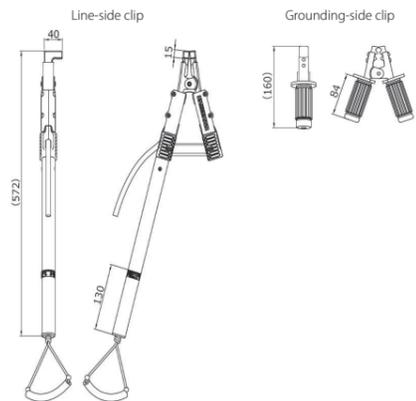
Universal Type for Cubicle

With Bag for housing

Check the QR code for details.



■ Dimensions



Improved model from type H.



When you pull the rope, clip is opened.



When you push the rope, clip is closed.

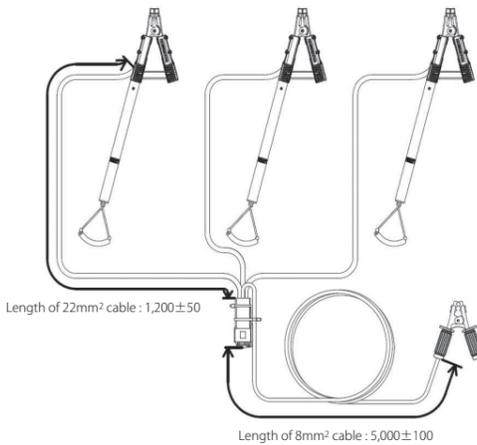
■ Accessory



Bag for housing

■ Specifications

Type	Tip metal fitting	Overall length	Grounding wire	Grounding metal fitting	Hammer-in type grounding bar	Bag for housing	Weight
HA	Clip	572mm	22mm ² ×1.2m×3 wires 8mm ² ×5 m×1 wire	Clip	None	Portable type 400×600×100	About 4.5kg

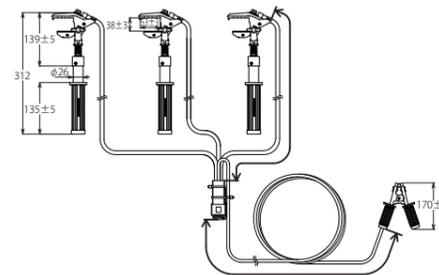


Type HC

Universal Type for Cubicle

For 6.6 kV (narrow space type) with bag for housing

■ Dimensions



■ Accessory



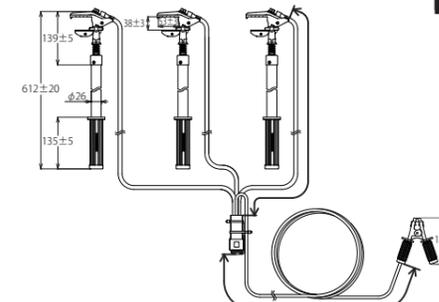
Bag for housing

Type HF

Universal Type for Cubicle

For 6.6 to 22 kV with bag for housing

■ Dimensions



■ Accessory



Bag for housing

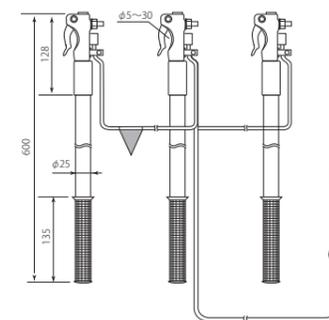
Hammer-in type grounding bar

Type S

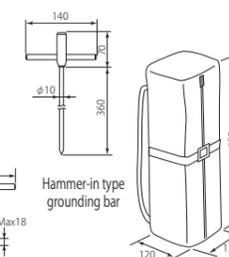
For Round Bus Bar

For 6.6 to 22 kV with carrying case

■ Dimensions



■ Accessory



Bag for housing

■ Specifications

Type	Tip metal fitting	Length of insulating stick	Grounding wire	Grounding metal fitting	Hammer-in type grounding bar	Bag for housing	Weight
HC	Wide angle adjustable type	Epoxy pipe (φ 26×38mm) with rubber grip	14mm ² ×1m×3 wires 8mm ² ×7m×1 wire	Clip	None	Portable type 300×360×110	About 3.4kg
HF	Wide angle adjustable type	Epoxy pipe (φ 26×338mm) with rubber grip	22mm ² ×1.5m×3 wires 8mm ² ×15m×1 wire	Clip	φ 10 steel bar	Portable type 400×600×100	About 5.6kg
S	MA122-A	Neo pipe (φ 25×337mm) with rubber grip	22mm ² ×1.5m×2 wires (with red triangular flag) 8mm ² ×15m×1 wire	SA107-B	φ 10 steel bar	Portable type 650×120	5.0kg

Type S is made by Sunasaki Seisakusho.

Grounding Hook

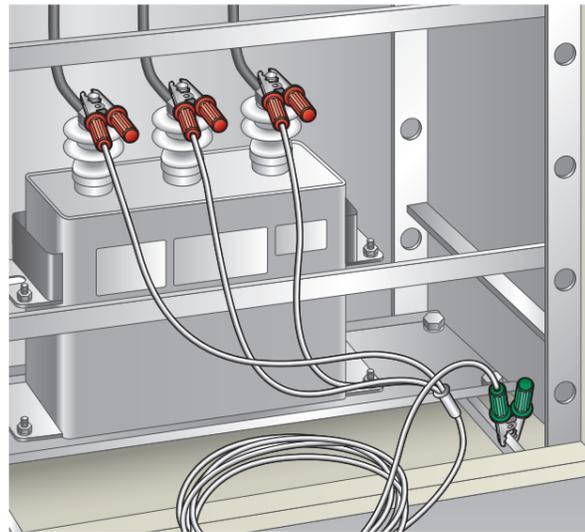
A wide variety of lineup according to the application

When ordering, please determine the followings.

1. Type of tip metal fitting
2. Type of insulating stick (supplementary connecting type, telescopic type)
3. Length and diameter of insulating stick
4. Cross-sectional area and length of earth wire
5. Type of grounding metal fitting
6. Working voltage

Attention

- Three-phase/one set (three-unit set) is the standard (except for railways).
- The bag for housing is sold separately (except for partial products).
- The products are manufactured to order, so there may be cases when they are non-returnable.



How to connect operating rod (As a standard, a rod of 3 m or less consists of a single rod.)

Figures inside () indicate outside diameter of the rod.

Length of operating rod	Earth wire of 38 mm ² or less is used.		
	In the case of using a strong type tip metal fitting		In the case of using earth wire of 60 mm ² or more
3.5m (connection of 2 rods)	1.5m (31φ) + 2.0m (34φ)	1.5m (31φ) + 2.0m (34φ)	1.5m (31φ) + 2.0m (34φ)
4.0m (connection of 2 rods)	2.0m (31φ) + 2.0m (34φ)	2.0m (31φ) + 2.0m (34φ)	2.0m (31φ) + 2.0m (34φ)
4.5m (connection of 2 rods)	2.5m (31φ) + 2.0m (34φ)	2.5m (31φ) + 2.0m (34φ)	2.5m (34φ) + 2.0m (39φ)
5.0m (connection of 2 rods)	2.5m (31φ) + 2.5m (34φ)	2.5m (31φ) + 2.5m (34φ)	2.5m (34φ) + 2.5m (39φ)
6.0m (connection of 2 rods)	3.0m (34φ) + 3.0m (39φ)	3.0m (34φ) + 3.0m (39φ)	3.0m (34φ) + 3.0m (39φ)
6.0m (connection of 3 rods)	2m (34φ) + 2m (39φ) + 2m (39φ)	2m (34φ) + 2m (39φ) + 2m (39φ)	2m (34φ) + 2m (39φ) + 2m (39φ)
Kind of joint	□ uses an insulating joint, and others use a metallic joint.		

Type of grounding wire (transparent vinyl covered electric wire)

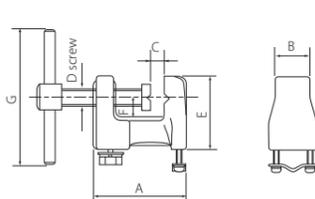
Cross-sectional area	8mm ²	14mm ²	22mm ²	38mm ²	60mm ²	100mm ²
Wire configuration	7/22/0.26	7/38/0.26	7/7/40/0.12	19/38/0.26	19/60/0.26	37/51/0.26
Weight	105g/m	180g/m	265g/m	455g/m	680g/m	1120g/m
Finished outside diameter	6.6mm	8.4mm	10.1mm	12.9mm	15.2mm	19.0mm

Grounding metal fitting

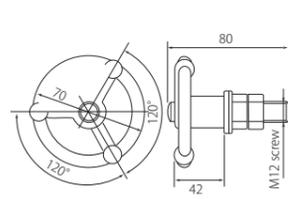
Grounding metal fitting (SA107-B,C,D)



* The photo shows SA107-C.



Valve type grounding handle (SA110)



Model	Mounting method	Applicable wire	A	B	C	D	E	F	G	Weight	
SA107-B	Screw tightening method	8mm ² ~ 14mm ²	51	18	18	10	39	13	65	280g	
SA107-C	Screw tightening method	22mm ² ~ 38mm ²	66	24	27	12	53	14	95	570g	
SA107-D	Screw tightening method	60mm ² ~ 100mm ²	90	30	38	12	75	23	95	1080g	
SA110	Stud bolt type	M12 stud	Valve type grounding handle								320g

Grounding Hook Component

Table 1

When ordering the earth hook, please determine the following.

1. Type of tip metal fitting
2. Type of insulating stick (supplementary connecting type, telescopic type)
3. Length and diameter of insulating stick
4. Cross-sectional area and length of earth wire
5. Type of grounding metal fitting
6. Working voltage

Attention

- Three-phase/one set is a standard. (Used with AC)
- The bag for housing is sold separately.
- The products are manufactured to order, so there may be cases when they are non-returnable. Please note this when placing an order.

Fixed type tip metal fitting (The operating rod and tip metal fitting are fixed.)

External appearance	Model name	Range of use (mm)	Dimensions	Weight	Remarks
	MA121-A Large size	φ8 to 40		710g	For round bus bar
	MA121-AS Special large size	φ30 to 80		800g	For round bus bar
	MA121-AG Strong large size	φ20 to 52, L=195 φ40 to 80, L=195 φ70 to 150, L=225 φ100 to 180, L=225		1200g 1920g	For round bus bar (Earth wire: 60 mm ² or more)
	MA121-C Slanted large size	φ8 to 40		930g	For round bus bar
	MA111-A Universal type	φ8 to 40 Thickness of bus bar within 12 Width within 75		930g	For dual use of round and flat bus bars
	MA111-AG Strong universal type	φ20 to 52 Thickness of bus bar within 20 Width within 100		1600g	For dual use of round and flat bus bars (Earth wire: 60 mm ² or more)
	MA111-C Slanted universal type	φ8 to 40 Thickness of bus bar within 12 Width within 75		1060g	For dual use of round and flat bus bars
	MA122-A Medium size	φ5 to 25		370g	For round bus bar
	MA114-A Horizontal & slanted copper band type	Thickness within 25 Width within 100		1000g	For flat bus bar
	MA114-AG Strong horizontal & slanted copper band type	Thickness within 30 Width within 100		2250g	For flat bus bar (Earth wire: 60 mm ² or more)
	MA115-A Cubicle type	φ5 to 25 Thickness of bus bar within 30 Width no limit		500g	For dual use of round and flat bus bars
	MA115-AG Strong cubicle type	φ8 to 25 Thickness of bus bar within 35 Width no limit		1050g	For dual use of round and flat bus bars (Earth wire: 60 mm ² or more)
	MA115-AN Cubicle type for narrow spaces	φ5 to 25 Thickness of bus bar within 30 Width within 50		480g	For dual use of round and flat bus bars
	MA115-AH Cubicle type with claw	φ5 to 25 Thickness of bus bar within 30 Width within 50		530g	For dual use of round and flat bus bars

Grounding Hook Component

Table 2

● When ordering the earth hook, please determine the following.

1. Type of tip metal fitting
2. Type of insulating stick (supplementary connecting type, telescopic type)
3. Length and diameter of insulating stick
4. Cross-sectional area and length of earth wire
5. Type of grounding metal fitting
6. Working voltage

Attention

- Three-phase/one set is a standard. (Used with AC)
- The bag for housing is sold separately.
- The products are manufactured to order, so there may be cases when they are non-returnable. Please note this when placing an order.

■ Detachable type tip metal fitting (The operating rod and tip metal fitting are detachable.)

External appearance	Model name	Range of use (mm)	Dimensions	Weight	Remarks
	MA121-B Large size	φ8 to 40		760g	For round bus bar Closed stocks (set items) of the type ZB, type YB have a groove width of 5.5 mm.
	MA121-BS Special large size	φ30 to 80		860g	For round bus bar
	MA121-BG Strong large size	φ20 to 52, L=200 φ40 to 80, L=200 φ70 to 150, L=200 φ100 to 180, L=230		1250g 1950g	For round bus bar (Earth wire: 60 mm ² or more)
	MA121-D Large slanted type	φ8 to 40		930g	For round bus bar
	MA111-B Universal type	φ8 to 40 Thickness of bus bar within 12 Width within 75		980g	For dual use of round and flat bus bars
	MA111-BG Strong universal type	φ20 to 52 Thickness of bus bar within 20 Width within 100		1680g	For dual use of round and flat bus bars (Earth wire: 60 mm ² or more)
	MA111-D Universal slanted type	φ8 to 40 Thickness of bus bar within 12 Width within 75		930g	For dual use of round and flat bus bars
	MA122-B Medium size	φ5 to 25		420g	For round bus bar
	MA114-B Horizontal & slanted copper band type	Thickness within 25 Width within 100		1010g	For flat bus bar
	MA115-B Cubicle type	φ5 to 25 Thickness of bus bar within 30 Width no limit		520g	For dual use of round and flat bus bars
	MA105 Tip metal fitting for operating rod			170g	To be used for all detachable models of the types MA115-B, ZB, and YB, except for closed stocks
	MA105-S Tip metal fitting for operating rod			70g	To be used for closed stocks of the types MA115-B, ZB, and YB

Fixed Type

● When ordering the earth hook, please determine the following.

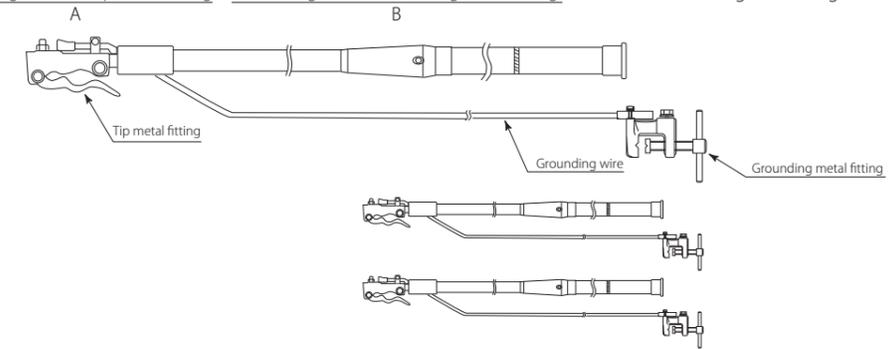
1. Type of tip metal fitting
2. Type of insulating stick (supplementary connecting type, telescopic type)
3. Length and diameter of insulating stick
4. Cross-sectional area and length of earth wire
5. Type of grounding metal fitting
6. Working voltage

Attention

- Three-phase/one set is a standard. (Used with AC)
- The bag for housing is sold separately.
- The products are manufactured to order, so there may be cases when they are non-returnable. Please note this when placing an order.

(Closed stock) = (Operating rod with tip metal fitting + Grounding wire + Grounding metal fitting) × 3

(The bag for housing is sold separately.)



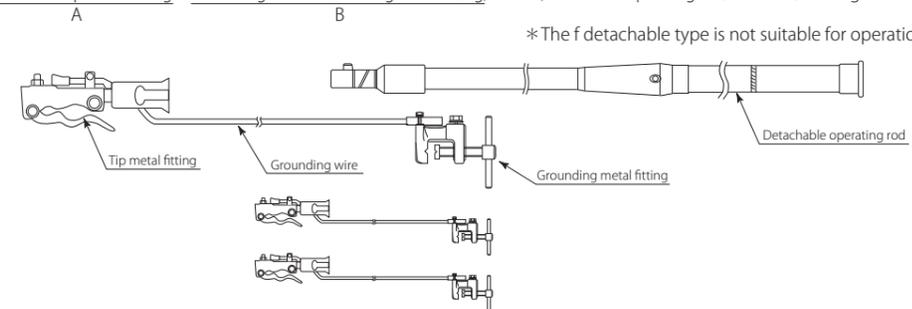
A Model of tip metal fitting	B Class	Breakdown of class			Grounding wire	Grounding metal fitting	Applicable voltage
		Length, kind of operating rod					
Large fixed type MA121-A (MA121-C)	Type 5	Neo pipe	0.5m	Single rod	22mm ² ×3m	SA107C	6.6kV
	Type 10	"	1.0m	"	"	"	"
	Type 15	"	1.5m	"	22mm ² ×4m	"	22kV
	Type 20	"	2.0m	"	"	"	"
	Type 25	"	2.5m	"	22mm ² ×5m	"	77kV
	Type 30	"	3.0m	"	"	"	"
	Type 35	"	3.5m (1.5+2)	Connecting type	22mm ² ×6m	"	"
	Type 40	"	4.0m (2+2)	"	"	"	154kV
	Type 45	"	4.5m (2.5+2)	"	22mm ² ×7m	"	"
	Type 50	"	5.0m (2.5+2.5)	"	"	"	"
Universal fixed type MA111-A (MA111-C)	Type 60	"	6.0m (3+3)	"	"	"	275kV
	Type 60	"	6.0m (2×3)	"	"	"	"
Medium-sized fixed type MA122-A Fixed type for cubicle MA115-A	Type 5	"	0.5m	Single rod	14mm ² ×3m	SA107B	6.6kV
	Type 10	"	1.0m	"	"	"	"
	Type 15	"	1.5m	"	14mm ² ×4m	"	22kV
	Type 20	"	2.0m	"	"	"	"

(Regarding the Type 60 described above, please determine either connection with two rods or three rods.)

Detachable Type

(Closed stock) = (Detachable tip metal fitting + Grounding wire + Grounding metal fitting) × 3 + (Detachable operating rod) × 1 (The bag for housing is sold separately.)

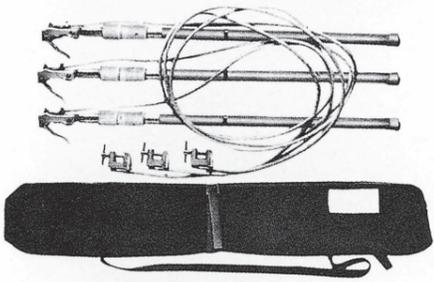
* The f detachable type is not suitable for operation at 4 m or more.



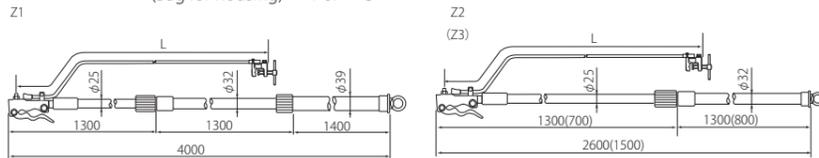
A Model of tip metal fitting	B Class	Breakdown of class			Grounding wire	Grounding metal fitting	Applicable voltage	
		Length, kind of operating rod						
Large detachable type MA121-B (MA121-D)	Type 5	Neo pipe	0.5m	Single rod	22mm ² ×3m	SA107C	6.6kV	
	Type 10	"	1.0m	"	"	"	"	
	Type 15	"	1.5m	"	22mm ² ×4m	"	22kV	
	Type 20	"	2.0m	"	"	"	"	
	Type 25	"	2.5m	"	22mm ² ×5m	"	77kV	
	Type 30	"	3.0m	"	"	"	"	
	Type 35	"	3.5m (1.5+2)	Connecting type	22mm ² ×6m	"	"	
	Type 40	"	4.0m (2+2)	"	"	"	154kV	
	Universal detachable type MA111-B (MA111-D)	Type 60	"	6.0m (3+3)	"	"	"	"
		Type 60	"	6.0m (2×3)	"	"	"	"

Operating Rod of Compressed Tightening-Type Telescopic Model for Power Transmission Line

Type Z



(Closed stock) = (Operating rod with tip metal fitting + Grounding wire + Grounding metal fitting) × 3 + (Bag for housing) × 1 or × 3



Grounding metal fitting SA107-C Insulating stick: Epoxy pipe

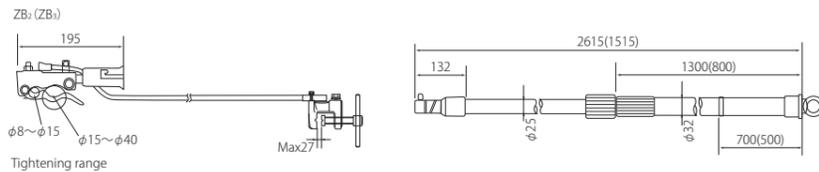
Type	Applicable voltage	Tip metal fitting	Grounding wire	Length at extended state	At storage	No. of connections	Bag for housing	Weight of contents & bag
Z1	275kV	MA121-A	22mm ² × 5m	4.0m	1.8m	3	Capacity of 1 phase portion	15.5kg
Z2	154kV	"	22mm ² × 4m	2.6m	1.5m	2	Capacity of 3-phase portion	11.0kg
Z3	77kV	"	22mm ² × 3m	1.5m	1.1m	2	"	8.8kg

Operating Rod of Compressed Tightening-Type Telescopic Model for Power Transmission Line

Type ZB



(Closed stock) = (Detachable tip metal fitting + Grounding wire + Grounding metal fitting) × 3 + (Operating rod) × 1 + (Bag for housing) × 1

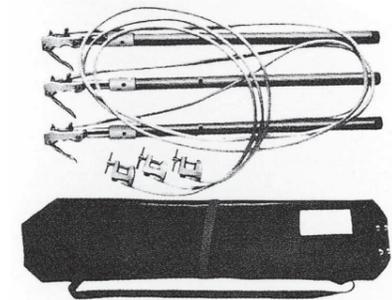


Grounding metal fitting SA107-C Insulating stick: Epoxy pipe

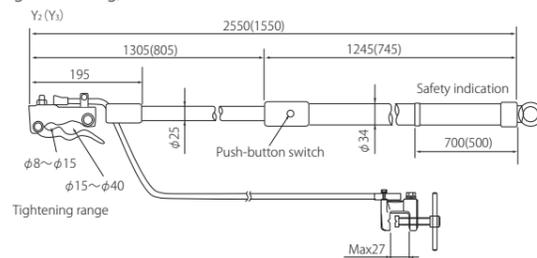
Type	Applicable voltage	Tip metal fitting	Grounding wire	Length at extended state	At storage	No. of connections	Bag for housing	Weight of contents & bag
ZB2	154kV	MA121-B (Groove: 5.5 mm)	22mm ² × 4m	2.6m	1.4m	2	Capacity of 3-phase portion for 1800 × 1200	9.3kg
ZB3	77kV	"	22mm ² × 3m	1.5m	0.9m	2	Capacity of 3-phase portion for 1200 × 1200	7.8kg

Operating Rod of Button Type Telescopic Model

Type Y



(Closed stock) = (Operating rod with tip metal fitting + Grounding wire + Grounding metal fitting) × 3 + (Bag for housing) × 1

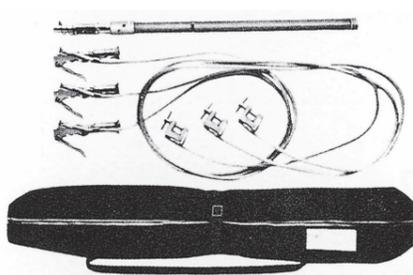


Grounding metal fitting SA107-C Insulating stick: Neo pipe

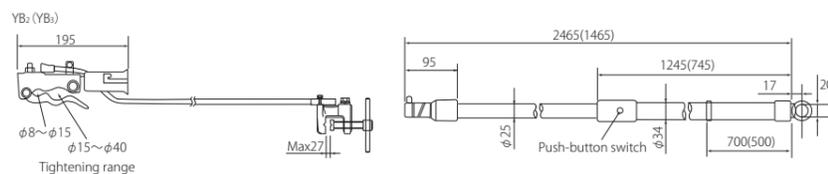
Type	Applicable voltage	Tip metal fitting	Grounding wire	Length at extended state	At storage	No. of connections	Bag for housing	Weight of contents & bag
Y2	154kV	MA121-A	22mm ² × 4m	2.5m	1.4m	2	Capacity of 3-phase portion	11.5kg
Y3	77kV	"	22mm ² × 3m	1.5m	0.9m	2	"	9.0kg

Operating Rod of Button Type Telescopic Model

Type YB



(Closed stock) = (Detachable tip metal fitting + Grounding wire + Grounding metal fitting) × 3 + (Operating rod) × 1 + (Bag for housing) × 1



Grounding metal fitting SA107-C Insulating stick: Neo pipe

Type	Applicable voltage	Tip metal fitting	Grounding wire	Length at extended state	At storage	No. of connections	Bag for housing	Weight of contents & bag
YB2	154kV	MA121-B	22mm ² × 4m	2.4m	1.4m	2	Capacity of 3-phase portion	9.6kg
YB3	77kV	"	22mm ² × 3m	1.4m	0.9m	2	"	8.1kg

HSH-K6

Disconnecter Hook Stick with Voltage Detector

AC 6.6kV

Enhance Work Safety and Efficiency



Features

- Work safety and efficiency are improved by combining the voltage-detecting function to the medium voltage cutout operating rod.

Specifications

Model	HSH-K6	
Working voltage range	AC 6.6kV	
Operation starting voltage (Voltage to ground)	1300V ± 20% (continuous indications of sound & light) (with insulated wire)	
Dielectric strength	Ditto: AC 50kV - 1 min	
Leakage current	1 mA or less at dielectric strength test	
Indication of operation	Light	Light emission: It shall be able to confirm luminance of 8,000 lux.
	Sound	Sound: 50 dB or more at a distance of 2 m

Operating temperature range	-10°C ~ +40°C
Structure	Waterproof (Water shall not ingress.)
Tensile performance	200kgf, 1 min
Battery	6R61 or 6F22(9V) × 1 pcs
Dimensions	About 470mm
Weight	About 390g

*Without the casing

SA109 □ - □

Hook Stick for D/S (Disconnecting Switch)

AC 10kV~110kV

Features

- There are lineups with or without the water drip shed (for outdoor use) as well as chain.

Specifications

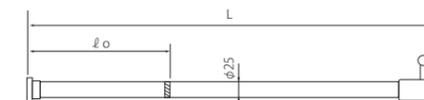
Model (SA109)	Indoor								Outdoors															
	A-1	A-1.5	A-2	A-3	A2-4	A2-5	A2-6	A3-6	C-1	C-1.5	C-2	C-3	C2-4	C2-5	C2-6	C3-6								
Applicable voltage	AC 10kV				AC 20kV				AC 30kV				AC 40kV				AC 70kV				AC 110kV			
Length of hook rod (L)	1.0m		1.5m		2.0m		3.0m		4.0m (connection of 2 rods)		5.0m (connection of 2 rods)		6.0m (connection of 2 rods)		6.0m (connection of 3 rods)		6.0m (connection of 3 rods)							
Rod dia. & connecting method	φ 31		1.0m		1.5m		2.0m		3.0m		2.0m		2.5m		—		—							
	φ 34		—		—		—		—		2.0m		2.5m		3.0m		2.0m							
	φ 39		—		—		—		—		—		—		3.0m		2.0m+2.0m							
Length of grip (ℓ o)	0.3m		0.5m		0.5m		0.7m		0.7m		1.0m		1.0m		1.0m		1.0m							
Tip metal fitting for Disconnecter hook rod	SA108-B								SA108-C				SA108-E											

Type	Indoor	Chain	Water drip shed
Type A	Indoor	None	None
Type B	"	Exist	None
Type C	Outdoors	Exist	Exist

D □

Hook Stick for D/S in Cubicle

AC 6.6kV~30kV



Specifications

Class	D1	D2	D3	D4
Length (L)	0.5m	1.0m	1.5m	2.0m
Length of grip (ℓ o)	0.3m	0.3m	0.5m	0.5m
Applicable voltage	6.6kV	10kV	20kV	30kV

HRD-27S Residual Electric Charge Discharging Stick

- Voltage detection functions
- Built-in resistance

DC 27kV (Maximum discharge voltage)



■ Features

- Allows for residual electric charge to be discharged safely and easily
- When discharging, allows for visual and auditory confirmation of discharge status through an audio and light emitting display at the center of the detector
- The metal fitting can be switched according to application (2 types)

This device is not a voltage detector. Use a voltage detector on the circuit to confirm that the power is not running before using this device.

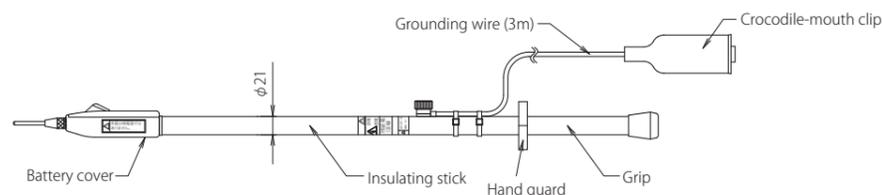
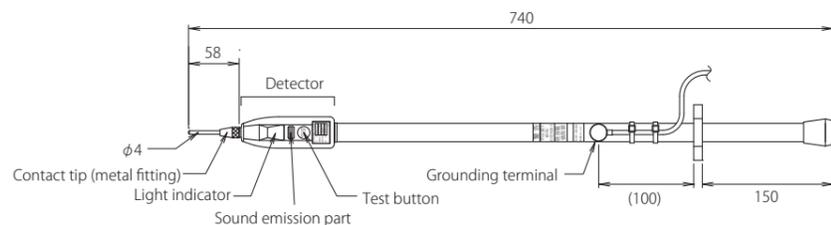
■ Detector



■ Accessory



■ Dimensions



■ Specifications

Discharge voltage	DC27kV (Max)
Discharge capacity	1 μF (Max)
Discharge time	5 seconds or less (DC27 kV, 50 V or less at 1 μF)
Discharge resistance	600kΩ
Operation stop voltage	DC40V ±20%
Indication (Light/sound)	Light: It shall be able to confirm in the luminance of 8,000 lux Sound: 50 dB or more at a distance of 2 m
Battery	LR44 alkaline button cell (1.5 V) x2 pcs.
Battery life	Approx. 4 hours of continuous operation
Operating temperature range	-10°C ~ +40°C
Weight	About 800 g
Accessories	Bag for housing, contact tip (hook metal fitting), each 1 pc.

Uses sound and light to visualize the complete discharge of accumulated charge



HRD-27 Residual Electric Charge Discharging Stick

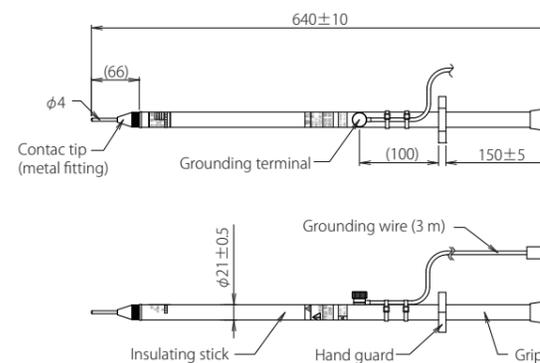
- Built-in resistance

DC 27kV (Maximum discharge voltage)

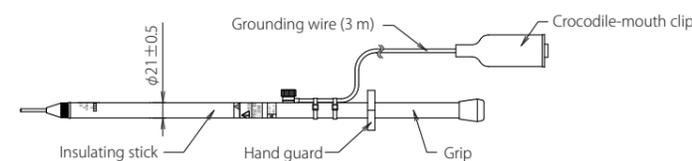
■ Features

- Allows for residual electric charge to be discharged safely and easily
- The metal fitting can be switched according to application (2 types)

■ Dimensions



■ Accessory



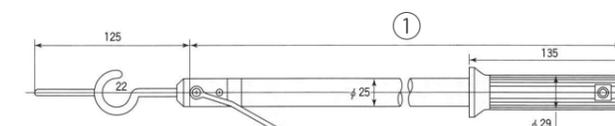
■ Specifications

Discharge voltage	DC27kV (Max)
Discharge capacity	1 μF (Max)
Discharge time	5 seconds or less (DC27 kV, 50 V or less at 1 μF)
Discharge resistance	600kΩ
Operating temperature range	-10°C ~ +40°C
Weight	About 660 g
Accessory	Bag for housing, contact tip (hook metal fitting), each 1 pc.

Order-made Residual Electric Charge Discharging Stick

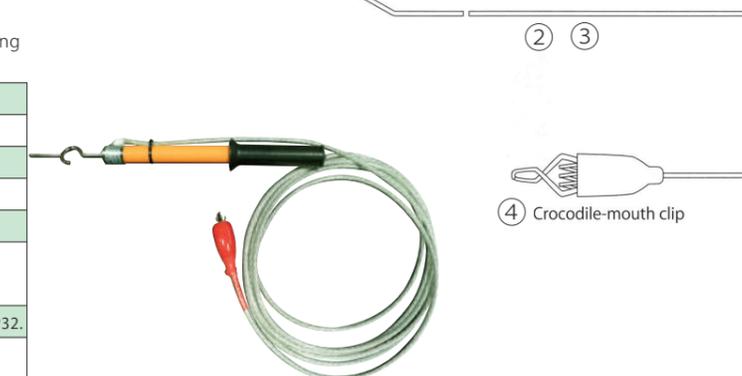
- No built-in resistance
- *Select from the following specifications

Simple Discharge stick with no built-in Internal Resistance



- This product is custom built according to the following selected specifications ((1) to (4))

(1) Length of insulation stick	<input type="checkbox"/> 0.5m <input type="checkbox"/> 1.0m <input type="checkbox"/> 1.5m <input type="checkbox"/> 2.0m
(2) Cross-sectional area of grounding wire	<input type="checkbox"/> 8mm ² <input type="checkbox"/> 14mm ²
(3) Length of grounding wire	<input type="checkbox"/> 2m <input type="checkbox"/> 3m <input type="checkbox"/> 4m <input type="checkbox"/> 5m <input type="checkbox"/> 6m <input type="checkbox"/> 7m <input type="checkbox"/> 8m <input type="checkbox"/> 9m <input type="checkbox"/> 10m
(4) Grounding metal fitting type	*For the Dimensions, refer to P32. <input type="checkbox"/> Crocodile-mouth clip <input type="checkbox"/> Vise type (SA107-B)



Technical Data

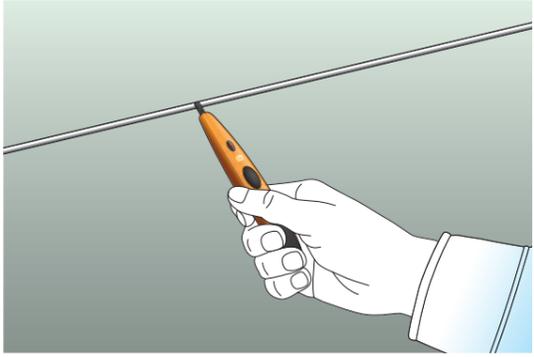
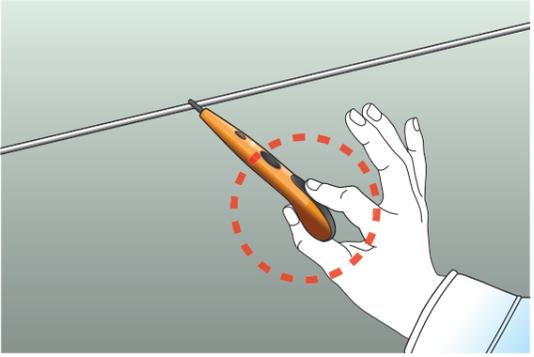
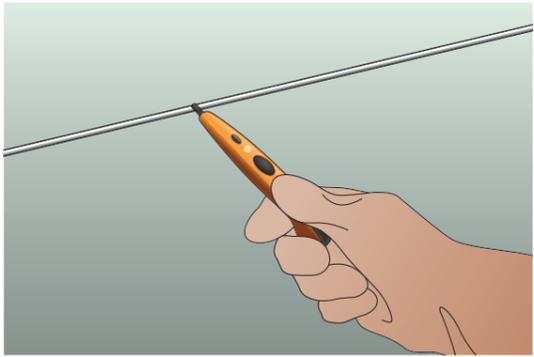
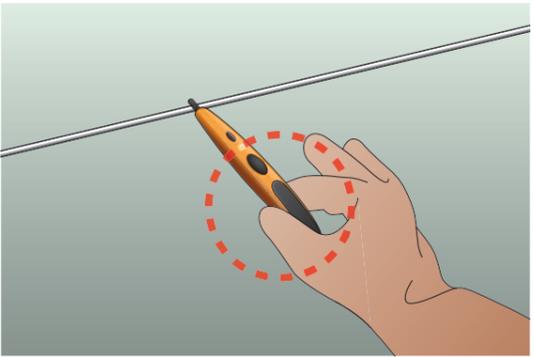


■ Information Materials P.63

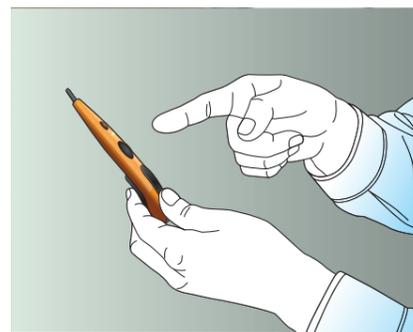
Low Voltage Use (For AC)

The contact area with the hand affects the sensitivity of the voltage detector. So, appropriate sensitivity cannot be obtained unless it is held firmly. Also, it is not possible to use rubber gloves for high voltages or gloves made from thick fabric.

■ Holding the voltage detector correctly

○ Good	✗ Bad
	
	
● Hold the grip firmly.	● It is not possible to detect the voltage correctly if the grip is held with the tips of the fingers.

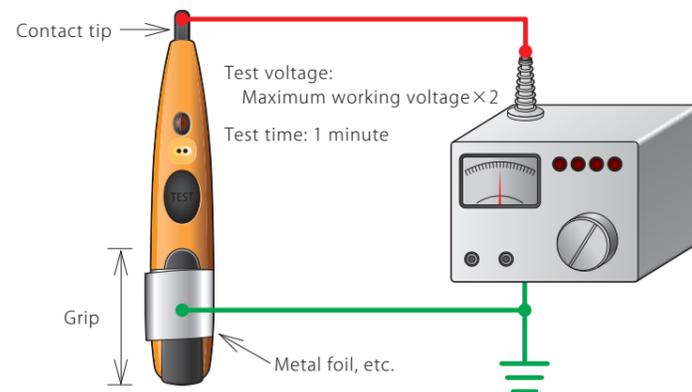
■ Visual inspection



Visual inspection items

- Press the test button for about five seconds and check that there is no change in the lamp or the sound.
- Check that there are no problems such as damage, dirt, scratches or cracks.

■ Withstand voltage testing

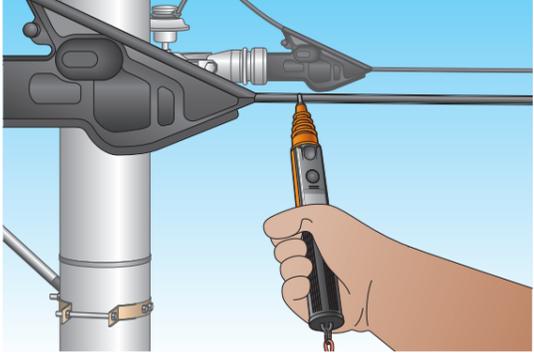
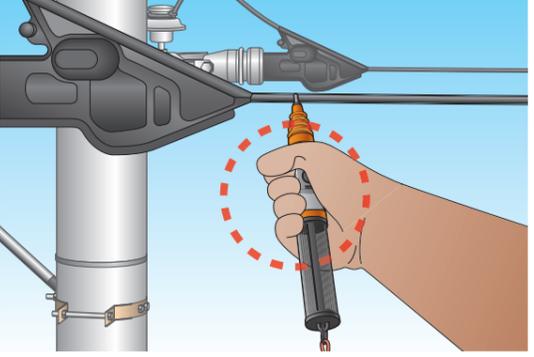
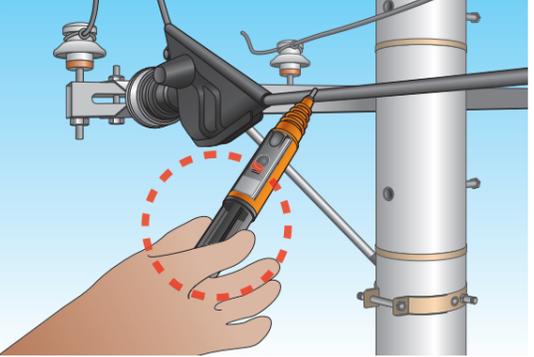


- Apply a voltage between the contact tip and the grip (at a position near the contact tip).

Medium and Low Voltage Use (For AC)

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

■ Holding the voltage detector correctly

○ Good	✗ Bad
	
	
● Hold the grip firmly.	● Never hold a part other than the grip when detecting voltages. This is extremely dangerous. ● It is not possible to detect the voltage correctly if the grip is held with the tips of the fingers.

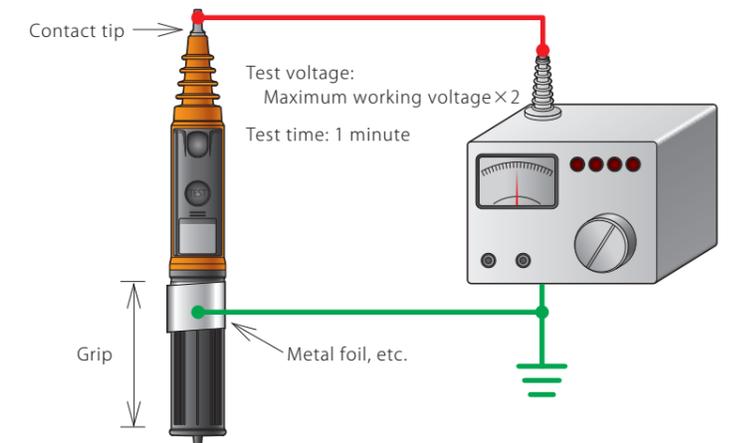
■ Visual inspection



Visual inspection items

- Press the test button for about five seconds and check that there is no change in the lamp or the sound.
- Check that there are no problems such as damage, dirt, scratches or cracks.

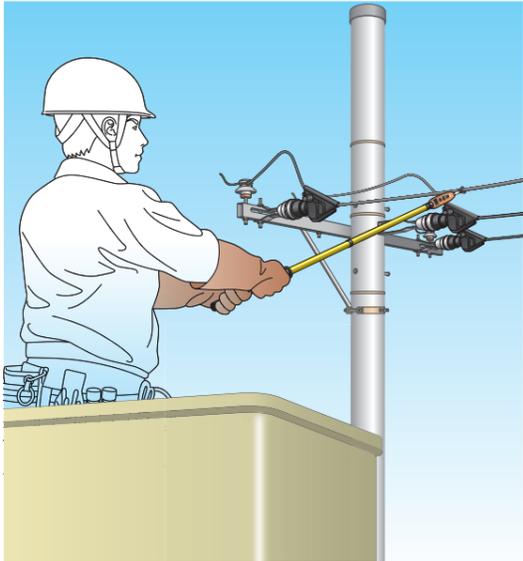
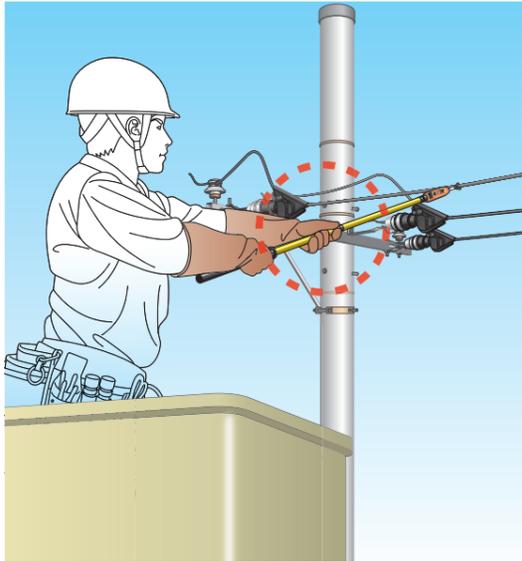
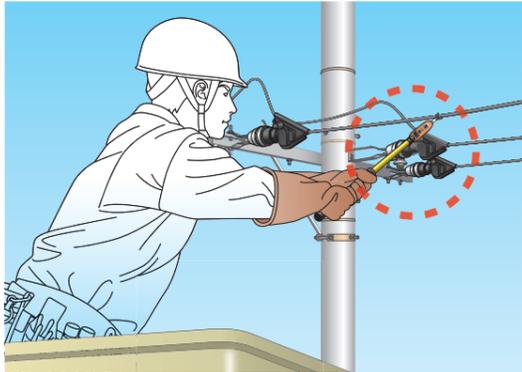
■ Withstand voltage testing



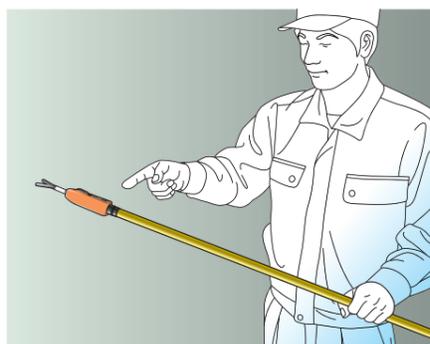
- Apply a voltage between the contact tip and the grip (at a position near the contact tip).

Medium Voltage & High Voltage Detector Use

■ Holding the voltage detector correctly

○ Good	✗ Bad
	
<p>■ During storage</p> 	
<p>■ During use</p>  <p>Extend as far as possible</p>	
<ul style="list-style-type: none"> ● Hold the grip firmly. ● Telescopic type voltage detectors should be extended as far as possible for use. 	<ul style="list-style-type: none"> ● Never hold a part other than the grip when detecting voltages. ● Do not use a telescopic type voltage detector to detect voltages in its shortened state.

■ Visual inspection



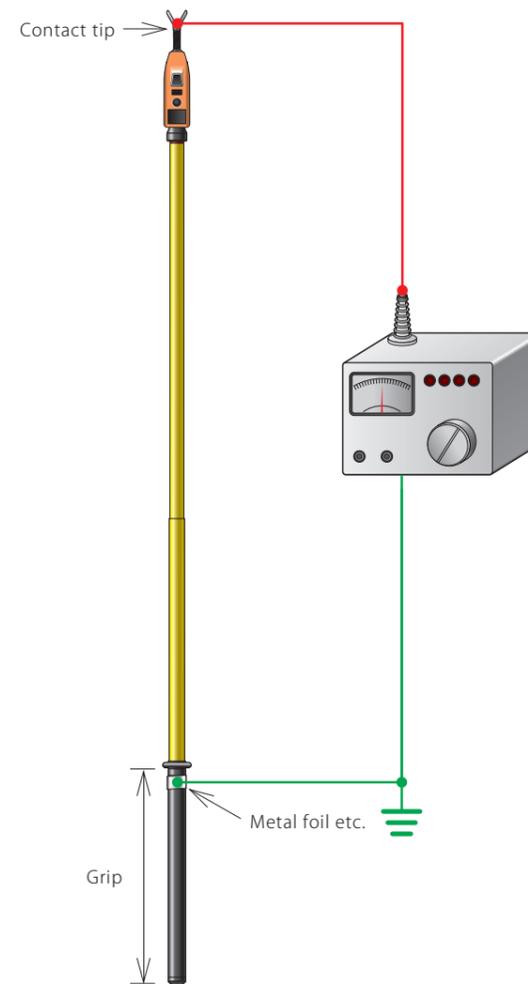
Visual inspection items

- Press the test button for about five seconds and check that there is no change in the lamp or the sound.
- Check that there are no problems such as damage, dirt, scratches or cracks.

■ Withstand voltage testing

- When test voltage is applied in batches
Test voltage is applied between the detector and the grip

Example:HST-30



Test voltage: Maximum working voltage × 2
Test time: 1 minute

Working voltage range: 3kV ~ 34.5kV
34.5kV (Maximum working voltage) × 2 = 69kV (Test voltage)

*We apply a test voltage of 70 kV

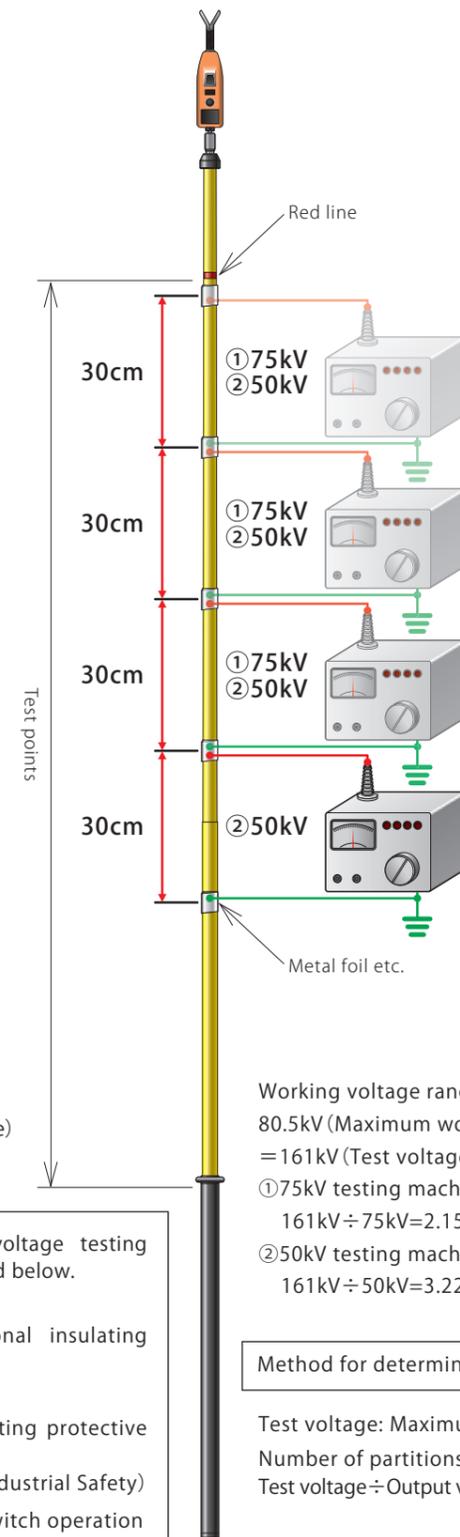
Hasegawa Electric has defined the withstand voltage testing methods by quoting the regulations and others listed below.

- March 28, 1961 LSB Notification No. 247 "Regulations on the performance of personal insulating protective equipment" (Ministry of Health, Labour and Welfare)
- 4th Edition Test standards for personal insulating protective equipment, etc. (Issued by: The Expert Group of Expertise on Industrial Safety)
- JIS C 4510-1991 Hook bars for disconnecting switch operation

*Unauthorized copying and reproduction is prohibited

- When test voltage is applied in installments
The test area is divided into 30 cm lengths and test voltage is applied to each section

Example:HST-70



Working voltage range: 20kV ~ 80.5kV
80.5kV (Maximum working voltage) × 2 = 161kV (Test voltage)

- ① 75kV testing machine
 $161\text{kV} \div 75\text{kV} = 2.15 = \text{trisection (Round up)}$
- ② 50kV testing machine
 $161\text{kV} \div 50\text{kV} = 3.22 = \text{quartering (Round up)}$

Method for determining the number of sections

Test voltage: Maximum working voltage × 2
Number of partitions:
Test voltage ÷ Output voltage of the test instrument

*The "Split-application test" cannot be performed for voltage detectors (HST-20N, HSR-90N) with resistance in the insulating rod.

■ Warranty period

- Product warranty period is one year after purchase. If any failure, trouble, etc. is caused during normal use in the course of the warranty period, we will repair or replace it free of charge.

■ Scope of warrantee

- If disassembly, modification, etc. is performed by customers, the product becomes outside the scope of warranty.
- Consumable parts such as batteries attached to products, etc. are outside the scope of warranty. Furthermore, because attached batteries are provided for the purpose of confirming operation, early replacement is recommended.

■ Repair

- If the product malfunctions, please inquire at a sales office of our company or a sales agent. Requests for repair will be received through sales agents.
- When an estimate before repair is needed, please request it when asking for the repair. When declining repair after submission of the “estimate before repair,” the cost of diagnosis will be requested.
- Warranty period after repair is six months. Scope of warranty is limited to the corresponding portion(s) repaired, and even within that warranty period, any new problem arising is outside the scope of warranty.

[Period for repair]

Materials and components for repair are kept for a minimum of five years after stopping manufacture of a product. However, please note that there are cases in which repair can become impossible before that period has expired.

■ Recommended period for replacement

(voltage detector, phase tester, auxiliary device for voltage detection, etc.)

Products can be used for a long period if they are handled with sufficient care. However, it is inevitable that functional deterioration occurs to the strength of components, insulation performance, etc. due to aging, micro-cracks caused by shocks when handling resin parts, etc. For safety, please use the product until the recommended time for replacement under product control. The table to the right summarizes recommended replacement periods.

For a detailed table, please inquire at our company’s homepage (URL is given on the back cover of the catalog) or a sales office.

Product classification	Recommended period for replacement
Low voltage detector	3 to 5 years
High voltage detector	5 to 7 years
High voltage & special high voltage detector	
High voltage & special high voltage detector (Non-extendable type)	5 to 10 years

■ Periodic inspection, calibration test

- For high voltage and special high voltage detectors, we recommend periodic inspection at least once a year. For requests, please inquire at a sales office of our company, or a sales agent.
- After the calibration test, we will issue a test report, calibration certificate, and traceability certificate.
- If calibration documents are required when purchasing a new product, please request them when placing an order.

■ Consigned testing

Taking advantage of being a leading maker of domestic test equipment and many years of experience, we will execute withstand voltage tests for products even made by other companies.



Voltage detector test equipment



Simulated power pole for electricity distribution line

■ ISO management system Acquiring certification of ISO9001, ISO14001

Hasegawa Electric Co., Ltd. has acquired certification of “ISO9001,” which is the international standard of the Quality management system, and certification of “ISO14001,” which is the international standard of the Environment management system.

ISO9001 Registration No.: 0921

ISO14001 Registration No.: E635

