



Hoyt High Voltage Series

High Voltage Detectors

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High Voltage Series - Detectors

213 HVD - 226 HVD

Capacitive High Voltage Detectors (Contact)

IP65

CE



Features

- Excellent shock resistance.
- Rugged nylon moulding.
- Auto on (when voltage detected).
- Excellent drop resistance. Good vibration resistance.
- Loud sound alarm indication.
- Built-in proving and self-test circuit.
- High bright color-coded LEDs.
- Works from standard 9V battery. Easy access to batteries.
- Interchangeable contact electrode.
- Use in all weather conditions. Compatible with all link sticks.
- Lightweight, robust & compact.
- Models available from 11kV to 132kV.
- Suitable for indoor and outdoor use.
- Self(auto on) or manual arming.
- Customized threshold on demand.
- Auto off (if no voltage detected).
- Waterproof design, protection class : IP65.

This family of Capacitive High Voltage Detectors has been designed to meet the latest IEC standards. The HVDs are used to determine whether a system is live or not so that it may be safely earthed/ grounded. They are self starting and automatically activated when high voltage is applied to the contact electrode. They can also be manually armed before use by depressing the "TEST/ARMING" button. The HVDs also have a low battery detection function. These detectors are intended for use on sinusoidal signal (50 or 60Hz) high voltage systems.

Models are available to cover system voltages from 11kV to 132kV. Non-standard threshold voltages can be customized to suit application requirements. Utilized to determine if a system is live or not, so that it maybe safely earthed/grounded.

All models are designed for both indoor and outdoor use, in all weather condition.

Each HVD is housed in a rugged, reinforced nylon molded outer casing and is shock, drop and vibration resistant.

A visual indication shows when the HVD is armed. When armed, the green LED indicator flashes about twice per second. When high voltage is detected the red LED indicator flashes about twice per second, and the buzzer also sounds intermittently.

The HVD's outer casing is easy to clean and maintain. Each HVD is supplied with a cleaning kit and a carry case. A range of accessories is available..

Models and Comparison Table

Please note the internal proofing circuit does not test the contact electrode and the protection devices.

PART#	213HVD	214HVD	215HVD	216HVD	217HVD	218HVD	219HVD	220HVD	221HVD	222HVD	223HVD	224HVD	225HVD	226HVD
System Voltage	11kV	33kV	66kV	132kV	11/ 33kV	44/ 132kV	66/ 132kV	6.6/ 132kV	11/ 132kV	11/ 44kV	33/ 132kV	44kV	kV User defined	12/ 36kV
Threshold Set within Range	1.65kV to 4.4kV	4.95kV to 13.2kV	11kV to 13kV	11kV to 13kV	3.3kV to 4.95kV	11kV to 13kV	11kV to 13kV	2kV to 3kV	4.4kV to 6.6kV	4.4kV to 5kV	11kV to 13kV	6.6kV to 17.6kV	Xx kV to Xx kV	5.0kV to 6.0kV
Threshold	3.02kV	9.07kV	12kV	12kV	4.12kV	12kV	12kV	2.5kV	5kV	4.75kV	12kV	12kV	User's Spec.	5.4kV

Specifications

Response Time:	<1 Sec.
Auto-OFF	3Min.
Bridging Protection	YES
Spark Protection	YES
Battery Low	<7V
Battery Current	<30mA
Green = Armed	YES
Red = V Detected	YES
Test / Arming Button	YES

General

Dimensions	300(L) x 100(W) x 100(D)mm
Weight	Approx. 550g (battery included)
Standarts	EN 61243-1



High Voltage Series - Detectors

273 HP Non-Contact Voltage Detector

Features

- 2 ranges for selection : LOW 50V~1.5kV | HIGH 1.5kV~132kV
- There is no power consumption in off mode : 0uA
- Nice mechanical slide switch for function selection : HIGH / OFF / LOW
- The power consumption in low voltage detection mode : Less than 20mA
- The power consumption in high voltage detection mode: Less than 20mA
- Bright LED and audible alarm sound when voltage is present.
- Lightweight, robust and compact.
- Efficient and easy to use
- Users have to use the Hot Stick when test high voltages between 1.5kV~132kV.
- SEW provides nice optional accessories of Hot Sticks HS-175 and HS-120 for high voltage detection.

The 273 HP is a Non-contact voltage detector. It has two ranges for selection. The 273 HP consists of an internal pickup sensor, a function selection switch, a visual and a sound annunciator. With the 273 HP, physical contact with electrical conductors is not necessary when testing for live lines.

Its sensor senses the radiated field which surrounds live conductors. Radiated field strength increases with voltage and decreases quickly with distance or earth shielding. Some of the typical applications are:

- Non-contact detection of live voltages
- Find faults in cables
- Check and detect live high voltage cables
- Trace live wires
- Check high frequency radiation
- Check grounding equipment
- Detect residual or induced voltages

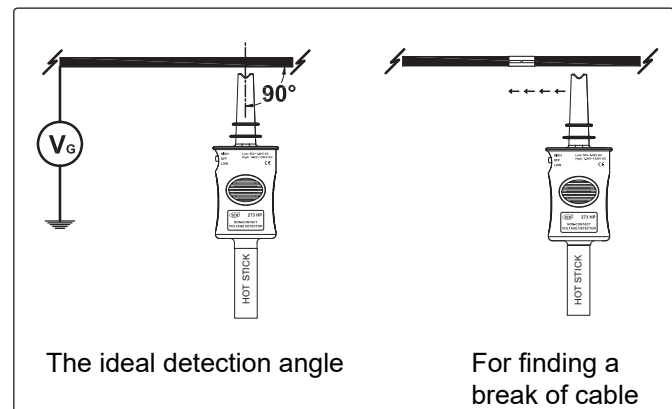
Specifications

General

Operating temperature	0°C~50°C
Dimensions	245(L) x 80(W) x 37(D)mm
Weight (battery included)	Approx. 175g
Power source	9V(6LF22) x 1 Alkaline battery
Safety standards	EN 61326-1 EN 61000-4-2 EN 61000-4-3

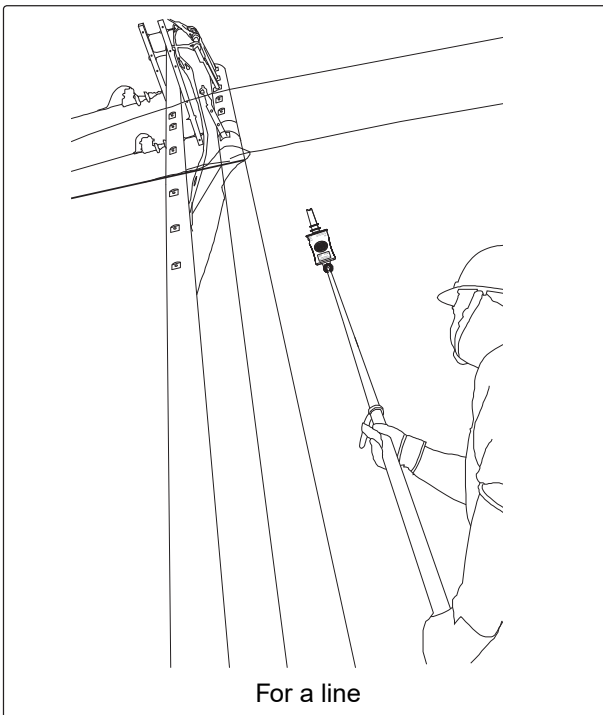
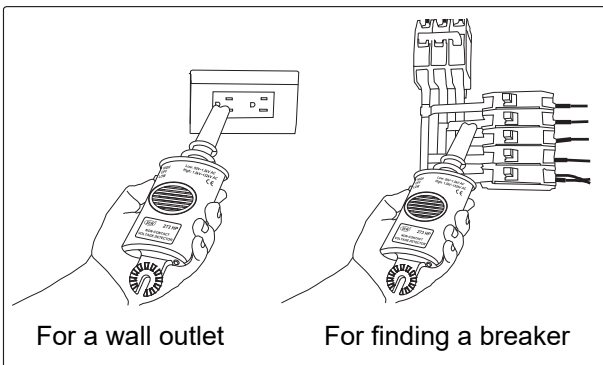
Accessories

Instruction manual	Optional accessories
Carry case	HS-175 Telescopic hot stick (triangle-type)
Battery	HS-120 Hot stick



CE

Voltage detection



High Voltage Series - Detectors

277 HP Non-Contact High Voltage Detector

Features

- 2 ranges for selection (2 function buttons)
 LOW : 50V~1.5kV
 Press the LOW button, 277 HP is ready for low voltage detection.
 HIGH : 1.5kV~132kV
 Press the HIGH button, 277 HP is ready for high voltage detection.
- Power consumption:
 Off : Less than 5uA
 Low voltage detection mode: Less than 40mA
 High voltage detection mode: Less than 40mA
- Circuit test function
 Press the Test button to make sure the whole circuit is working well before testing actual high voltage circuits.

The 277 HP is an ideal tool for checking the presence of AC high voltages and AC low voltages in cables, wall outlet, fuses.....etc.

The 277 HP provides a non-contact detection for AC voltages from 50V~132kV. It's also for industrial, utility and mine safety applications:

- Non-contact detection of live voltages
- Find faults in cables
- Check and detect live high voltage cables
- Trace live wires
- Check high frequency radiation
- Check grounding equipment
- Detect residual or induced voltages

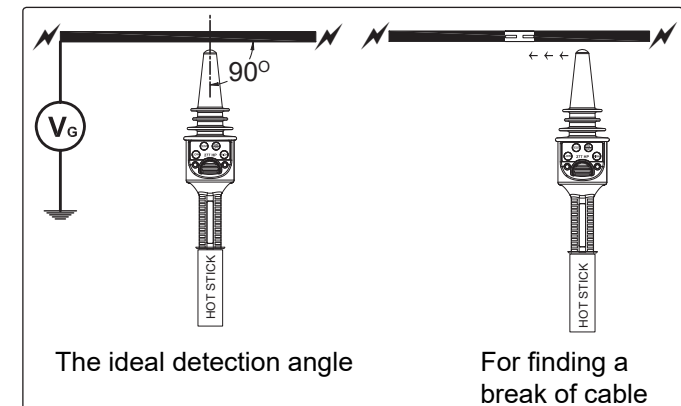
Specifications

General

Operating temperature	0°C~50°C
Dimensions	318(L) x 75(W) x 71(D)mm
Weight (battery included)	Approx. 227g
Power source	9V(6LF22) x 1 Alkaline battery
Safety standards	EN 61326-1 EN 61000-4-2 EN 61000-4-3

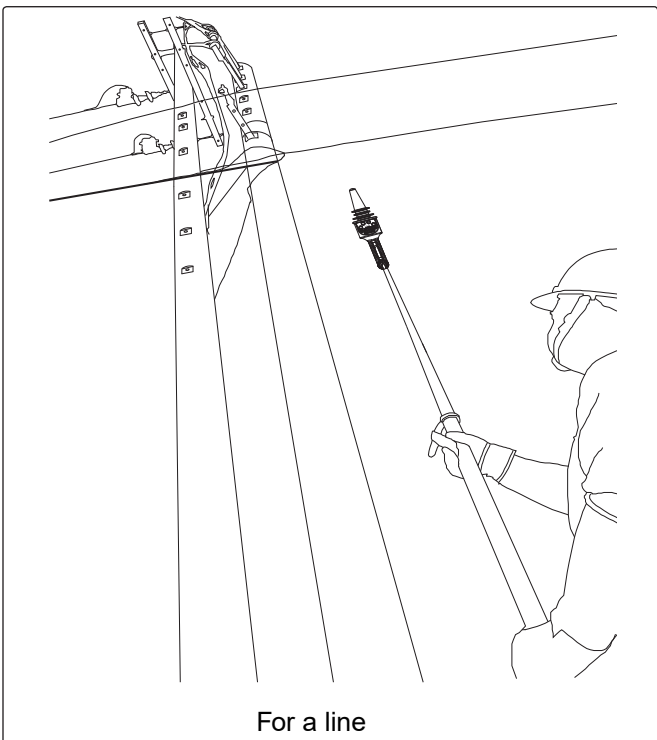
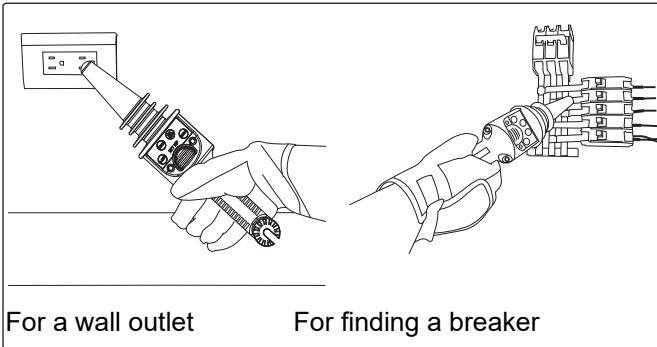
Accessories

Instruction manual	Optional accessories:
Carry case	HS-175 Telescopic hot stick
Battery	(triangle-type) HS-120 Hot stick



- Use the hot stick HS-175 or HS-120 for high voltage detection: 1.5kV~132kV

Voltage detection



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Use the hot stick HS-175 or HS-120 for high voltage detection.

The 300 HP is a new water-proof design tool for checking the presence of AC high voltages and low voltages. It has eight voltage detection settings from 240Vac to 275kVac. The 300 HP provides a non-contact detection of AC voltages with an internal pickup sensor plate.



Check and detect live high voltage cables (using extension hot stick).

300 HP Non-Contact High Voltage Detector

Features

- Protection class : IP66.
- 3 LED indicators in a circle for easier viewing in any directions (360° LED indication).
- 8 voltage settings: 240V, 2kV, 6kV, 11kV, 22kV, 33kV, 132kV, 275kV.
- High bright LED visual indication.
- With the longer shelter to make the 3 LED indicators brighter under the sun.
- Sound indication.
- The maximum voltage setting can be 500kV .
- Self-test function.
- Power source : 1.5V "C" type battery × 3.
- High impact nylon casing.
- Non-contact work by proximity.
- Compatible with most hot sticks.
- Lightweight, robust & compact.
- Suitable for indoor and outdoor use.
- Easy access to batteries.
- Special ranges are available upon request.
- The maximum detection range can be 500kV.

Specifications

General

Operating temperature	-10°C~50°C
Storage Temperature	-20°C~60°C
Humidity	85% R.H. @ 40°C
Dimensions (case)	265(L) x 117(W)
Weight (battery included)	Approx. 590g
Power source	1.5V "C" x 3 Alkaline Batteries
Safety standards	EN 61326-1 CISPR 11 EN 61000-4-2 EN 61000-4-3 EN 61000-4-8

Applications

- Non-contact detection of live voltages.
- Find faults in cables.
- Check and detect live high voltage cables.
- Trace live wires.
- Check high frequency radiation.
- Check grounding equipment.
- Detect residual or induced voltages

Accessories

Instruction manual
Disconnect hook
Fuse extractor head
Carry case
Batteries



IP65

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375 HP Non-Contact High Voltage Detector

Features

- Protection class : IP65.
- 8 voltage settings :
240V, 2kV, 6kV, 11kV, 22kV, 33kV, 132kV, 275kV
- Bright LED visual indication
- Frequency range: 40~70Hz
- Flashlight function
- Wider angle for voltage detection(120°)
- Audible indication
- Easy-to-prove method
- Self-test function
- Power source : 1.5V "C" type battery × 3
- High impact nylon casing
- Non-contact work by proximity
- Compatible with most hot sticks
- Lightweight, robust & compact
- Suitable for indoor and outdoor use
- Easy access to batteries.
- Special ranges are available upon request.
- The maximum detection range can be 500kV.

Specifications

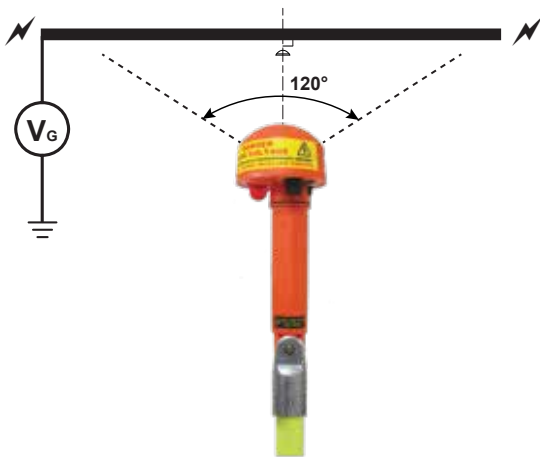
General

Operating temperature	-10°C~50°C
Storage Temperature	-20°C~60°C
Humidity	85% R.H. @ 40°C
Dimensions (case)	255(L) x 96(W)
Weight (battery included)	Approx. 531g
Power source	1.5V "C" x 3 Alkaline Batteries
Safety standards	EN 61326-1 CISPR 11 EN 61000-4-2 EN 61000-4-3 EN 61000-4-8

The 375 HP is a new tool for checking the presence of AC high voltages and low voltages. It has eight voltage detection settings from 240Vac to 275kVac. The 375 HP provides a wider angle for non-contact detection of AC voltages with an internal pickup sensor plate.

Accessories

- Instruction manual
- Carry case
- Batteries



375 HP provides a wider angle for non-contact voltage detection.



IP65



CE

The 380 HP is a new tool for checking the presence of AC high voltages and low voltages. It is waterproof and has seven voltage detection settings from 120Vac to 69kVac. The 380 HP provides a non-contact detection of AC voltages with an internal pickup sensor plate.

Applications

- Non-contact detection of live voltages.
- Find faults in cables.
- Check and detect live high voltage cables.
- Trace live wires.
- Check high frequency radiation.
- Check grounding equipment.
- Detect residual or induced voltages.

Charging with the automotive charger in a car.



380 HP Non-Contact High Voltage Detector

Features

- Protection class : IP65.
- 7 voltage settings : 120V, 4kV, 15kV, 25kV, 35kV, 46kV, 69kV
- Bright LED visual indication
- Vibration function
- Frequency range: 40~70Hz
- Audible indication
- Easy-to-prove method
- Power source : 9V rechargeable battery
- Can be charged with the automotive
- Non-contact detection by proximity
- Compatible with most hot sticks
- Lightweight, robust & compact
- Special ranges are available upon request
- Flashlight function

Specifications

General

Operating temperature	0°C ~ 40°C
Humidity	80% R.H. Max.
Dimensions	262(L) × 85(W) × 56(D)mm
Weight (battery included)	Approx. 330g
Safety standards	EN 61326-1 CISPR 11

Accessories

- ① Type I plug (Depends on the customer's need)
- ② Type C plug (Depends on the customer's need)
- ③ Type G plug (Depends on the customer's need)
- ④ Type A plug (Depends on the customer's need)
- ⑤ General charger
- ⑥ Automotive charger
- ⑦ Pouch



381 HP Non-Contact High Voltage Detector

IP65



The 381 HP is a new tool for checking the presence of AC high voltages and low voltages. It is waterproof and has seven voltage detection settings from 120Vac to 69kVac. The 381 HP provides a non-contact detection of AC voltages with an internal pickup sensor plate.

Features

- Protection class : IP65.
- 7 voltage settings : 120V, 4kV, 15kV, 25kV, 35kV, 46kV, 69kV
- Bright LED visual indication
- Vibration function
- Frequency range : 40~70Hz
- Audible indication
- Easy-to-prove method
- Power source: 9V alkaline battery
- Non-contact detection by proximity
- Compatible with most hot sticks
- Lightweight, robust & compact
- Special ranges are available upon request
- Flashlight function

Specifications

General

Operating temperature	0°C ~ 40°C
Humidity	80% R.H. Max.
Dimensions	262(L) × 85(W) × 56(D)mm
Weight (battery included)	Approx. 345g
Safety standards	EN 61326-1 CISPR 11

Applications

- Applications
- Non-contact detection of live voltages.
- Find faults in cables.
- Check and detect live high voltage cables.
- Trace live wires.
- Check high frequency radiation.
- Check grounding equipment.
- Detect residual or induced voltages.

Accessories

- ① Pouch

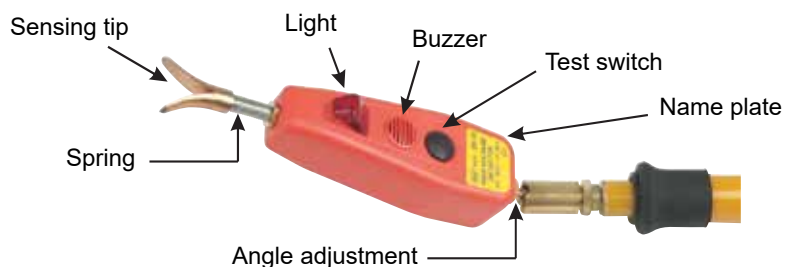


230 HD and 290 HD High Voltage Detectors

The detector detects a high and extra high voltage in AC lines. An elongate insulation rod permits checking of high tension circuits at safe distance for voltage. Also it is telescopic compact, lightweight, easy to use and handy.

Features

- Telescopic, compact, lightweight.
- High voltage detection.
- Self test button feature.
- Easy to recognize indication.
- High intensity red light emitting diode and intermittent audible sound for easy recognition in full sunlight and noisy environments.
- Waterproof.



Specifications

	230 HD	290 HD
Withstand voltage (On insulating rod)	100kV / 300mm : 1 minutes	
Insulation resistance	2000MΩ min by 1kV / DC megger at the same testing location as withstand voltage	
Leakage current	100uA or less than 100uA at withstand voltage test	
Construction	Water proof (detecting head impervious to water)	
Measuring voltage range	6kV~36.5kV	6kV~81.5kV
Operation start voltage (To ground)	2.7kV	2.7kV
Display Light :	Flashing red light.	
Sound :	Intermittent sound 50 dB apart 3 m.	
Frequency	50/60Hz	
Operating temperature	0°C ~ 40°C	
Battery	2 button-cells LR44(1.5V)	
Overall length		
Retracted	893±50mm	1370±50mm
Extracted	1520±50mm	2450±50mm
Weight (battery included)	Approx. 485g	Approx. 590g
Safety standards	IEC / EN 61243-1	



Soft Pouch 230 HD 290 HD

Accessories

Instruction Manual
Soft Pouch

High Voltage Series - Detectors

276 HD, 276S HD High Voltage Detectors



The 276 HD and 276S HD detect the presence of voltage in AC lines. Elongated insulation rods permit checking high-tension circuits from a safe working distance. The units are compact, lightweight, and easy to handle. They are also capable of voltage detection in low-tension circuits.

Features

- Telescopic, compact, lightweight
- High voltage and Low voltage detection
- Self-test button
- Easy-to-recognize indication
- Waterproof

Specifications

	276 HD	276S HD
Sections	7	4
Working voltage	H.V. : 3kV~24kV AC L.V. : 80V~600V AC	
Frequency	50/60Hz	
Operating temperature and humidity	0°C~40°C Max: 80%	
Retracted length	255±30mm	354±30mm
Extended length	870±30mm	1010±30mm
Weigh (battery included)	150g	180g
Power source	CR 2032 (3V) × 1	
Safety standards	EN 61326-1	

• Working Voltage Range:

H.V. : 3kV~24kV AC....hold grip portion to detect.
L.V. : 80V~600V AC....hold nameplate portion to detect.

• Operational Test: (Initial voltage)

- When extended, hold the grip portion.
Put the sensing tip in contact with the voltage (250V AC ± 50V).
The LED and buzzer should operate.
- When retracted, hold the nameplate portion.
Put the sensing tip in contact with the voltage (80V AC or below).
The LED and buzzer should operate.

• Operation Start Distance:

Distance at which operation starts when front metal is brought near Ø5mm O.C. wire with grip portion held by hand.
Where $24kV / \sqrt{3}$ (voltage to ground)....about 20cm.
Where $6.6kV / \sqrt{3}$ (voltage to ground)....about 3cm.
Where $3.3kV / \sqrt{3}$ (voltage to ground)....about 1cm.

• Dielectric Strength:

- Between sensing tip and grip portion: 50kV AC 1 min.
(The detector must be extended.)
- Between sensing tip and nameplate portion: 4kV AC, 1 min

• Construction: Waterproof (detecting head impervious to water).

• Insulation Resistance:

Measure the insulation resistance with the high voltage insulation tester.

The areas measured are the same as in the dielectric strength test.

- Between sensing tip and grip portion: 1kV.
The insulation resistance must be more than 2000MΩ.
(The detector must be extended.)
- Between sensing tip and nameplate portion: 1kV.
The insulation resistance must be more than 2000MΩ

• Leakage Current Test:

Apply high voltage to the parts listed below.

- Between sensing tip and grip portion: 50kV AC, 1 min.
The leakage current must be 100uA or less.
(The detector must be extended.)
- Between sensing tip and nameplate portion: 4kV AC, 1 min.
The leakage current must be 100uA or less

CAC-276
for 276 HD



CAC-279
for 276S HD



IP66



279 HD High and Low Voltage Detector

Features

- Compact and light weight
- Self-test function
- Voltage detection: 80V~11.4kV AC
- Auto power off (5 minutes)
- Waterproof: IP66
- Identify Line (Phase) and Neutral

Specifications

Working voltage range	80V~11.4kV AC
Frequency	Both 50Hz and 60Hz
Insulation resistance	100MΩ or more between the contact tip and the grip
Dielectric strength	20kV for 3 minutes between the contact tip and the grip
Leakage current	100uA or less on dielectric strength
Operation starting voltage (exposed live part)	Low voltage: 65±15V High voltage: 1700±200V
Operation status	Sound emission 50dB or more (2m apart)
Operating temperature range	0°C ~ 40°C
Structure	Waterproof structure, equivalent to IP66
Weight(battery included)	150±10g
Power source	1.5V (AAA) x 2
Safety standard	EN 61326-1

Accessories

Instruction Manual
Soft Pouch
Batteries



285 HD High Voltage Detector

Features

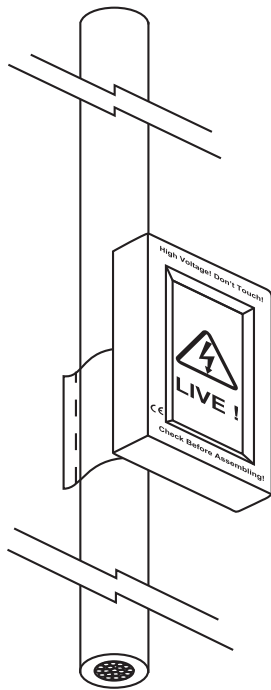
The 285 HD High Voltage Detector is primarily used to detect the presence of an alternating field. It shows identification of AC voltages.

285 HD has a large LCD that is housed in an ABS enclosure. 285 HD can be attached to the cable by a large metal clip and can be secured with a cable tie.

The high voltage detector senses the radiated magnetic field surrounding the cable and shows a LIVE warning sign on the LCD.

Specification

- Three different ranges of identification of AC voltage:
 - 285-A HD : 3~7 kV
 - 285-B HD : 6.6~11 kV
 - 285-C HD : 10~22 kV
- The LCD will "flash continuously" for high voltage testing.
- Physical contact with electrical conductors is not necessary when testing for live wires.
- The 285 HD senses the radiated field that surrounds live conductors.
- Radiated field strength increases with voltage and decreases quickly with distance.
- Large LCD.
- Continuous monitoring.
- Easy to install.
- No batteries required.
- Weight: Approx. 80g.
- Safety standards: EN 61326-1
EN 55011
EN 61000-4-2
EN 61000-4-3



Application

Identify and check live cables.
Check live wires at high voltage

High Voltage Series - Probes



CE



Features

- Measures positive polarity DC voltages up to 40kV.
- Lightweight and rugged.
- 2 available contact tips: round needle tip for normal use and a special flat spring-type for CRT anode.
- Are typically used to measure high voltages in TV sets, power supplies and instruments in laboratories.

Specifications

Input impedance	600 M Ω
Attenuation ratio	40000 : 1
Accuracy	DCV (0 ~ 20kV) \pm 2% DCV (20kV ~ 40kV) \pm 3%
Max. working voltage	DC 40kV
Operating temperature	0°C ~ 40°C
Storage temperature	-10°C ~ 50°C
Cable length	1 m
Weight Approx.	400g
Safety standards	EN 61010-1 EN 61010-031 EN 61326-1

Note : The PD-40AM is for Positive Polarity only,
not for Microwave ovens

High Voltage Probes



PD-20



PD-20S
• For Scope



PD-28

Features

- Measures both AC and DC voltages with digital multimeter.
- Are typically used to measure high voltages in TV sets, power supplies and instruments in laboratories.
- Lightweight and rugged.
- 2 available contact tips: round needle tip for normal use and a special flat spring-type for CRT anode.

Specifications

	PD-20 & PD-20S	PD-28
Input impedance	500 MΩ	1000 MΩ
Attenuation ratio	1000 : 1	1000 : 1
Accuracy	DCV (0 ~ 20kV) ± 1%, DCV (20kV ~ 30kV) ± 2% ACV (0 ~ 20kV) typically ± 5% at 50/60 Hz	DCV (0 ~ 20kV) ± 1%, DCV (20kV ~ 40kV) ± 2% ACV (0 ~ 28kV) typically ± 5% at 50/60 Hz
Max. working voltage	30kV DC or 20kV AC	40kV DC or 28kV AC
Operating temperature	0°C ~ 40°C	0°C ~ 40°C
Storage temperature	-10°C ~ 50°C	-10°C ~ 50°C
Cable length	1 m	1 m
Weight Approx.	260g Approx.	320g
Safety standards	EN 61010-1 EN 61010-31 EN 61326-1	EN 61010-1 EN 61010-031 EN 61326-1

Note : PD-20 and PD-28 are high voltage probes that are used with digital multimeter.

Accessories



High Voltage Series - Hot Sticks

HS-120 Hot Stick



- Used for the extraction of fuses, isolators & fuse switch disconnections.
- Can be attached to the 275 HP Proximity Detectors and contact Capacitive Detectors 21× HVD.
- Universal "sunrise" head attachment to fit special tool fittings.
- Head Section rated at 100kV per 300mm (5 min).
- Comes complete with sunrise fitting and fuse extractor.
- 3 × 1.8 meter sticks; 1 × 1.2 meter head section.
- Sticks 1 × 1.2 meter head section complete with universal sunrise fitting.
- 1 × carry bag.
- Meets IEC 60855.



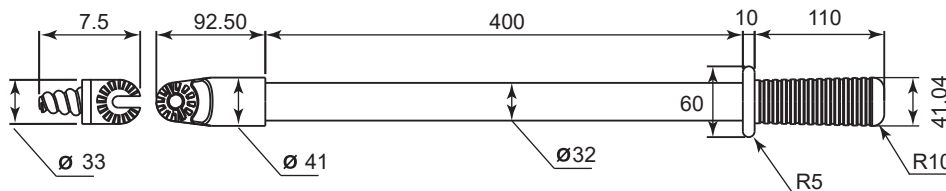
HOK-HS166
Disconnect hook (Optional)



ADP-HS120
Fuse extractor head



HS-500



The Hot Sticks can be attached to the Proximity Detectors 275 HP and 277 HP.



Please keep in your mind to wear high insulating gloves when you detect high voltages with HS-500 and Non-contact H.V. Detector.

High Voltage Series - Hot Sticks

HS-120R 1.8m Hot Stick

- Weight : Approx. 1.1kg
- The Hot Stick is rated at 100kV per 300mm (5 minutes)
- High quality fiber glass round tube filled with Polyurethane.
- Meets IEC60855

The Hot Stick kit can be used for the extraction of House Service Fuses, it can also be used for disconnecting dropout fuses, isolators & fuse switch disconnections.

The Hot Sticks can be attached to the High Voltage Proximity Detectors. These sticks are also the perfect companion for our Contact Capacitive Detectors.

Our Hot Sticks can be used for many other applications, for example, on overhead power lines or any application which requires insulating sticks made of high quality fiber glass to protect and insulate users from High Voltages.

A wide variety of specialised fittings and tools are available to fit the "sunrise" head attachment.

It comes complete with Universal Sunrise Fitting Head and Fuse Extractor Head.

WARNING



- Always remember to keep it clean. Keep the hot sticks away from the sunlight for safe-keeping.
- Do not use the hot sticks in the rain.
- Always remember to wear the insulated gloves and insulated boots when you use the hot sticks.

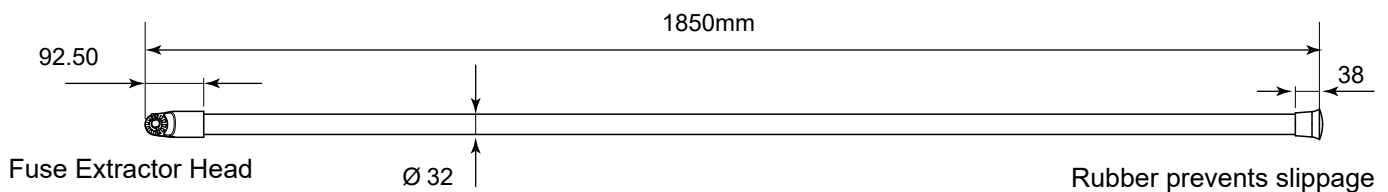


Universal Sunrise Fitting head



Fuse Extractor Head

Attached to the High Voltage Proximity Detectors and Contact Capacitive Detectors



HS-120R and HS-800 Short Hot Sticks Series

Features

- Single foamed hot stick.
- Universal sunrise fitting on the head to fit special tool fittings.
- Rated at 100 kV per 300mm (5 minutes).
- Can be connected to
 - 275 HP HV proximity detector,
 - 21X HVD capacitive HV detector
 - and 277 HP Non-contact HV detector.
- Meets IEC 60855.
- Reasonable price.



HS-120R
1200mm



HS-800
800mm



Accessories

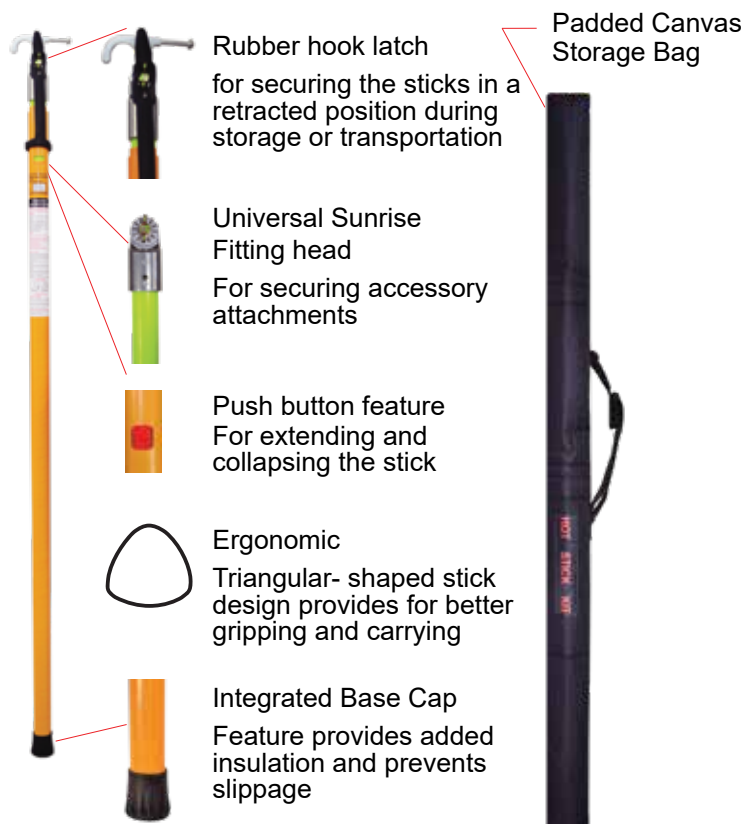
HOK-HS166
Disconnect hook (Optional)



ADP-HS120
Fuse extractor head



HS-175 & H-178 Series Telescopic Hot Sticks



Rubber hook latch for securing the sticks in a retracted position during storage or transportation

Universal Sunrise Fitting head For securing accessory attachments

Push button feature For extending and collapsing the stick

Ergonomic Triangular-shaped stick design provides for better gripping and carrying

Integrated Base Cap Feature provides added insulation and prevents slippage

Padded Canvas Storage Bag

The HS-175 Telescopic Hot Stick provides maximum flexibility and access for linesman needing to access electrical systems from a working distance. Its unique triangular design allows for easy operation without compromising strength and durability. The Telescopic Hot Stick has been designed to telescopically extend and retract into itself with integrated locking buttons. All sections are made from high grade electrical rated fiberglass.

Features

- Triangular-shaped design keeps the sections aligned during extension and retraction.
- Push button release for stick extension and retraction.
- Telescopic design allows for easy assembly, storage and transportation.
- Withstands voltage rating of 100kV from 30cm for 1 minutes.
- Universal end fitting accepts a wide variety of standard attachments.
- Highly visible yellow tip section.
- Easy-to-replace sections.
- Carrying bag included.
- Optional integrated height measurement scale.
- Complies with IEC 62193 safety standard

Specifications

	HS-175-3	HS-175-4	HS-175-5	HS-175-6	HS-175-7	HS-175-8	HS-175-9
Sections	3	4	5	6	7	8	9
Extended length (m)	3.82	5.10	6.42	7.78	9.18	10.62	12.09
Retracted length (m)	1.48	1.53	1.58	1.63	1.68	1.73	1.78
Stick width (mm)	37.8	41.8	45.3	49.5	53	57.5	61.5
Weight (kg)	1.85	2.40	3.10	3.85	4.70	5.90	6.90

	HS-178-3	HS-178-4	HS-178-5	HS-178-6	HS-178-7
Sections	3	4	5	6	7
Extended length (m)	3.82	5.10	6.42	7.78	9.18
Retracted length (m)	1.48	1.53	1.58	1.63	1.68
Stick width (mm)	37.8	41.8	45.3	49.5	53
Weight (kg)	2.15	2.80	3.80	4.45	5.40

* NOTE: Dimension lengths are approximate and may have a variance of ± 0.05m

Accessories



ADP-HS120 Fuse extractor head (Optional)



HOK-HS166 Disconnect hook (Included)

Applications

- Voltage detection.
- Opening and closing switches.
- Overhead switch operation.
- Fuse replacement.
- Cleaning electrical fittings.
- Installation of temporary clamps.
- Tree trimming.

High Voltage Series - Discharge Rods

DSR-50K & DSR-100K High Voltage Discharge Rods



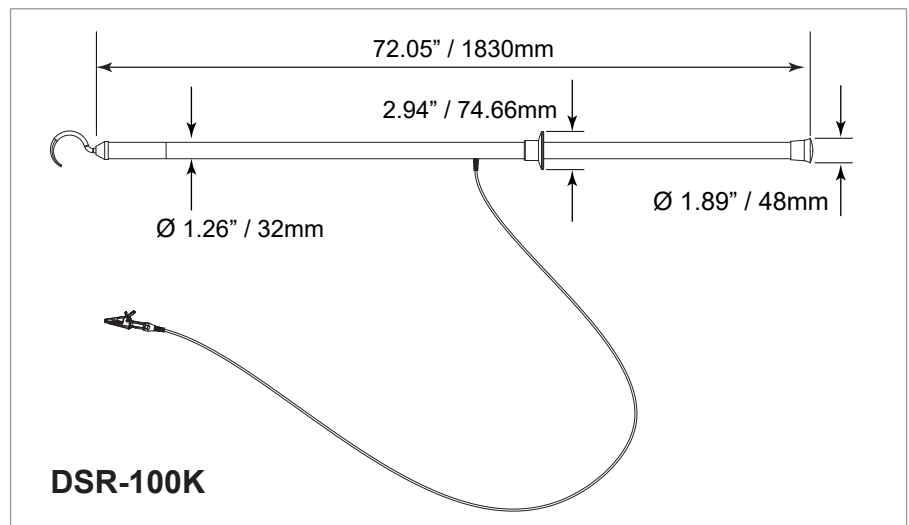
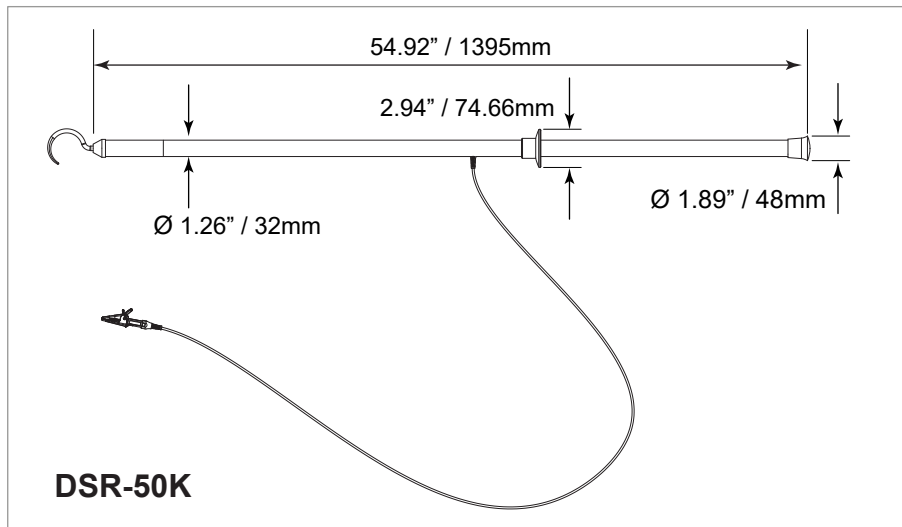
Features

- For discharging and earthing for cables
- For discharging and earthing of test units
- For safety purpose

Specifications

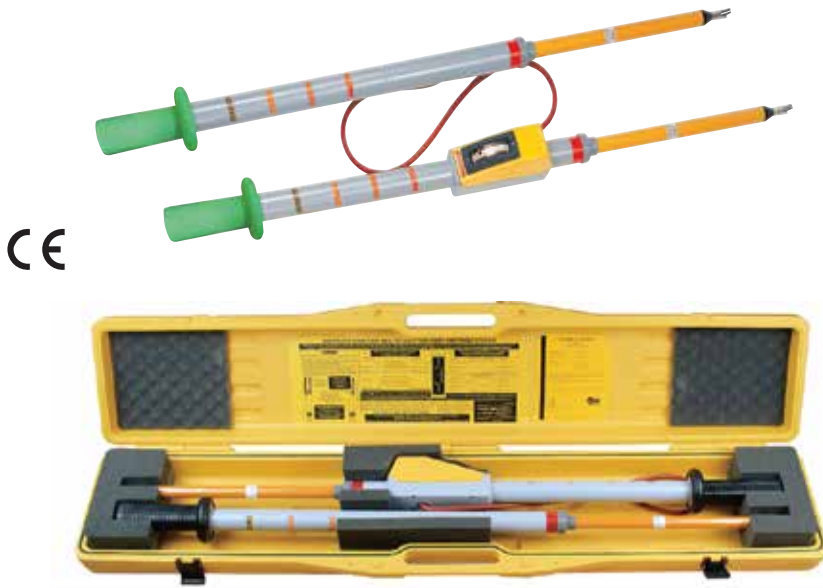
	DSR-50K	DSR-100K
kV	50kV	100kV
Weight	1.4 kg approx.	2.0 kg approx.
Resistance	100k Ω	200k Ω

Dimensions



High Voltage Series - Phasing Sticks

PC7k, PC11k, PC22k, PC33k, PC44k H.V. Multifunton Phasing Sticks



Features

- No user's assembled parts.
- Dual color-coded scale (% , Vac).
- Neon indicator when >1200Vac.
- Lightweight, robust & compact.
- Carry case included.
- Compare between phases.
- Measure and test phase to earth.
- High quality fiberglass wound rod.
- Self powered operation. No battery required.
- DC version available.
- Measure phase to phase.
- Hi ght immunity to interference fields.
- Suitable for indoor and outdoor use.
- Current is limited to ± 1 milli-ampere.
- Grounded or ungrounded systems.
- Meets IEC 61481 (excludes PC44K).

Specifications

	PC7K	PC11K	PC22K	PC33K	PC44K
Total resistance	4.48M Ω	6.78M Ω	10.82M Ω	9.68M Ω	26.8M Ω
Response time	<1Sec				
Neon threshold	1.2kV				
Neon lit fully @	1.5kV				
Length of handle	775mm				
Length front end	400mm	400mm	500mm	665mm	820mm
Total lenght	1.175m	1.175m	1.275m	1.440m	1.595m
Total weight	2.1kg	2.1kg	2.2kg	2.4kg	2.5kg

- The length of the interconnecting lead: 1m. Customized interconnecting lead's length on demand.

Handle Material Composite Material with Polyurethane
Front End Fiber Glass Wound Tubing.

Range of Models

	PC7K	PC11K	PC22K	PC33K	PC44K
System Voltage	6.6kV	11kV	22kV	33kV	44kV
Full scale Voltage	8kV	12kV	24kV	36kV	48kV
Maximum Voltage	9kV	15kV	30kV	40kV	55kV

- Models are available to cover system voltages from 1kV to 44kV @50 or 60Hz.
- Contact the factory for information on models suitable for other Voltages.
- All models have Neon & Analog panel Meter Indicators.
- The following models are available as standard Instruments:

Accessories (Optional):

The Piercing Tips are utilized to pierce through Silicon, grease or Insulating Material when required.

PC-170

- Material of the body : PVC
- Material of the metal contact part: Aluminum
- Specially designed adapters for PCxxK series phasing sticks.
- Length : A 26.3 cm x 1 piece
B 13.2 cm x 2 pcs
C 6.3 cm x 2 pcs
- Applications: Bus bars, Generators, High voltages.



ADP-PCXXK



TER-70mm Piercing Tip 70mm (optional)



PC-160 Right Angle Adaptors. It can be semi-disconnected for storage into the case. (optional)- Sold by pair

TER-213 100mm
TER-213 60mm
TER-213 40mm

2713 PU High Voltage Proving Unit (DCV)

Features

- Designed to proof:
 - Phasing sticks.
 - High voltage detectors (contact type only, not to be used with non contact proximity detectors.)
 - High voltage and voltage testers.
- Battery operated.
- Led indicates when power is "ON".
- Small and hand-held.
- Quick connection with normal 4mm test leads.

Specifications

Voltage settings (Internal Jumpers Selectable)	500 Vdc 1000 Vdc 2500 Vdc 5000 Vdc (default setting)
Over-current protection	Yes
Power on indicator	Yes
Operating temperature	-5°C to 45°C
Storage temperature	-10°C to 55°C
Dimensions	205(L) × 90(W) × 55(D)mm
Weight (battery included)	Approx. 510g
Power source	1.5V (AA) × 6 or equivalent

Accessories

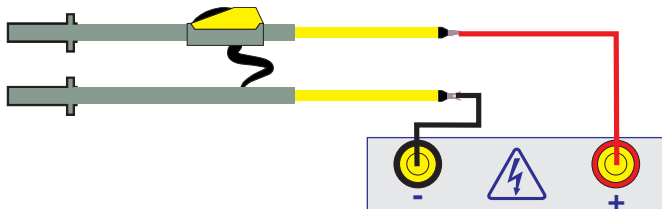
- Test leads
- Carry case
- Batteries



The high voltage proving unit for high voltage testers is utilized to determine if the devices under test are functionally working.

The high voltage proving unit is not a calibrator and can't be utilized for calibration.

The high voltage proving unit for high voltage testers can be utilized to proofcontact devices on a momentary basis (press on, check, release).



Proving Second source equivalents or Compatible models

The high voltage proving unit for voltage testers output a DC voltage of around 5000Vdc (factory setting).

This unit has been designed to deviate most of the voltage testers and the voltage detectors.

It can be used with most of the phasing sticks and voltage testers which can accept 5000V input.

This unit is basically a low current 5000Vdc supply.

The output current is limited.

To save battery life, it is recommended to depress the test button for short period of time only.

Proofing PC xxk - Multifunction Voltage Testers

The master pole must be connected to the positive socket of the proofing unit.

The slave pole must be connected to the negative socket of the proofing unit.

The test button of the proofing unit must be depressed for a short time only.

During that short time, the neon voltage detector must lit and the panel meter must deviate and show increase in the voltage, then come back down.

8000 HVDM True RMS High Voltage DMM



Hand strap

Features

- True RMS measurement
- For measuring solar, PV systems
- Auto ranging
- Bar-graph indication
- Data hold function
- 3000V DC Voltage measurement
- 2000V AC Voltage measurement
- AC mA/uA measurement
- DC mA/uA measurement
- Low battery indication
- Auto power off
- Low power consumption
- Rugged and compact

For measuring solar, PV systems



Accessories

- Instruction manual
- Test leads
- Alligator clips
- Hand strap
- Batteries



AL-8000 R



AL-30B



AL-30BU



BET-80XX



AL-23CAR N
AL-23CAB N



AL-25CBU

Specifications

DC Voltage

Ranges	Resolution	Accuracy
400mV	0.1mV	
4V	1mV	$\pm(0.5\%rdg+5dgt)$
40V	10mV	
400V	100mV	
1000V for CE	1V	
3000 for general	1V	$\pm(1.0\%rdg+3dgt)$

- Input impedance : 10M Ω

AC Voltage

Ranges	Resolution	Accuracy
400mV	0.1mV	
4V	1mV	$\pm(1.0\%rdg+5dgt)$
40V	10mV	
400V	100mV	
1000V for CE	1V	
2000 for general	1V	$\pm(1.5\%rdg+3dgt)$

- Input impedance : 10M Ω

DC mA / μ A

Ranges	Resolution	Accuracy
400 μ A	0.1 μ A	
4000 μ A	1 μ A	$\pm(1.2\%rdg+5dgt)$
40mA	0.01mA	
400mA	0.1mA	

- Overload Protection 0.5A/1000V fast blow fuse for 400mA

AC mA / μ A

Ranges	Resolution	Accuracy
400 μ A	0.1 μ A	
4000 μ A	1 μ A	$\pm(1.5\%rdg+3dgt)$
40mA	0.01mA	
400mA	0.1mA	

- Overload Protection 0.5A/1000V fast blow fuse for 400mA

General

Dimensions	221(L) \times 110(W) \times 57(D)mm
Weight (battery included)	Approx. 507g
Power source	1.5V (AA) \times 2 (Alkaline battery)
Safety standards	IEC / EN 61010-1 CAT III 1000V IEC / EN 61010-1 CAT IV 600V EN 61326-1

High Voltage Series

MDP-50K Multi-Purpose Digital H. V. Phasing Meter



IP66

CE

Features

- AC 50kV and DC 50kV measurement with direct reading.
- 4000-count LCD.
- Input impedance : 400 Mohm
- Auto-ranging :
AC : 4.000kV / 40.00kV / 50.0kV
DC : 4.000kV / 40.00kV / 50.0kV
- MDP-50K must be connected with an approved hot stick, such as HS-175, HS-120.
- Check phases are "in-phase" or "out of phase".
- Polarity indication : Positive / Negative
- Backlight function.
- Auto power off.
- Power source : 1.5V(AA) alkaline battery × 2.
- Low battery indication(Multi-level).
- Protection class : IP66

Specifications

AC Voltage	Ranges	Resolution
	4.000 kV	0.001 kV
	40.00 kV	0.01 kV
	50.0 kV	0.1 kV
Accuracy	0 ~ 30 kV	±(4.0%rdg+0.1kV)
	30 kV ~ 50 kV	±(5.0%rdg+0.5kV)

DC Voltage	Ranges	Resolution
	4.000 kV	0.001 kV
	40.00 kV	0.01 kV
	50.0 kV	0.1 kV
Accuracy	0~20 kV	±(2.0%rdg+0.08kV)
	20 kV ~ 50 kV	±(3.0%rdg+0.1kV)

General

Low battery indication	√ (Multi-level)
Operating temperature & humidity	0°C~40°C, 80% Max.
Storage temperature & humidity	-10°C~50°C, 80% Max.
Dimensions	
Master stick :	490(L) × 101(W) × 118(D)mm
Slave stick :	490(L) × 35(W) × 35(D)mm
Weight (battery included)	Approx. 1.35kg
Power source	1.5V (AA) Alkaline battery × 2

Accessories

- Instruction manual
- "Y" contact electrode × 2
- Test hook (contact electrode) × 2
- Insulated rod × 2
- Alkaline batteries
- Carry case
- Piercing tip × 2



Carry case (TOC-MDP50K)



TER-213



TER-213 60mm



TER-45M/M A



NUT-MDP-50K

MDP-50K must be connected with an approved hot stick, such as HS-175, HS-120, HS-120R to do the high voltage measurement.

1026 AH Accessories for Hot Sticks and High Voltage Detectors

Accessories include:



• **ADP-HS120**
Fuse extractor head
Material : Nylon



• **HOK-HS166**
Disconnect hook
Material : Aluminum alloy



• **ADP-278**
Shotgun adapter
Material : Aluminum alloy

Specifications

- Content : ADP-HS120, HOK-HS166, ADP-278
- Dimension of the carry case : 243(L) × 126(W) × 46(D) mm
- Weight of the whole set : Approx. 386g



Carry case for the whole set accessories



Small, lightweight, easy to carry