

### SUBSTATION AND RAIL SAFETY EQUIPMENT





### PORTABLE EARTHING EQUIPMENT FOR SUBSTATION



### **Portable Earthing Equipment**

Item Code
DSSB-SLE-PEE

### **Description:**

- 3 x 7m Earthing Lead Conductors (150sqmm)
- 4 x 1.22m Operating Pole (1 x Top Pole with S9D Operating Socket, 2 x Intermediate Pole, 1 x Bottom Pole with Rain Shield)
- 3 x Line End Clamp (CE22 A+B)
- 3 x Earth Clamp (S9A Standard ) or (CE20/ES1-E1 upon request)
- 1 x Carry Bag











### **Click Here For Product Flyer**

Line End Clamp (CE22 A+B)

Earth Clamp S9A (Standard)

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Carrying Bag



### **PVC Carrying Bags**

Item Code	
DSSB-SLE-PEE-BAG	

Robust fabric reinforced PVC carrying bags can be supplied for the storage and handling of distribution line These will provide protection of the equipment during transit as well as easing transportation in the field and keeps the earth equipment clean and dry.

Quick release buckles or straps with Velcro fixings are supplied on the bags which also come with a black webbing shoulder strap.

### **Product Benefits**

- Reinforced material
- Easy storage
- Quick release opening
- Carrying strap
- Different colours and sizes available Operating Sockets

### **Operating Poles**

Item Code	Detail	
DSSB-SLE-PEE-OP-TOP	TOP POLE	
DSSB-SLE-PEE-OP-INT	INTERMEDIATE POLE	
DSSB-SLE-PEE-OP-BTM	BOTTOM POLE	

\*Operating Socket is not included for Top Poles

### **Description:**

Operating poles are manufactured from a lightweight resinimpregnated, electrical insulation grade fibre glass.

The poles are machined to provide rigid assembly and include a double sided snap action apring locking device. 4 feet Operating Pole suitable for 66-400kV for use in accordance with ENA Technical Specification.

Sections Available: Top, Bottom and Intermediate Compatible with: S9D and CEA/S2 Sockets Length: 1.22 m

Intermediate Pole	
Bottom Pole	





PORTABLE EARTHING EQUIPMENT FOR SUBSTATION



### **Earth Leads**

Item Code	Short Circuit Rating	Cont. Current Rating	Size
DSSB-SLE-PEE-150EL	17.5kA/2sec	350A	150 sq.mm

### **Description:**

Earthing Leads is produced from multi-stranded, commercially pure aluminium with an extruded pvc sheath to protect the cable from damage.

The 150sqmm flexible aluminium earth lead comes with tested and approved compression terminations and support sleeves which are used for connecting between a line end clamp and an earth end clamp.

### **Benefits**

- Aluminium is less expensive than copper
- Light and flexible
- Aluminium is less vulnerable to copper theft

### **Further Technical Details:**

Aluflex leads are designed to meet specific requirements of ENA technical specification 41/21

For use in Substations, 150EL is always used as a primary lead and suitable for the CE20 Clamp to connect to the Substation Earth Tap.



PORTABLE EARTHING EQUIPMENT FOR SUBSTATION

### **Operating Socket**

Item Code
DSSB-SLE-PEE-S9D ESI

### **Description:**

S9D Operating Socket is suitable for the attachment of a line end clamp with a long taper op screw to a P&B style operating pole. Sprung

### **Product Benefits**

- Lighweight Alloy
- Rugged construction
- Excellent anti-corrosive properties
- Adaptors available to convert operating poles types/fitting
- Precision machined











### **Line End Clamps**

Item Code	Clamp Diameter	Short Circuit Rating	Max Number of Leads
DSSB-SLE-PEE-CE22A/ESI-L1	10mm-38mm	17.5kA for 2 secs	1 lead
DSSB-SLE-PEE-CE22 A+B	19mm-76mm	17.5kA for 2 secs	1 lead
DSSB-SLE-PEE-CE25	35mm-75mm	38kA for 2 secs	2 leads
DSSB-SLE-PEE-CE22B/ESI-L2	37mm-76mm	17.5kA for 2 secs	1 lead
DSSB-SLE-PEE-CE22C/ESI-L3	60mm-90mm	17.5kA for 2 secs	1 lead
DSSB-SLE-PEE-CE15	90mm	36.5kA for 2 secs	2 leads
DSSB-SLE-PEE-CE27	101.6mm	17.5kA for 2 secs	2 leads
DSSB-SLE-PEE-CE16/5/ESI-L4	127mm only	50kA for 3 secs	3 leads
DSSB-SLE-PEE-CE16/5/.5/ESI-L5	140mm only	50kA for 3 secs	3 leads
DSSB-SLE-PEE-CE51	140mm-160 mm	38kA for 2 secs	2 leads
DSSB-SLE-PEE-CE50	190mm-200mm	38kA for 2 secs	2 leads
DSSB-SLE-PEE-CE71	220-250mm	17.5kA for 2 secs	1 lead

### **Product Benefits:**

• Lightweight

• Precision machine for rigidity

CE16/5.5



CE50

PORTABLE EARTHING EQUIPMENT FOR SUBSTATION

CE51

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CE71



### Earth End Clamp

Item Code	Earth Tape	Earth Tape	Short Circuit
	Thickness (mm)	Width (mm)	Rating
DSSB-SLE-PEE-CE20/ESI-E1	3.2 - 6.5mm	38 - 50mm	38kA/2sec

For Application to clean or dirty copper or aluminium strip.

*Note: When secured the spring shall be fully compressed and this shall be readily visible.* **Tested to 38kA for 2 secs** 



DSSB-SLE-PEE-CE20/ESI-E1

### **S9A LONG TAPER EARTH END CLAMP 135H**

Item Code	Clamping Range	Short Circuit Rating	Operating Screw	Weight
DSSB-SLE-PEE-S9A-135H	For up to 20mm thick bar	17.5 kA/2s	Long Taper	0.38 kg





PORTABLE EARTHING EQUIPMENT FOR SUBSTATION

UKAS



### **Stainless Steel Earthing Round Bolt Set**

Item Code	Bolt Size
DSSB-EA-RHB-M12100SS	M12 x 100 mm

Round Bolt Set Come With

- : Earthing Round Bolt x 1
- : M12 Nuts x 3
- : Flat Washer x 2
- : Spring Washer x 1



### **Carrying Case (Very Heavy Duty)**

ltem Code	
DSSB-SLE-PEE-CC	





## PORTABLE EARTHING EQUIPMENT FOR SUBSTATION



### PORTABLE EARTHING EQUIPMENT FOR TRANSMISSION



Item Code	
DSSB-TLE-PEE	

### **Description:**

- 3 x 7m Earthing Lead Conductors
- 4 x 1.22m Operating Pole
  (1 x Top Pole with Operating Socket OL1, 2 x Intermediate Pole, 1 x Bottom Pole)
- 3 x Line End Clamp (CE69)
- 3 x Earth Clamp (CE10/A2)
- 1 x Carry Bag



Earthing Lead Conductor











e Bottom Pole & Plug

UKAS

## PORTABLE EARTHING EQUIPMENT FOR TRANSMISSION





### **Operating Poles**

**Item Code** DSSB-TLE-PEE-OP

### **Description:**

Operating poles are manufactured from a lightweight resinimpregnated, electrical insulation grade fibre glass.

The poles are machined to provide rigid assembly and include a double sided snap action apring locking device. 4 feet Operating Pole suitable for 66-400kV for Transmission Line Use.

Length: 1.22 m

### **Product Benefits:**

- · Open weave hand grips
- · Rain shields available
- · Snap action' button joints
- · Lightweight rigid sections



PORTABLE EARTHING EQUIPMENT FOR TRANSMISSION

### **OL1 Operating Socket**

Item Code	
DSSB-TLE-PEE-OL1	

The OL1 Operating Socket is suitable for the Transmission Line **Operating Poles.** 

Suitable for fitting Long Taper Clamps, Spring Loaded.

### **Product Benefits**

- Lighweight Alloy
- Rugged construction
- Excellent anti-corrosive properties
- Adaptors available to convert operating poles types/fitting
- Precision machined







### **Earth Leads**

Item Code	Short Circuit Rating	Cont. Current Rating
DSSB-TLE-PEE-50EL	8.9kA/1s	150A
DSSB-TLE-PEE-120EL	20kA/1s	300A

The Earth leads are available in 50sqmm and 120sqmm sizes.

Earth bond are of a 50sqmm/120sqmm nominal section terminated either by PB50/PB120 palm type terminations or PB50F/PB 120F Ferrule terminations, depending upon which style CE60 Sparrow plates is used, Flexible clear P.V.C stress-relieving sleeves are fitted to prevent excessive wear around the compression joints.

### **Product Benefits:**

- · Aluminium is less expensive than copper
- Light and flexible
- · Aluminium is less vulnerable to theft than copper
- Available in any lengths on request

PORTABLE EARTHING EQUIPMENT FOR TRANSMISSION

### Line End Clamps

Item Code
DSSB-TLE-PEE-CE69

### **Product Details:**

The CE69 clamp is to be applied in either an upward or downward direction utilising an OL1 operating socket attached to an insulated operating pole. The spring-loaded jaws enable the clamp to be slipped easily over the line conductor and retain the clamp in position whilst the operating screw is being tightened or loosened. The clamp is suitable for application to conductors ranging from 13mm to 46mm.

- Short Circuit Rating: 20kA/ 1s
- Cont. Current Rating: 300A •
- Clamping Diameter: 13-46mm

### **Product Benefits:**

- Solid construction to give extended service
- Proven service record use by ESI for 40 years
- Lightweight and good corrosion resistance.
- Angled jaws allow application from a near-horizontal position







### Earth End Clamp

Item Code	
DSSB-TLE-PEE-CE10/A2	

Short Circuit Rating: 8.9kA/ 1s Cont. Current Rating: 150A

The <u>CE10/A2</u> clamp is for direct application by hand to steelwork. The large thumbscrew of the device has a captive hardened steel tip which penetrates through painted, weathered or non-conductive surfaces and indents into the steel work, ensuring a strong connection to earth potential.



### **CE60 Sparrow Plate**

Item Code	
DSSB-SLE-PEE-CE60	

Used to provide a common point of connection for portable drain earths that will permit the safe and effective control of induced currents and voltages.

### **Product Details:**

Fits up to six portable Line Earths and up to six further equipment earth with PB50F terminations. Provision for up to four interconnecting leads (120 sq.mm) with PB120F terminations.

- Short Circuit Rating: 36kA/ 1s
- Cont. Current Rating: 600A

### **Product Benefits:**

- Lightweight aluminium alloy
- Excellent corrosion resistance
- PB50F and PB120F ferrule compatible





PORTABLE EARTHING EQUIPMENT FOR TRANSMISSION



### PORTABLE EARTHING EQUIPMENT FOR DISTRIBUTION LINE



### **DISTRIBUTION LINE EARTHING KITS**

### **Distribution Line Earthing Kit - DLE/1**

Item Code	
DSSB-DLE-PEE-DLE/1	

### **Description:**

The 33kV standard distribution line earthing kit is supplied with parking bar,S9B clamps with a short taper operating screw, orange aluflex earth lead and an earth end clamp.

### **Technical Detail**

Short Circuit Rating : 20kA/1s (Phase to Phase)

### **Comprising:**

- 3 x S9B Short Taper Line End Clamps
- 3 x 3m Long Arctic Orange 120sqmm Aluflex Leads
- 1 x Type-A Terminal Plate
- 1 x 6m Long Arctic Orange 50sqmm Aluflex Lead
- 1 x S9A Short Handle Earth End Clamp
- 1 x PVC Carrying Bag
- 1 x 4ft Top Section Pole
- 1 x 4ft Bottom Section Pole
- 1 x P331 Socket



Earth End Clamp





**Type A Terminal Plate** 



Arctic Orange Aluflex Lead

**Bottom Section Pole** 

S KAS

### **Click Here For Product Flyer**



# PORTABLE EARTHING EQUIPMENT FOR DISTRIBUTION LINE

### Redefining Supply

### **DISTRIBUTION LINE EARTHING KITS**

### **Operating Sockets P331**

Item Code
DSSB-DLE-PEE-P331

### **Description:**

Suitable for removal and fitting of LEL and S&E fuse insulator.

### **Product Benefits**

- Lighweight Alloy
- Rugged construction
- · Excellent anti-corrosive properties
- · Adaptors available to convert operating poles types/fitting
- Precision machined

### Earth End Clamps S9A

Item Code
DSSB-DLE-PEE-S9A

### **Description:**

It is suitable for application to flat, clean, aluminium or copper bar. 12.7mm thick or 6.4 to 20mm round conductor or earth rod. The S9A is also available with short or long insulated handle, a hand applied cross pin, ring or tapered style operating screw.

### **Product Benefits**

- Tested to 17.5kA for 3 seconds (25kA/1s)
- · Solid construction to give extended service
- · Proven service record used by ESI for over 40 years
- · Light weight and good corrosion resistance
- · No plated components







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### **DISTRIBUTION LINE EARTHING KITS**

### Line End Clamp S9B

Item Code
DSSB-DLE-PEE-S9B

The S9B is designed to hook onto the conductor to become self-supporting whilst the operating screw is tightened or loosened. S9B is available with a short, tapered ring type or ISO syle operating screw and is suitable for a conductor range between 6.3mm and 38mm diameter.

### **Product Benefits**

- Tested to 17.5kA for 2 seconds (25kA/1s)
- · Solid construction for extended service
- · Proven service record used by ESI for over 40 years
- · Light weight and good corrosion resistance

### **Aluflex Earth Leads**

Item Code	Cont. Current Rating	Short Circuit Rating	Size (sqmm)
DSSB-DLE-PEE-120EL	300A	20kA/1s	120sqmm
DSSB-DLE-PEE-50EL	15A	8.9kA/1s	50sqmm

### **Description:**

Earth leads are produced from multi-stranded, commercially pure aluminium with an extruded PVC sheath, either in clear or opaque 'arctic' orange grade to protect the cable from damage.

Standard Distribution Line Earthing kits utilise 50sqmm and 120sqmm Aluflex leads, 120sqmm is used for the phase leads, and the down lead is generally 50sqmm. Leads are carefully manufactured at our factory and tested rigorously throughout the manufacturing process to ensure quality and performance.

### **Product Benefits**

- · High visibility
- · Less expensive than copper
- · Light and flexible
- · Less vulnerable to copper theft
- · Available in any lengths on request









### DISTRIBUTION LINE EARTHING KITS

### **Terminal Plates**

Item Code
DSSB-DLE-PEE-TP

### **Description:**

As an alternative to the cluster bar a terminal plate can be specified. There are several types of terminal plates available for mounting on to the operating pole.

Multi point aluminium plate, for interconnecting phase to clamp leads and down leads. Type A is also available with hook.





### **PVC Carrying Bag**

Item Code	
DSSB-TLE-PEE-BAG	

### **Description:**

Robust fabric reinforced PVC carrying bags can be supplied for the storage and handling of distribution line earthing kits.

These will provide protection for the equipment during transit as well as easing the transportation in the field and keeps the earth equipment clean and dry.

Quick release buckles or straps with Velcro fixings are supplied on the bags which also come with a black webbing shoulder strap.

### Product Benefits

- Reinforced material
- Easy storage
- Quick release opening
- Carrying strap
- Different colours and sizes available







### **DISTRIBUTION LINE EARTHING KITS**

### **Operating Pole Kit - Type 1**

Item Code	
DSSB-DLE-PEE-OPK1	

### The Operating Pole Kit comprises:

- 1 x Top Section Pole
- 3 x Intermediate Section Poles
- 1 x Primary Insulator Pole
- 1 x Bottom Section Pole
- 1 x Dispensing Head with PB Adapter
- 1 x Carry Bag

### **Description:**

The Operating pole kit is suitable for applying a range of isolation earth leads to designated earth points and overhead cables.

Operating poles are manufactured from a lighweight resin-impregnated, electrical insulation grade fibre glass.

A number of intermediate poles can be selected to make up a longer length pole. The precision snap action joints and tight telerances minimise flexure of the pole assembly The lower pole is supplied with a on-grip to provide a guaranteed grip., and a rain shield is also fitted to keep this section dry.

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Primary Insulator Pole	Intermediate Section Pole	1	Top Section Pole	





## PORTABLE EARTHING EQUIPMENT FOR DISTRIBUTION LIN

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Bottom Section Pole



### **DISTRIBUTION LINE EARTHING KITS**

### **Operating Pole Kit - Type 2**

Item Code
DSSB-DLE-PEE-OPK2

### The Operating Pole Kit comprises:

- 1 x Top Section Pole
- 3 x Intermediate Section Poles
- 1 x Primary Insulator Pole
- 1 x Bottom Section Pole
- 1 x Hex Type Socket/Head ASSY
- 1 x CATU Dispensing Head MT630C
- 1 x Carry Bag

### **Description:**

The Operating pole kit is suitable for applying a range of isolation earth leads to designated earth points and overhead cables.

Operating poles are manufactured from a lighweight resin-impregnated, electrical insulation grade fibre glass.

A number of intermediate poles can be selected to make up a longer length pole. The precision snap action joints and tight telerances minimise flexure of the pole assembly The lower pole is supplied with a on-grip to provide a guaranteed grip., and a rain shield is also fitted to keep this section dry.







Head MT630C

Hex Type Socket/ Head ASSY

PORTABLE EARTHING EQUIPMENT FOR DISTRIBUTION LIN





### **DISTRIBUTION LINE EARTHING KITS**

### **Operating Pole Kit - Type 2**

**Item Code** DSSB-DLE-PA3GTI

### This set contains the following products :

- 2-section telescopic metal sticks L 5.45 m / 2.20 m
- Upper section of insulating stick
- Lower section of insulating stick
- Lower insulating stick extension, length 1,6 m
- Guide socket
- Cable reel with 3 x 10 m of copper braid, 35 mm<sup>2</sup> and an earthing clamp
- Soft plastic-coated canvas cover
- Hexagonal earthing rod 1 m Ø 18 mm

### USAGE

The device enables a single linesman to :

- check for the absence of voltage
- earth and short-circuit overhead lines at heights of up to 11.50 m

### **ADVANTAGES**

For work from the ground to heights up to 11.5 m.

### **TECHNICAL SPECIFICATIONS**

- Max. allowable Isc : 8 kA/1s
- Clamping range on cylindrical conductors from 3 mm to 22 mm in diameter (7 to 380 mm<sup>2</sup>)
- Telescopic metal sticks fitted with collars for quick, calibrated clamping, with integrated cleaning rings
- 3-section foam-filled fiberglass insulating sticks, type IEC 60855, with reinforced slot-in joints
- Optional insulating extension to reach 11.5m,
- Can fit the voltage tester to the bottom of the metal stick before earthing, (voltage tester optional)
- Removable clamp and stick bottom Nominal voltage up to 36kV.

### **STANDARD**

CEI 60855 / EN 50508 / IEC 61230 / DIN VDE680 / EDF-SPS n°CK 18-S-422



PORTABLE EARTHING EQUIPMENT FOR DISTRIBUTION LIN

**Click Here For Product Flyer** 







### **VOLTAGE DETECTOR**



- any directions (360° LED indication)
- Voltage bright LED visual indication
- · Sound indication
- Power source: 1.5V"C" type battery x 3
- Compatible with most hot sticks.
- Lightweight, robust & compact

Operating temperature : -10° ~ 50°C Storage temperature: -20°C ~ 60°C Humidity : 85%R.H @40°C Case height : 265mm Case width : 117mm Weight (batt incl.) : Approx. 600g Power source : 1.5 "C" x 3 alkaline batteries **VOLTAGE DETECTO** 



### **VOLTAGE DETECTOR**

### **Beacon Voltage Detector**

Item Code	Voltage Operating Range	Threshold Voltage
DSSB-SSE-PEE-BVD12	5 - 12 kv	1.2 - 2.25 kV
DSSB-SSE-PEE-BVD36	10 - 36 kv	3.6 - 4.5 kV

Beacon is designed for both indoor and outdoor use as the circuitry is housed within a durable plastic moulded body.

With an audible alarm, and visible warning light, the Beacon is simple to use, and is suitable in poor visibility. The unit is a capactitve type and does not require a downlead, which greatly reduces the risk to the operator caused where fault protection can be grounded.

- Visible and audible detection.
- Suitable for fitting to standard operating poles head.
- Built-in test facility
- Battery operated (easy change)
- Rugged construction
- Voltage ranges 5-12kV and 10-36kV available
- Twin LED indication
- Lightweight
- Easy to use
- Supplied in a sturdy carry case

### Supplied with

- Beacon Voltage Detector
- Durable Case
- Y Contact Probe
- Universal Castellated Adaptor
- Long Taper Operating Socket Adapter.
- 4 Feet Poles (Bottom & Top Section Poles)
- Universal Adapter Castellated Head For Top Pole



Universal Castellated Adaptor For Pole





' Bottom Section Pole

Top Section Pole





### **VOLTAGE DETECTOR**

### WD6B/D3 Voltage Detector

Item Code	
DSSB-SSE-PEE-WD6B/D3-5/12	
DSSB-SSE-PEE-WD6B/D3-10/36	
DSSB-SSE-PEE-WD6B/D3-50/140	

WD6B/D3 is a robust construction, the circuitry is housed within the tubular body. The unit is suitable for fitting to any Pole section as a large range of adaptors is available.

Voltages are indicated with an audible and visual warning, and the light is bright enough so that it can be seen in poor visibility conditions.

Available in range of 5-12kV, 10-36kV and 50-140kV

### **DS/MS/VA Voltage Detector**

Item Code

The DS/MS/VA comes in five main components-

- The Contact Probe can be supplied as a Mushroom, Pointer or "Y" probe.
- The Extension can be supplied to suit The relevant range of voltage.
- The Adaptor can be supplied at an angle of 900 or 600.
- The Main Body houses The voltage detector.
- The Handle provides suitable insulation from the voltage being tested, and provides storage for the main body when not in use.
- Range includes 3.3kV, 5-12kV & 10-36kV

### Benefits

- Robust Construction
- Lightweight
- Fully interchangeable components
- Audible and Visual Warning











### **VOLTAGE TESTER**

### Prüfball SPB Digital



Туре	ltem Code	Phase-/ phase sequence test	Continuity test	Additional load 30 mA-RCD- tripping	LCD value
SPB 500L	DSSB-RSE-VT-81422	Yes	Yes	Yes	Yes
50-500 V					
SPB 1000L	DSSB-RSE-VT-81423	Yes	Yes	Yes	Yes
50-1000 V					

### **VOLTAGE TESTER**



### **VOLTAGE TESTER**

### **Prüfball SPB Analog**



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Туре	Item Code	Phase-/	Continuity	Additional load	Vibration	Acoustic
		phase sequence	test	30 mA-RCD-	inducation	indication
		test		tripping	for load	for load
SPB 500B	DSSB-RSE-VT-81411	Yes	Yes			
50-500 V						
SPB 1000B	DSSB-RSE-VT-81414	Yes	Yes			
50-1000 V						
SPB 500PR	DSSB-RSE-VT-81401	Yes	Yes	Yes	Yes	
50-500 V						
SPB 1000PR	DSSB-RSE-VT-81404	Yes	Yes	Yes	Yes	
50-1000 V						
SPB 500PRA	DSSB-RSE-VT-81402	Yes	Yes	Yes		Yes
50-500 V						



### **VOLTAGE TESTER**

### Prüfball SPB-UB for subways



Туре		Self-test with green LED	Single pole voltage warning	,		Ū	Magnet for
				interference volt			rail
SPB 1000L-UB	DSSB-RSE-VT-81391	Yes	Yes	Yes	Yes		
50-1000V							
SET SPB-UB	DSSB-RSE-VT-81390	Yes	Yes	Yes	Yes	Yes	Yes
50-1000∨							

### **VOLTAGE TESTER**







### SOFT DISCHARGED ROD

### HOT STICK

Item Code
DSSB-SSE-PEE-HS120 (M)
DSSB-SSE-PEE-HS500 (M)

- Can be attched to the 275 HP proximity Detectors and contact Capacitive Detectors 21 x HVD switch disconnectors.
- Universal "sunrise" head attachement to fit special tool fittings.
- Head Section rated at 100kV per 300mm (5min) •
- Comes complete with sunrise fitting and fuse extractor
- 3 x 1.8 meter sticks; 1 x 1.2 meter head section.



### **TELESCOPIC HOT STICK**

Item Code
DSSB-SSE-PEE-HS175 (M)

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

### **APPLICATIONS**

- Opening and closing switches
- Overhead switch operation •
- Fuse replacement •
- Lamp replacement •
- Cleaning electrical fittings
- Instalation of temporary clamps .
- Tree trimming

Ergonomic Triangular-shaped stick design provides better grip

**Rubber Hook Latch** Securing the sticks in retracted position during storage or transportation









### **DISCHARGED ROD**

Padded Canvas Storage



### SOFT DISCHARGED ROD

### HIGH VOLTAGE (HV) DISCHARGE STICK/ROD (GERMANY)

Item Code	Dimensions (cm) x Weight	Damping Resistor	Discharge Capacitor	kV
DSSB-EA-HVDR-EST35	50 (L) x 0.95kg	10K ohm	6 mfd	35
DSSB-EA-HVDR-EST50	136 (L) x 1.9kg	100K ohm	6 mfd	50
DSSB-EA-HVDR-EST75	156 (L) x 2.2kg 🛛	150K ohm	3 mfd	80
DSSB-EA-HVDR-EST100	176 (L) x 2.5kg?	200K ohm	2 mfd	110
DSSB-EA-HVDR-EST150	208 (L) x 2.85kg?	300K ohm	2 mfd	150

High Voltage discharge probe with built-in resistor ensures controlled and reduced discharge of live cables up to 35 kV. The pole is 50 cm long and weighs only 0.95 kg. Resistor is 10kohm and maximum capacitance is 6 uF. Avoid damage to the cables as a result of direct ground / short circuit. Safe discharging of visual grounding. PS: These rods are available in several sizes with voltages up to 150 kV.





### EARTH DISCHARGE ROD (UK)

Item Code	Voltage
DSSB-EA-EDD-ER15	for use up to 15kV
DSSB-EA-EDD-ER 35	for use up to 35kV
DSSB-EA-EDD-ERR 15	for use up to 15kV
DSSB-EA-EDD-ERR 35	for use up to 35kV

\*\*\*ER= without Discharge Limiting Resistor

\*\*\*ERR= with Discharge Limiting Resistor



## **DISCHARGED ROD**







### SUBSTATION RUBBER MAT (Low Voltage)

Item Code	Class	Size
DSSB-SA-RM-1kV-S	0	10000mm x 915mm x 2.5mm
DSSB-SA-RM-7.5kV-S	1	10000mm x 915mm x 3.0mm



IEC Standard	<b>Recommended Use</b>
61111:2009	Up to
Class 0	1.0kV
Class 1	7.5kV
Class 2	17.0kV
Class 3	26.5kV
Class 4	36.0kV

### ADVANTAGE OF CLOTH IMPRESSION ARE:

- ~ Antislip both sides
- ~ Easer for rolling instruments/ equipments
- ~ Easier to clean than ribbed matting

### **Corrugated Matting**

Corrugated with pointed corrugations or ribs running lengthwise. These mattings are used for flooring in many other places. Specially made for long lasting services. Won't curl, shrink or separate. Easy to clean substation. Power Plants, Electrical Installation switchboard.



3mm, 20Kv Code: DSSB-SA-RM-7.5kV-S

Class 0

2.5mm Low Voltage Code: DSSB-SA-RM-1KV-S







### SUBSTATION RUBBER MAT (High Voltage)

Item Code	Class	Size
DSSB-SA-RM-17kV-S	2	6000mm x 5mm x 1000mm
DSSB-SA-RM-26.5kV-S	3	6000mm x 5mm x 1000mm
DSSB-SA-RM-36kV-S	4	6000mm x 6mm x 1000mm













### INSULATION RUBBER MAT

Item Code	Class	Size	Nominal Maximum Use Voltage
DSSB-SA-RM-IRM0	0	(3mm) Nominal Thickness x 1,000mm (1m) Width x 10,000mm (10m) Length/roll	1kV & Below
DSSB-SA-RM-IRM1	1	(5mm) Nominal Thickness x 1,000mm (1m) Width x 10,000mm (10m) Length/roll	7.5kV & Below
DSSB-SA-RM-IRM2	2	(9.5mm) Nominal Thickness x 1,000mm (1m) Width x 10,000mm (10m) Length/roll	17kV & Below

### Purpose:

Switchboard matting is a non-conductive high-density rubber compound engineered to prevent electric shock around high voltage equipment. The non-conductive rubber compound creates an insulating barrier between the electrical source and the ground.

Material : Non-RoHS SBR / Reclaimed Natural Rubber Base Polymer





### NON CONDUCTIVE INSULATION RUBBER MAT

Item Code	Class	Size	Nominal Maximum Use Voltage
DSSB-SA-RM-NCIRM0	0	2.5mm Nominal Thickness x 915mm (3ft) Width x 10,000mm (10m) Length/roll	1kV & Below
DSSB-SA-RM-NCIRM1	1	3.0mm Nominal Thickness x 915mm (3ft) Width x 10,000mm (10m) Length/roll	7.5kV & Below
DSSB-SA-RM-NCIRM2-CSM	2	5.0mm Nominal Thickness x 1000mm (1m) Width x 6,000mm (6m) Length/roll	17kV & Below
DSSB-SA-RM-NCIRM2-DSM	2	5.0mm Nominal Thickness x 1000mm (1m) Width x 6,000mm (6m) Length/roll	17kV & Below
DSSB-SA-RM-NCIRM3	3	5.0mm Nominal Thickness x 1000mm (1m) Width x 6,000mm (6m) Length/roll	26.5kV & Below
DSSB-SA-RM-NCIRM4	4	6.0mm Nominal Thickness x 1000mm (1m) Width x 6,000mm (6m) Length/roll	36kV & Below
DSSB-SA-RM-NCIRM4-TE	4	7.0mm Nominal Thickness x 1000mm (1m) Width x 6,000mm (6m) Length/roll	36kV & Below

### Purpose:

Switchboard matting is a non-conductive high-density rubber compound engineered to prevent electric shock around high voltage equipment. The non-conductive rubber compound creates an insulating barrier between the electrical source and the ground.



### Model : DSSB-SA-RM-NCIRMO

Top Surface : Anti Slip Corrugated Material : RoHS-2 Natural Rubber Base Polymer Nominal Thickness: 2.5mm IEC 61111:2009 : CLASS 0, Dielectric Test Voltage : 10kV , (10,000 V) Nominal Maximum Use Voltage : 1 kV ( 1,000 V) Colour: Grey Test Certificate : Available (T)(Si)(S)



### Model : DSSB-SA-RM-NCIRM1

Top Surface : Anti Slip Corrugated Material : RoHS-2 Natural Rubber Base Polymer Nominal Thickness : 3mm IEC 61111:2009 : CLASS 1, Dielectric Test Voltage : 20kV , (20,000 V) Nominal Maximum Use Voltage : 7.5kV (7,500 V) Colour: Black Test Certificate : Available (T)(Si)(S)



### NON CONDUCTIVE INSULATION RUBBER MAT



Model : **DSSB-SA-RM-NCIRM2-CSM** Top Surface : Anti Slip Corrugated Material : RoHS-2 Natural Rubber Base Polymer Nominal Thickness : 5mm IEC 61111:2009 : CLASS 2, Dielectric Test Voltage : 30kV , (30,000 V) Nominal Maximum Use Voltage : 17kV (17,000 V) Colour: Black Test Certificate : Available (T)(Si)(S)



Model : DSSB-SA-RM-NCIRM2-DSM

Top Surface : Anti Slip Diamond Material : RoHS-2 Natural Rubber Base Polymer Nominal Thickness : 5mm IEC 61111:2009 : CLASS 2, Dielectric Test Voltage : 30kV , (30,000 V) Nominal Maximum Use Voltage : 17kV (17,000 V) Colour: Black Test Certificate : Available (T)(S)



### Model : DSSB-SA-RM-NCIRM3

Top Surface : Anti Slip Diamond Material : RoHS-2 Natural Rubber Base Polymer Nominal Thickness : 5mm IEC 61111:2009 : CLASS 3, Dielectric Test Voltage : 40kV , (40,000 V) Nominal Maximum Use Voltage : 26.5kV (26,500 V) Colour: Grey Test Certificate : Available (T)(S)



### Model : DSSB-SA-RM-NCIRM4

Top Surface : Anti Slip Corrugated Material : RoHS-2 Natural Rubber Base Polymer Nominal Thickness : 6mm IEC 61111:2009 : CLASS 4, Dielectric Test Voltage : 50kV , (50,000 V) Nominal Maximum Use Voltage : 36kV (36,000 V) Colour: Grey Test Certificate : Available (T)(Si)(S)



### NON CONDUCTIVE INSULATION RUBBER MAT



### Model : DSSB-SA-RM-NCIRM4-TE

(High Voltage Electrical Insulation Elastomer Mat ) Top Surface : Anti-Slip Corrugated Material : RoHS-2 Thermoplastic Elastomer Nominal Thickness : 7mm IEC 61111:2009 : CLASS 4, Dielectric Test Voltage : 50kV , (50,000 V) Nominal Maximum Use Voltage : 36kV (36,000 V) Colour: Grey Test Certificate : Available (T)(Si)(S)



### **EMERGENCY** EQUIPMENT **KIT**



### SAFETY RESCUE STICK

### DELTA ELECTRICAL SAFETY HOOK

Node Size : 16mm

Safety Hook Operating Diameter : 45cm

- Able to withstand Static Load = ±145kg
- Able to withstand AC voltage = 110kV

### Application :

Used for rescuing an injured workers (Electric Shock, Arc Flash etc.) It is used to pull the victim into the safe area.

\* Rescue Hook come with 2 holding clip.

### Single Section Type :

Model	Length (m)	Section
DSSB-SSE-RHF150	1.5	1
DSSB-SSE-RHF180	1.8	1
DSSB-SSE-RHF200	2	1

### Joint Section Type :

Model	Length (m)	Section	Retracted Length (m)
DSSB-SSE-RHJ180	1.8	2	0.95
DSSB-SSE-RHJ200	2	2	1.05
DSSB-SSE-RHJ250	2.5	2	1.3
DSSB-SSE-RHJ300	3	2	1.55

## EMERGENCY EQUIPMENT KIT

### **Telescopic Type :**

Model	Length (m)	Section	Retracted Length (m)
DSSB-SSE-RHTELE180	1.8	2	1.00
DSSB-SSE-RHTELE200	2	2	1.10
DSSB-SSE-RHTELE250	2.5	2	1.35
DSSB-SSE-RHTELE300	3	2	1.60



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### NOTES:




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### NOTES:


### Delta Sama Jaya Sdn.Bhd.



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