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DISTRIBUTION LINE EARTHING

# P&B Weir Electrical Ltd. Distribution Line Earthing

+44 (0) 1225 811449



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# Distribution Line Earthing

## PRODUCT RANGE

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### PENTA P&B DISTRIBUTION LINE END CLAMPS

PENTA P&B offer a broad range of Line End clamps to suit the requirements of ENA Technical Specification 41-21 as well as for export markets. The Distribution Line range of portable earthing equipment is suitable for temporary earthing of conductors up to 66kV.

### S9B LINE END CLAMP

The S9B Line End clamp is designed to hook over the conductor and be self-supporting whilst the operating screw is tightened or loosened. S9B clamps are available with a short tapered, long tapered, ring type or ISO style operating screw and are suitable for a conductor range between 6.3mm and 38mm diameter.

### PRODUCT BENEFITS

-  Short Circuit tested to 17.5kA for 2 seconds (25kA/1s)
-  Robust construction for extended service life
-  Proven service record used by ESI for over 50 years
-  Lightweight and excellent corrosion resistance



#### LINE END CLAMPS

##### S9B SHORT TAPER LINE END CLAMP

Hooks over conductor, with spring-loaded jaw for ease of installation.

Clamping Diameter: 3-38mm  
Short Circuit Rating: 17.5kA/2s  
Operating Screw: Short Taper  
Weight: 0.56kg  
**Part Number: FA3218-A**

##### S9B RING TYPE LINE END CLAMP

Ring Type operating screw allows application to conductor whilst holding the Operating Pole at an angle to the Line End clamp.

Clamping Diameter: 3-27mm  
Short Circuit Rating: 17.5kA/2s  
Operating Screw: Ring Type  
Weight: 0.52kg  
**Part Number: FA3213-A**



##### S9B LONG HANDLE LINE END CLAMP

Insulated Handle to allow hand application upon LV Distribution Lines.

Clamping Diameter: 3-27mm  
Short Circuit Rating: 17.5kA/ 2s  
Operating screw: Insulated Handle  
Weight: 0.58kg  
**Part Number: FA3344-A**



##### S9B DLE CEB ASSEMBLY

Serrated jaw profile to provide better contact upon weathered conductor.

Clamping Diameter: 3-27mm  
Short Circuit Rating: 17.5kA/2s  
Operating Screw: Short Taper  
Weight: 0.56kg  
**Part Number: EFD-13218/3**



# Distribution Line Earthing

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### LINE END CLAMP CE62

The Line End clamp (sometimes referred to as a phase or conductor clamp) is precision manufactured from a robust aluminium casting with stainless steel fittings.

The CE62 incorporates a stainless steel jaw, which is spring-loaded to reduce application and removal time associated with clamps of the screw type. CE62 is suitable for a conductor range between 4mm and 20mm.

Three interconnected CE62 clamps can be loaded onto the Applicator Head for rapid, snap-on application to the conductors. Removal is again a quick action using the spike of the Applicator Head, by locating into the eye at the rear of the clamp and pulling firmly downwards.

### PRODUCT BENEFITS

-  Solid construction for extended service
-  Proven service record used by ESI for over 40 years
-  Rapid fitting and removal



#### CE62 SNAP-ON LINE END CLAMP

Sprung loaded jaw snaps onto conductor for easy connection and removal.

Clamping Diameter:	4-20mm
Short Circuit Rating:	12.5 kA/1s
Applied with:	DH1A or Applicator Head
Weight:	0.44kg
<b>Part Number:</b>	<b>EFD-16733</b>

#### CE52/A LINE END CLAMP

Push-on aluminium Line End clamp with stainless steel fittings.

Application:	For use up to 400kV
Operating Screw:	Long taper
Clamping Diameter:	13mm to 42mm
Short Circuit Rating:	8.9 kA/1s
Weight:	0.69kg
<b>Part Number:</b>	<b>EFP-16704</b>



#### CE5 LINE END CLAMP

Push-on Line End clamp. Gunmetal with tin plated finish and high quality stainless steel fittings.

Material:	Bronze
Operating Screw:	Short taper
Conductor size:	12.7mm – 25.4mm
Short Circuit Rating:	12kA/1s
<b>Part Number:</b>	<b>EFP-10911</b>

# Distribution Line Earthing

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## CE36 LINE END CLAMP

CE36 Line End Clamp is also available.






Part Number: FA3724-A

## CE10 CROSS ARM/STEELWORK CLAMPS

The type CE10 clamp is suitable for steelwork/ cross arms up to 13mm thick.

Manufactured from a lightweight aluminium alloy, they have a stainless steel operating screw fitted with a hardened steel tip to penetrate painted and non-conductive surfaces, to ensure a low resistance earth connection. Also available is a black pvc protective shroud to protect the CE10/A clamp when painting etc.

### PRODUCT BENEFITS

-  Lightweight
-  Excellent corrosion resistance
-  Solid construction for extended service



### CE10 CROSS ARM/STEELWORK CLAMP

Hardened Steel Tip penetrates non-conductive surfaces for a strong, low resistance connection.

Clamping Range: 0-13mm thick

Weight: 0.45kg

Part Number: EFD-11764/2

## S9A RING TYPE STEELWORK/EARTH END CLAMP

Hardened Steel Tip penetrates non-conductive surfaces for a strong, low resistance connection.

Clamping Range: Up to 20mm thick  
6.4-20mm diameter

Short Circuit Rating: 17.5kA/2s

Operating Screw: Ring Type

Weight: 0.45kg

Part Number: FA3496-A



# Distribution Line Earthing

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## S9A LONG TAPER STEELWORK/EARTH END CLAMP

Hardened Steel Tip penetrates non-conductive surfaces for a Strong, low resistance connection.

Clamping Range: 6.4-20mm diameter  
Up to 20mm thick bar

Short Circuit Rating: 17.5kA/2s

Operating Screw: Long Taper

Weight: 0.40kg

**Part Number: EFP-11076/8**






## S9A EARTH END CLAMPS

The PENTA P&B Distribution Line range of portable earthing equipment is suitable for temporary earthing of conductors up to 66kV and suits the requirements of ENA TS 41-21 as well as for export markets.

The S9A Earth End Clamp (sometimes referred to as grounding clamp) is robust and will withstand a reasonable amount of rough handling.

It is suitable for application to aluminium or copper flat bar, round conductor or earth rods. The S9A is also available with long insulated handles, hand-applied cross pins, and ring or tapered style-operating screws.

## PRODUCT BENEFITS

-  Tested to 17.5kA for 2 seconds (25kA/1s)
-  Solid construction to give extended service
-  Proven service record used by ESI for over 40 years
-  Lightweight and good corrosion resistance
-  No plated components



## S9A SHORT HANDLE EARTH END

Knurled insulated handle for ease of application and rocker contact block.

Clamping range: 6.4 – 17mm dia.

Short Circuit Rating: 24.75kA/ 1s

Operating Screw: Insulated Handle

Weight: 0.46kg

**Part Number: FA1076-F**

## S9A CLAMP WITH HARDENED TIP

Knurled insulated handle for ease of application and hardened steel tip.

Clamping range: Up to 20mm thick  
6.4-20mm dia.

Short Circuit Rating: 17.5kA/ 2s

Operating Screw: Insulated Handle

Weight: 0.46kg

**Part Number: SK081008-0/1**





# Distribution Line Earthing

## PRODUCT RANGE

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### ALUFLEX LEADS

PENTA P&B earth leads are produced from multi-stranded, commercially pure aluminium with an extruded pvc sheath, either in clear or opaque 'arctic' grade to protect the cable from damage. Other insulation colours are available upon request. PENTA P&B can supply Aluflex leads in any length required, in a range of sizes including 50sqmm, 70sqmm, 95sqmm, 120sqmm and 150sqmm. Suits the requirements of ENA TS 41-21 as well as for export markets.

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.

Earth leads can also be provided from flexible multi-stranded copper 25, 35, 50, 70 and 95 sqmm as an alternative to aluminium leads. PENTA P&B also has available captive Velcro fasteners for cable storage in three lengths: 220mm, 350mm and 500mm.

### PRODUCT BENEFITS

-  High visibility
-  Less vulnerable to theft than copper
-  Half the weight of copper for equivalent Short Circuit Rating
-  Available in any length on request



#### 120sqmm ARCTIC ORANGE ALUFLEX LEADS

Short Circuit Rating: 20kA/1s  
Cont. Current Rating: 300A  
Weight per m: 0.45kg  
**Part Number: FA3353**

#### 50sqmm ARCTIC ORANGE ALUFLEX LEADS

Short Circuit Rating: 8.9kA/1s  
Cont. Current Rating: 150A  
Weight per m: 0.19kg  
**Part Number: FA3347**



#### 50sqmm ARCTIC BLUE ALUFLEX LEADS

Short Circuit Rating: 8.9kA/1s  
Cont. Current Rating: 150A  
Weight per m: 0.19kg  
**Part Number: FA3472**

#### 120sqmm CLEAR ALUFLEX LEADS

Short Circuit Rating: 20kA/1s  
Cont. Current Rating: 300A  
Weight per m: 0.45kg  
**Part Number: EFL-19136/1**



#### 50sqmm ORANGE/REFLECTIVE ALUFLEX

Market leading Aluflex cable with orange marking helix for identification with additional reflective silver helical strip to aid identification at night or when used in tunnels. Strands remain visible between helical strips to aid inspection.

Short Circuit Rating: 8.9kA/1s  
Cont. Current Rating: 150A  
Weight per m: 0.19kg  
**Part Number: EFL-19134**

# Distribution Line Earthing

## PRODUCT RANGE

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### ALUMINIUM TERMINATIONS

Terminations are manufactured from specially milled and certified material and precision machined in our works, tested rigorously throughout the manufacturing process to ensure quality and performance.



#### PB50 PALM TERMINATIONS

Suitable for 50sqmm Aluflex cable, available to suit M10 and M12 fasteners.

**Part Numbers:** EMP-07880/1 (11 Dia Hole)  
EMP-07880/2 (12 Dia Hole)  
EMP-07880/3 (13 Dia Hole)

Termination	Sleeves/ Spring
PB50 Alu. Termination	6112-01
PB50T Alu. Termination	EBL-16548
PB50S Alu. Termination	6112-01
PB50F Alu. Termination	6112-01

#### PB70 ALU. TERMINATIONS

Suitable for 70sqmm Aluflex cable, suits M12 fasteners.

**Part Number:** EMP-07883/1 (11 Dia Hole)  
EMP-07883/2 (12 Dia Hole)  
EMP-07883/3 (13.25 Dia Hole)

Termination	Sleeves/ Spring
PB70 Alu. Termination	6112-01
PB70T Alu. Termination	EBL-16548
PB70F Alu. Termination	6112-01



#### PB95T ALU. TERMINATION

Suitable for 95sqmm Aluflex cable, suits M12 fasteners.

**Part Number:** EMP-07889

Termination	Sleeves/ Spring
PB95T Alu. Termination	EBP-14714
PB95F Alu. Termination	EBP-14714

#### PB120 ALU. TERMINATIONS

Suitable for 120sqmm Aluflex cable, suits M12 fasteners.

**Part Number:** EMP-07881/1 (11 Dia Hole)  
EMP-07881/2 (12 Dia Hole)  
EMP-07881/3 (13 Dia Hole)

Termination	Sleeves/ Spring
PB120 Alu. Termination	6112-02
PB120T Alu. Termination	4906
PB120S Alu. Termination	6112-02
PB120F Alu. Termination	6112-02



#### PB150T ALU. TERMINATION: ESI-T1

Suitable for 150sqmm Aluflex cable, available to suit M10 and M12 fasteners.

**Part Numbers:** EMP-07882

Termination	Sleeves/ Spring
PB150T Alu. Termination	EBP-14714



# Distribution Line Earthing





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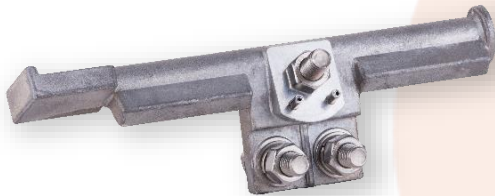
## CLUSTER BARS

The cluster bar is an attachment bolted to the centre of three-conductor clamps and facilitates the parking of the other two-conductor clamps with interconnecting leads, whilst the assembly is fitted or removed from the distribution line. The Cluster Bar is designed to be attached to the S9B Line End clamp, which then can accommodate two further S9B Clamps and a Cross Arm Clamp if required. This reduces the need to apply clamps individually by lowering the Operating Pole several times.

## PRODUCT BENEFITS

-  Solid construction for many years' service
-  Proven service record used by the ESI for over 40 years
-  Used worldwide
-  No plated components high-quality stainless-steel fasteners

Two types of Cluster Bars are available for ease of application.



### DLE/CAC CLUSTER BAR ASSEMBLY

Cluster bar assembly for use upon S9B clamp. Suitable for an additional cross-arm clamp with centre cable fixing for up to 4 leads.

**Part Number:** EFD-16748

### THREE-WAY CLUSTER BAR

Cluster bar assembly for use upon S9B clamp. Suitable for supporting two additional S9B clamps two phase leads and the earth lead.

**Part Number:** A3214-A



LAST UPDATED 05/04/2024





# Distribution Line Earthing

## PRODUCT RANGE

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### TERMINAL PLATES

As an alternative to the cluster bar, a terminal plate can be specified. There are several types of terminal plates available.



#### TYPE A TERMINAL PLATE ASSEMBLY

Multi-point aluminium plate, for interconnecting phase leads and down lead. The Type A Terminal Plate Assembly is available with and without a support hook (pictured without hook).

**Part Numbers:**                    **A3478-A (with hook)**  
                                                 **A3478-B (without hook)**

### TYPE B CRUCIFIX TERMINAL PLATE

The Type B Crucifix assembly is suitable for mounting to poles using chain or alternatively a ratchet strap. A parking bar is used for supporting, resting and raising the line end clamps before application. Suitable for four lead attachment via M12 stainless steel fasteners. Hook or Carabine to aid lifting.

**Part Numbers:**                    **EFD-16730 (Crucifix with Chain)**  
                                                 **EFD 16730/1 (Crucifix with strap and Carabine)**



#### TYPE C TERMINAL PLATE

Aluminium busbar with M12 stainless steel fasteners for attaching leads. With Carabine hook and webbing strap to secure to structure.

**Part Number:**                    **EFD-20030**

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# Distribution Line Earthing

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## TYPE D TERMINAL PLATE

Aluminium busbar with stainless steel M12 fasteners. Heavy-duty ratchet strap for securing to pole or structure. Similar to the Type A terminal plate except with a ratchet strap for secure pole mounting.

**Part Number:** EFD-16737



## CRUCIFIX PLATFORM

**Part Number:** EFD-16795








## EARTH RODS

Earths Rods can be used individually or interconnected by 50sqmm Arctic Orange Leads to create a nest. Leads can be attached using S9A Earth End clamps or Split Connectors. Configurations can be fully customised depending on customer requirements.

PENTA P&B Earth Rods have a high tensile strength, low carbon steel core, 99.95% pure copper is electrolytically applied and forms a metallurgical bond between the steel core and the copper. This combination makes the rod ideal for deep driving whilst also providing lasting resistance to corrosion. Standard earth rods are manufactured from either 16mm (5/8") or 19mm (3/4") diameter steel core copper bonded rods and are usually supplied in 850mm sections. Other lengths and diameters are also available.

The rod can be supplied with a split connector clamp to accept the termination of the down lead. Alternatively, a lightweight aluminium Earth end clamp type S9A fitted with an insulated handle can be supplied.

## PRODUCT BENEFITS

-  Lasting resistance to corrosion
-  High tensile strength
-  Available in standard lengths 850mm
-  Copper clad for low resistance
-  Other Lengths available (1,000mm and 1,200mm)



### 850MM EARTH ROD STEEL/COPPER

Copper clad steel spiked earth rod 850mm long x 14.3mm O/D. A high tensile strength, low carbon steel core clad with 99.95% pure copper and thickness 0.25mm.

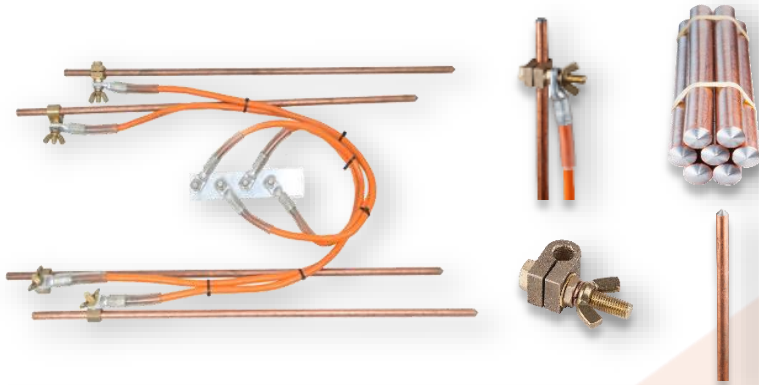
**Part Number:** EBD-20070



# Distribution Line Earthing

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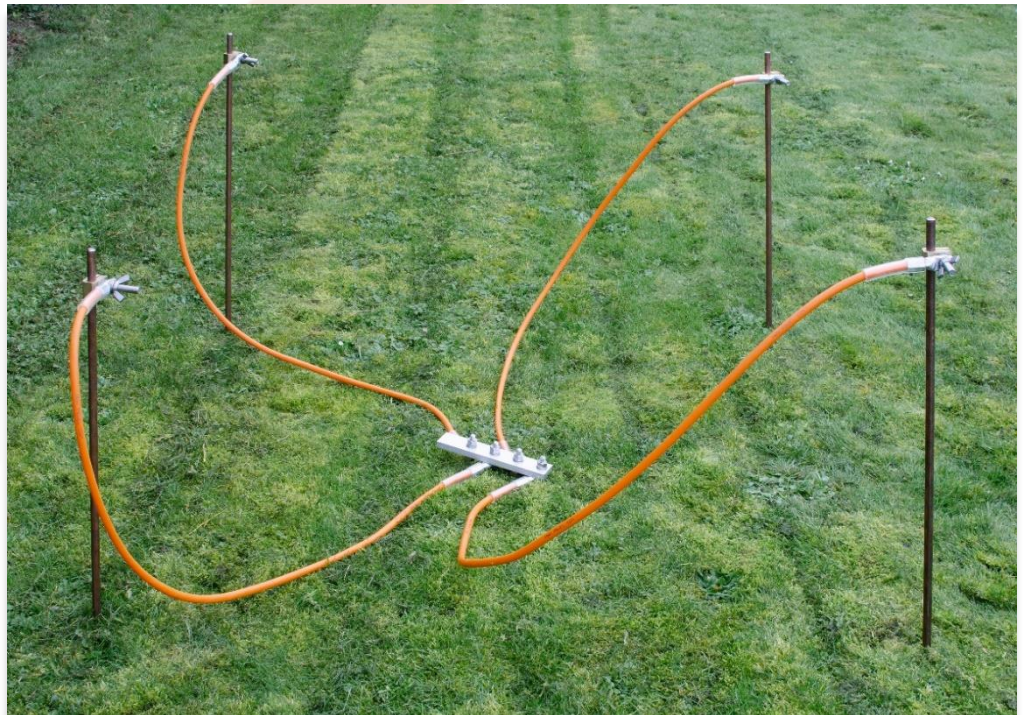
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## EARTH NEST KIT

Consisting of four Earthing rods, four 1.5m leads of 50sqmm orange Aluflex and a multipoint connector.

Part Number: MISC-00020



## SPARE PARTS



### SPLIT CONNECTOR FOR 14.3mm dia. EARTH ROD

Split type brass connector assembly for use with 14.3mm diameter copper clad earth rods.

Part Number: EAD-20074

### 50sqmm ORANGE LEAD 1.50m

Part Number: FA3347-C 01.50



### CONNECTOR ASSEMBLY

Multi-point aluminium connecting plate assembly for distribution line earthing, with stainless steel fasteners.

Part Number: SK140802-0/1

# Distribution Line Earthing

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## SCREW TYPE EARTH ROD

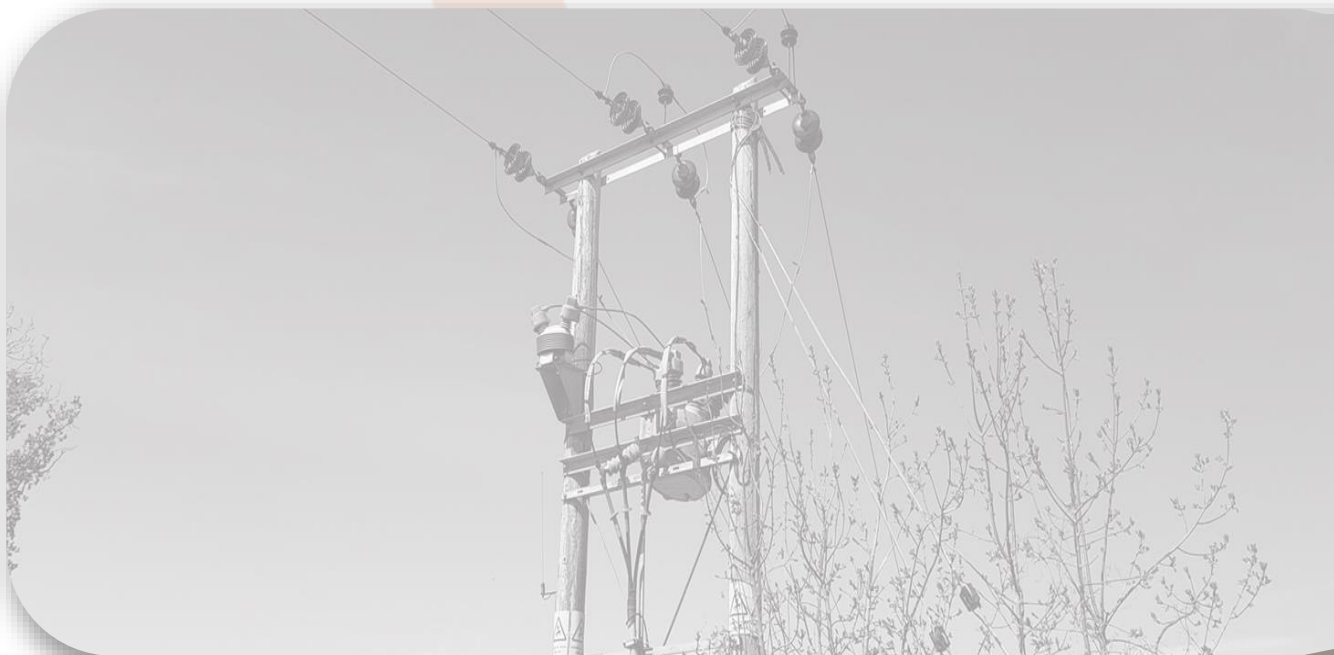
The 1.5m Screw Type Earth Rod x 17.2mm diameter copper clad steel core, with stainless steel sliding tommy bar for screwing into the ground. A bronze screw profile casting is pinned to the Earth rod for strength and provides an excellent conductive path to Earth. Earth rods come pre-fitted with split connectors with two variations:

Single split connector for nest applications (pictured)

Double split connectors to allow daisy chaining

**Part Numbers:**            **EFD-20137/1 (Single Split Connector)**  
                                      **EFD-20137/2 (Double Split Connectors)**

Strong cast bronze spiral end fitting to ease screwing into the ground to provide low resistance Earth connection



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# Distribution Line Earthing

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### DLE OPERATING POLES

PENTA P&B offer a range of operating poles suitable for use up to 66kV in accordance with ENA Technical Specification 41-21. These typically comprise 4ft (1.22m) sections poles, which can be interconnected to form the required length on site, comprising bottom (with a handgrip), intermediate and top sections. Our operating poles are manufactured from lightweight resin-impregnated fibreglass of a high electrical insulation grade and employ precision joints to reduce deflection and improve handling. Alternative lengths are available for special applications.

There are two Industry standard pole types, the PENTA P&B style and the Bowthorpe style sections. PENTA P&B are able to supply both styles and these are compatible with a large range of sockets and heads detailed in this brochure.



#### P&B 4ft (1.22m) TOP POLE SECTION

**Material:** Glass cloth reinforced epoxy resin tubing  
**Length:** 4ft (1.22m)  
**Weight:** 0.70kg  
**Use with:** PENTA P&B Intermediate and Bottom Poles

**Part Number:** EBR-18101/4

#### P&B 4ft (1.22m) INTERMEDIATE & BOTTOM POLE SECTIONS

**Material:** Glass cloth reinforced epoxy resin tubing  
**Length:** 4ft (1.22m)  
**Weight:** 0.70kg  
**Use with:** Inter & Top Poles

**Part Numbers:** EAR-18103/1 (Intermediate)  
 EAR-18103/2 (Bottom)



#### BOWTHORPE STYLE 4ft (1.22m) TOP POLE SECTION

**Material:** Glass Cloth Reinforced Epoxy Resin Tubing  
**Length:** 4ft (1.22m)  
**Weight:** 0.70kg  
**Use with:** Bowthorpe Intermediate & Bottom Poles

**Part Number:** EBR-18163

#### BOWTHORPE STYLE 4ft (1.22m) INTERMEDIATE SECTION POLE

**Material:** Glass Cloth Reinforced Epoxy Resin Tubing  
**Length:** 4ft (1.22m)  
**Weight:** 0.70kg  
**Use with:** Bowthorpe Intermediate, Top & Bottom Poles

**Part Number:** EBR-18161



#### BOWTHORPE 4ft (1.22m) BOTTOM POLE SECTION

**Material:** Glass Cloth Reinforced Epoxy Resin Tubing  
**Length:** 4ft (1.22m)  
**Weight:** 0.70kg  
**Use with:** Bowthorpe Intermediate & Top Poles

<b>Without Grip</b>	<b>EBR-18162/1</b>
<b>With Grip</b>	<b>EBR-18162/2</b>

#### RAIN SHIELD

Fits on to any standard 4ft Pole section. Protects Engineers against conductive paths caused by rainwater. Heavy Duty Black pvc.

**Part Number:** EBR-14502



# Distribution Line Earthing






## PRODUCT RANGE

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### OPERATING SOCKETS

Distribution kits can be supplied with a wide range of operating sockets and heads. Operating sockets should be matched with both the Operating Pole style and operating screw type of the Line End clamp.

### PRODUCT BENEFITS

-  Lightweight alloy
-  Rugged construction
-  Excellent anti-corrosive properties
-  Adaptors available to convert Operating Pole style
-  Precision machined



#### RT/TL SOCKET ASSEMBLY

Orange/white indicator to show retention and release of clamp.

Pole Type: Bowthorpe  
Op-screw Type: Ring type  
Weight: 0.37kg  
**Part Number: EFS-18304**

#### OL1 OPERATING SOCKET

Spring loaded bayonet socket for clamp application in any direction.

Pole Type: P&B  
Op-screw Type: Long taper  
Weight: 0.23kg  
**Part Number: FA1200-B**



#### RT OPERATING SOCKET

Spring loaded plunger type socket

Pole Type: P&B Style  
Op-screw Type: Ring type  
Weight: 0.28kg  
**Part Number: FA3215-B**

#### HOOK TYPE SOCKET

Spring tension hook type socket

Pole Type: Bowthorpe  
Op-screw Type: Ring Type  
**Part Number: FA3714-A**



#### PB331 OPERATING SOCKET

Torsional type spring loaded socket

Pole Type: P&B Style  
Op-screw Type: Long or Short Taper  
Weight: 0.31kg  
**Part Number: EFS-16637**

#### DH1A APPLICATOR HEAD

Aluminium dispenser head for CE62 Line End clamps.

Pole Type: Bowthorpe Pole  
Op-screw Type: CE62 Only  
Weight: 0.51kg  
**Part Number: EFD-16731/2**



# Distribution Line Earthing

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### DISPENSER HEAD

High tensile brass dispenser head for CE62 Line End clamps.

Pole Type: Bowthorpe Pole

Op-screw Type: CE62 only

**Part Number: EFT-20126**

### P331 OPERATING SOCKET

Torsional type spring loaded socket

Pole Type: Bowthorpe

Op-screw Type: Long or Short Taper

Weight: 0.31kg

**Part Number: EFS-18314**



### SPLASH PLATE

Suitable for protection from arc splash when applying live (hot) line clamps.

Pole Type: Bowthorpe

Weight: 0.63kg

**Part Number: EFS-18339**

### LIVE LINE TAPPING SOCKET

Suitable for the fitting and removal of live (hot) line taps.

Pole Type: Bowthorpe

Op-screw Type: Live Line Taps

**Part Number: EFS-18326**



### P3313 OPERATING SOCKET

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

Pole Type: Bowthorpe

Op-screw Type: LEL or S&E Fuse Isolators

Weight: 0.29kg

**Part Number: EFS-18319**

### GS1 OPERATING SOCKET

To suit square end op-screws

Pole Type: P&B Style

Op-screw Type: Square End

**Part Number: EFS-12541**



### S9D OPERATING SOCKET

Quick action sliding Socket supports clamps being applied in an upward direction. Ideally suited to use with the S9B clamp with a short taper op-screw.

Pole Type: P&B Style

Op-screw Type: Short taper

Weight: 0.30kg

**Part Number: FA1097-B**

### CEA/S2 OPERATING SOCKET

Spring loaded bayonet socket for clamp application in any direction.

Pole Type: P&B Style

Op-screw Type: Short taper

Weight: 0.33kg

**Part Number: EFS-11203**



### DIN BAYONET SOCKET

Suitable for fitting and removal of clamps with short taper style DIN op-screws.

Pole Type: Bowthorpe Inter. Pole

Taper Type: DIN Bayonet

Weight: 0.13kg

**Part Numbers: EFS-18362 (Spring loaded)  
EFS-18369 (Non-sprung)**

# Distribution Line Earthing

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### FUSE HEADS

Fuse heads should be matched with both the pole style and fuse. For recommendation, please contact us.



#### P3437 UNIVERSAL POLE HEAD

Suitable for fuse cut-outs die-cast for strength, durability and accuracy.

Pole Type: Bowthorpe  
Fuse Type: Universal Cut-Outs

**Part Number: EMS-18368**

#### SIDE SPINDLE FUSE HEAD

Suitable for Brush or J&P fuses

Pole Type: Bowthorpe Intermediate  
Fuse Type: Brush or J&P Fuses  
Weight: 0.15kg

**Part Number: EFS-18330**



#### JBONDEN PMR RE-CLOSER HEAD

Fully insulated Re-Closer Head

Pole Type: Bowthorpe  
Application: Re-closer

**Part Number: EFS-18323**

#### JB1030 FUSE HEAD

Suitable for fitting and removal of JB1030 LV Yorkshire fuses.

Pole Type: Bowthorpe  
Fuse Type: JB1030 LV Yorkshire Fuses  
Weight: 0.34kg

**Part Number: EFS-18334**



#### P3380 POLE HEAD

Suitable for fitting and removal of J&P fuse cut-outs, die-cast for strength, durability and accuracy.

Pole Type: Bowthorpe  
Fuse Type: J&P Fuses  
Weight: 0.34kg

**Part Number: EMS-18372**

#### P3458 POLE HEAD

Suitable for Brush fuse cut-out and isolating links, die-cast for strength, durability and accuracy.

Pole Type: Bowthorpe  
Fuse Type: Brush  
Weight: 0.30kg

**Part Number: EMS-18317**



#### AEI HENLEY FUSE HEAD

Suitable for the fitting and removal of Henley type fuses.

Pole Type: Bowthorpe  
Fuse Type: Henley

**Part Number: EMS-18301**

# Distribution Line Earthing

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### PENTA P&B POLE ADAPTOR HEADS

This range of adapters allows the interchanging of Sockets and Heads between different styles of Pole.



#### UNIVERSAL ADAPTER CASTELLATED HEAD

Suitable for use with universal (rising sun) line fitting tools.

Pole Type: Bowthorpe Intermediate

Fit to: Universal tools

Part Number: **EFR-18360 (Alu)**  
**EFS-18360/1 (Nylon)**

#### FEMALE SPIGOT ADAPTOR

Allows the fitting of P&B Sockets or heads to a Bowthorpe top pole.

Pole Type: Bowthorpe

Fit to: P&B Sockets & Heads

Part Number: **4927**



#### MALE SPIGOT ADAPTOR

Allows the fitting of Bowthorpe style sockets & heads to P&B top pole.

Pole Type: P&B Style

Fit to: Bowthorpe Sockets & Heads

Part Number: **EFS-13376**

#### UNIVERSAL HEAD ADAPTER

Suitable for use with universal (rising sun) line fitting tools. Aluminium or glass filled nylon (insulated) versions available.

Pole Type: Bowthorpe Top Pole

Fit to: Universal tools

Part Numbers: **EFS-18315 (Aluminium)**  
**EFS-18315/1 (Nylon)**



#### TELE ROD UNI-ADAPTOR

Adaptor for use with a Tele Rod or Universal Head adaptor (EFS-18315) to allow fitting of Bowthorpe style sockets.

Pole Type: Universal Head

Fit to: Bowthorpe Heads

Part Number: **EFS-18321**

#### VOLTAGE DETECTOR REPLACEMENT HEAD

Insulated adaptor to fit a Metrohm Tester to a Bowthorpe style top pole.

Pole Type: Bowthorpe

Fit to: Metrohm Voltage Tester

Part Number: **EMS-18380**



#### HEX TYPE SOCKET/HEAD ASSY

For application of clamps with hexagonal (12mm A/F) operating screws employing spring-loaded locking device operated by push button upon the light polymer socket.

Pole Type: Bowthorpe

Op-screw type: Hexagonal 12mm A/F

Weight: 0.2kg

Part Number: **EFS-18352**



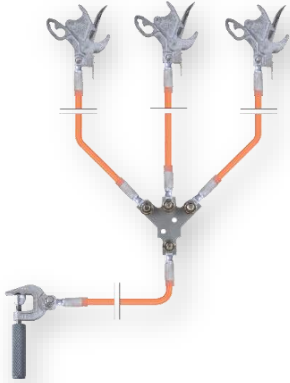
# Distribution Line Earthing

## PRODUCT RANGE

18

### EARTHING KITS

Distribution Line Earthing kits can be fully customised depending upon requirements, illustrated are various standard kits for reference but please contact us if your requirement is not shown specifically.



#### 11kV SNAP-ON EARTHING KIT

Comprising: 3 x CE62 Line End Clamps  
3 x 3m long Arctic Orange 120sqmm Aluflex Leads  
1 x Type-A Terminal Plate  
1 x 15m long Arctic Orange 50sqmm Aluflex Lead  
1 x S9A Short Handle Earth End Clamp

Short Circuit Rating: 12.5kA/1s (phase to phase)

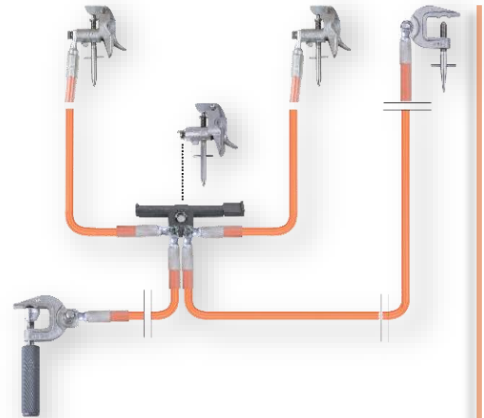
Part Number: **MISC-00006**

### DLE KIT WITH CROSS ARM CLAMP

Comprising: 3x S9B Short Taper Line End Clamps  
3 x 3m long Arctic Orange 120sqmm Aluflex Leads  
1 x Cluster Bar Type DLE/ CAC  
1 x 15m Arctic Orange 50sqmm Aluflex Lead  
1x S9A Short Handle Earth End Clamp  
1 x S9A Pointed Tip Cross Arm Clamp  
1 x 3m Arctic Orange 50sqmm Aluflex Lead

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

Part Number: **MISC-00060**



### DLE2/A EARTHING KIT

Comprising: 3 x S9B Short Taper Line End Clamps  
3 x 3m Clear 50sqmm Aluflex Leads  
1 x Type C Terminal Plate  
1 x 11m Clear 50sqmm Aluflex Lead  
1x Split Connector  
1 x 4ft P&B Top Pole  
1 x 4ft P&B Bottom Pole  
1 x S9D Socket  
1 x Rain Shield  
1 x Heavy Duty PVC Carrying Bag.

Part Number: **MISC-00066**



# Distribution Line Earthing

PRODUCT RANGE

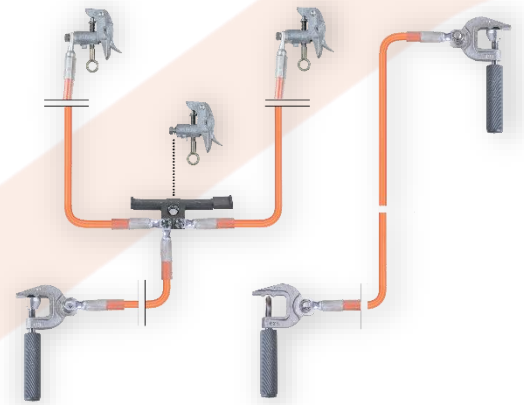
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## 33kV KIT WITH S9B RING TYPE LINE END CLAMPS

Comprising: 3 x S9B Ring Type Line End Clamps  
2 x 3m Arctic Orange 120sqmm Aluflex Leads  
1 x Cluster Bar  
1 x 15m Long Arctic Orange 50sqmm Aluflex Lead  
2 x S9A Short Handle Earth End Clamp  
1 x S9A Short Handle Clamp with Pointed Tip  
1 x 6m Long Arctic Orange 50sqmm Aluflex Lead

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

**Part Number:** MISC-00103



## DLE EARTHING KIT WITH S9B RING TYPE LINE END CLAMPS

Comprising: 3 x S9B Ring Type Line End Clamps  
3 x 3m Long Arctic Orange 120sqmm Aluflex Leads  
1 x Cluster Bar  
1 x 15m Long Arctic Orange 50sqmm Aluflex Lead  
1 x S9A Short Handle Earth End Clamp  
1 x pvc Carrying Bag

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

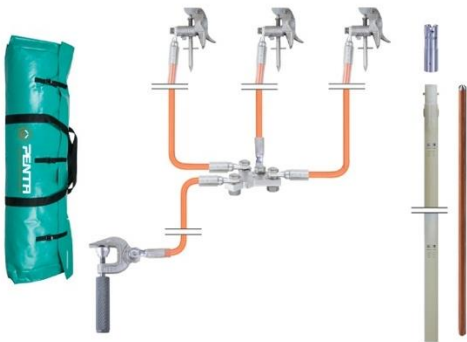
**Part Number:** MISC-00022

## DLE2/B EARTHING KIT

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 7m 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  
1 x Earth Rod

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

**Part Number:** MISC-00169

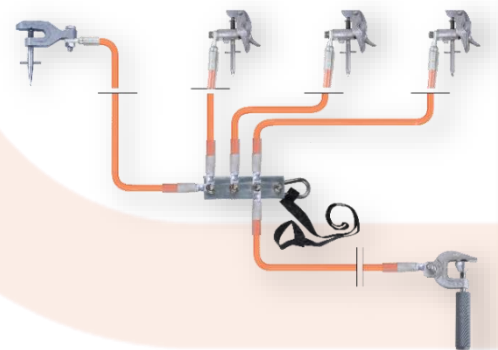


## 33kV DLE KIT WITH S9B SHORT TAPER TYPE LINE END CLAMPS

Comprising: 3 x S9B Short taper Line End Clamps  
3 x 3m Long Arctic Orange 120sqmm Aluflex Leads  
1 x Type C Terminal Plate  
1 x 15m Long Arctic Orange 50sqmm Aluflex Lead  
1 x S9A Short Handle Earth End Clamp  
1 x CE10 Cross Arm Clamp  
1 x 3m Long Arctic Orange 50sqmm Aluflex Lead

Short Circuit rating: 20kA/1s

**Part Number:** MISC-00018



# Distribution Line Earthing

PRODUCT RANGE

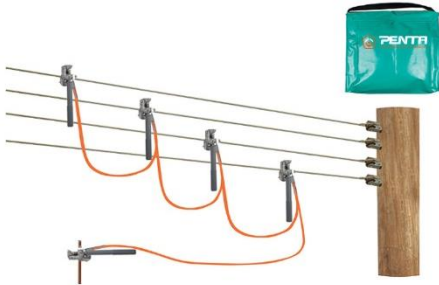
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## DISTRIBUTION KIT FOR KPLC

Comprising: 3 x S9B Short Taper Clamps  
3 x 4m Long Leads 95sqmm Clear Aluflex Leads  
Type D Terminal Plate  
1 x 12m Long 95sqmm Clear Aluflex Lead  
1 x S9A Earth End Clamp  
1 x Carrying Bag

Part Number: **MISC-00182**

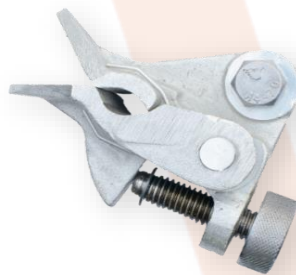
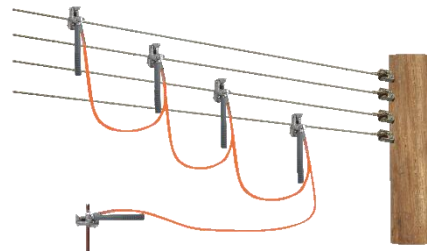


## Part Numbers: LV EARTHING KITS

LV Earthing Kits can be applied by hand using the S9B Long Handle clamps. Kits can be provided for up to 5 cables (three Phase, Neutral and Earth Line End clamps), and are supplied including a heavy duty pvc carry bag for protection of the equipment. The length of the 50sqmm leads is usually 1.5m, although these can be made to any length/colour depending upon requirements.

Part Numbers: **MISC-00029 (With pvc bag)**

Part Numbers: **MISC-00017**



## CE5/B/HW/105H CLAMP

Special MOD approved aircraft clamp for static discharge on runways. Tin plated to DEF std Bronze CE5 clamp with stainless steel thumbwheel.

Part Number: **EFP-10911/8**

MOD Reference: **5940993012736**

## TREE PRUNING EQUIPMENT

The PENTA P&B range of tree pruning equipment is ideal for removing branches and tree debris from near overhead lines.



### SAW PRUNING HEAD ASSEMBLY

The curved 6-TPI blade is 355mm long and manufactured from lacquered stainless steel to ensure long service life.

Pole style: Bowthorpe

Part Number: **EFS-18324**



### BRANCH CLEARANCE SAW

Suitable for fitment to middle section Bowthorpe style poles. The curved 6-TPI blade is 355mm long and manufactured from lacquered stainless steel to ensure long service life.

Pole style: Bowthorpe Intermediate

Part Number: **EFD-18404**



### TREE PRUNING HEAD

High quality steel side action cutting blade. Suitable for fitting upon a standard Bowthorpe style top section operating pole. Able to cut branches up to 44mm diameter. Fitted with a nylon operating cord, for ease of use from ground level.

Pole style: Bowthorpe

Part Number: **SK130296-0/1**

### PRUNING SAW ADAPTER

Pole style: Bowthorpe

Application: Allows fitting of Pruning Saw

Part Number: **EMS-18320**



P&B Weir Electrical Ltd - Address : Unit 1 Leafield Way, Leafield Ind. Est., Corsham, Wiltshire, SN13 9SW, UK  
Company Number : 10527362 – Registered Office : England & Wales - VAT Number : GB 289 988 694

 +44 (0) 1225 811449



 [www.pentaesp.com](http://www.pentaesp.com)