

Earthing

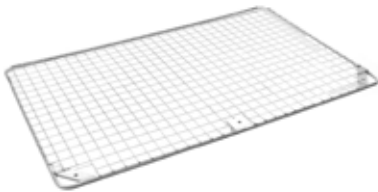


ESB

Earth Stub Brass

Earthing stubs are made from high purity brass, able to carry fault currents up to 40kA for 0.5 seconds or equivalent and suitable for connection of earthing devices onto structures.

Part Number	Description
ESB-95213	Earth Stub Brass - M16 Tap
ESB-M12-1	Earth Stub Brass - M12 Tap Stainless steel bolt included

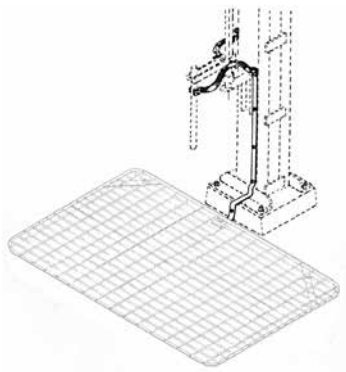


EARTHMAT

Earth Mats

Galvanised Steel Earth Mats can be either permanently installed and attached to the earthing system where maintenance is required. Various sizes are available as described below.

Part Number	Dimensions L x W (mm)
EARTHMAT-1	2500 x 1200
EARTHMAT-2	2500 x 1000
EARTHMAT-3	1500 x 1000
EARTHMAT-A	2400 x 1200
D-EARTHMAT	1500 x 900
EARTHMAT-C	600 x 450
D-KITY	Switching Kit to D-EARTHMAT



D-KITY



Earth Rods & Accessories



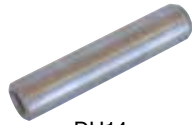
Extendable Earth Rods

Taperlock Coupled Type CTE Copper Clad (Sheathed)

Type CTE earth rods are among the simplest to use. They have identical taper ends and are joined by a one-piece tapered coupling which locks upon driving. These rods may be driven by hand or machine.

Part Number	Length (mm)	Description
D-DHT15	-	13mm hand driving head (average driving)
D-DHT15	-	15mm hand driving head (average driving)
D-DHTU25	-	15mm hand driving head (hard driving)
D-CTE1312	1200	13mm earth rods (10 pack)
D-CTE1314	1440	13mm earth rods (10 pack)
D-CTE1318	1800	13mm earth rods (5 pack)
D-CTE1324	2400	13mm earth rods (5 pack)
D-CTE1330	3000	13mm earth rods (5 pack)
D-CTE1512	1200	15mm earth rods (10 pack)
D-CTE1514	1440	15mm earth rods (5 pack)
D-CTE1518	1800	15mm earth rods (5 pack)
D-CTE1524	2400	15mm earth rods (5 pack)
D-CTE1530	3000	15mm earth rods (5 pack)
D-CCT13	-	13mm coupling
D-CCT15	-	15mm coupling
D-DPT13	-	13mm driving point
D-SDP13T	-	13mm driving point
D-DPT15	-	15mm driving point
D-SDP15T	-	15mm driving point

Earth Rods & Accessories



DH14

SDE
Tapered End

SCT13



DP12



SDP12T

Tapered Earth Rods

Taperlock Coupled Type STE Stainless Steel Clad (Sheathed)

Type STE earth rods are among the simplest to use. They have identical taper ends and are joined by a one-piece tapered coupling which locks upon driving. These rods may be driven by hand or machine.

Part Number	Length (mm)	Description
D-DHT15	-	13mm hand driving head (average driving)
D-DHT15	-	14mm hand driving head (average driving)
D-STE1312	1200	13mm earth rods (10 pack)
D-STE1314	1440	13mm earth rods (10 pack)
D-STE1318	1800	13mm earth rods (5 pack)
D-STE1324	2400	13mm earth rods (5 pack)
D-STE1330	3000	13mm earth rods (5 pack)
D-STE1412	1200	15mm earth rods (10 pack)
D-STE1415	1440	15mm earth rods (5 pack)
D-STE1418	1800	15mm earth rods (5 pack)
D-STE1424	2400	15mm earth rods (5 pack)
D-STE1430	3000	15mm earth rods (5 pack)
D-SCT13	-	13mm coupling
D-SCT15	-	14mm coupling
D-DPT12	-	13mm coupling (average driving)
D-SDP12T	-	13mm coupling (hard driving)
D-DPT15	-	14mm coupling (average driving)
D-SDP15T	-	14mm coupling (hard driving)



Earth Rods & Accessories



Extendable Deep Driving Rods

Flush Jointed Series Type CCE - Copper Clad (Sheathed)

These deep driving flush-jointed electrodes have identical swaged ends to take driving points and coupling pins. They may be either hand or machine driven.

Part Number	Length (mm)	Description
D-DH15	-	13mm hand driving head (average driving)
D-DH15	-	15mm hand driving head (average driving)
D-CCE1312	1200	13mm earth rods (10 pack)
D-CCE1314	1440	13mm earth rods (10 pack)
D-CCE1318	1800	13mm earth rods (5 pack)
D-CCE1324	2400	13mm earth rods (5 pack)
D-CCE1330	3000	13mm earth rods (5 pack)
D-CCE1512	1200	15mm earth rods (10 pack)
D-CCE1514	1440	15mm earth rods (5 pack)
D-CCE1518	1800	15mm earth rods (5 pack)
D-CCE1524	2400	15mm earth rods (5 pack)
D-CCE1530	3000	15mm earth rods (5 pack)
D-CCA13	-	13mm coupling
D-CCA15	-	15mm coupling
D-DP13	-	13mm driving point (average driving)
D-SDP13	-	13mm driving point (hard driving)
D-DP15	-	15mm driving point (average driving)
D-SDP15	-	15mm driving point (hard driving)

Earth Rods & Accessories



DH14

SDE
Machined End

C14L

DP14

SDP14D

Extendable Earthing Rods

Expansion Jointed - Type SDE (Telstra) Stainless Steel Clad (Sheathed)

Telstra designed and approved earth rod featuring corrosion resistant stainless steel clad rods, extendable in 1440mm lengths. The coupling system comprises of a stainless steel sleeve and hardened steel pin having a raised convolution at the midpoint. A secure and non-detachable joint is achieved by means of the pins convolute expanding and deforming the ends of the rod into the coupling sleeve as the rods are driven together.

Part Number	Length (mm)	Description
D-DH14	-	14mm hand driving head (average driving)
D-SDE1412K	1200	14mm earth rod (10 pack)
D-SDE1414L	1440	14mm earth rod (10 pack)
D-C14L	-	14mm coupling
D-DP14	-	14mm driving point (average driving)
D-SDP14D	-	14mm driving point (hard driving)



Earth Rods & Accessories



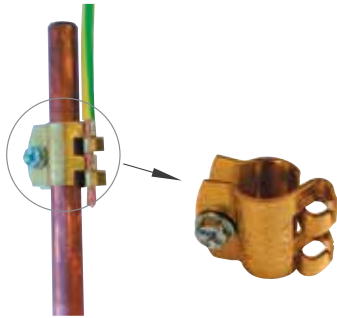
Earth Rod Driving Accessories

For Kango tool/machine only

Part Number	Description
D-MDH15K	For tapered end extendable rods (CTE & STE)
D-MDH15KF	For flush jointed extendable rods (CCE)
D-MDP10M	Machine Driving Pin (for use with the above tools)

Non-extendable Earth Rods (Domestic)

Copper Clad (Sheathed)



Dulmison manufacture a broad range of non-extendable earth rods. Each rod incorporates an integral driving point, machined (not ground) to preserve the strength and rigidity of cold-drawn steel. The flat tip was developed for penetrating all types of soil.

Part Number	Description
D-CNE1314	Domestic earth rods (10 pack)
D-EC13D	Earth clip - Suitable for cables in the range 4 - 25mm ² (10 pack)

Non-Extendable Earth Rods - Heavy Duty Series (Industrial) Type LGR - Copper Clad (Sheathed)



Clamp Types EP; ET; GB and FSC provide a copper to copper connection, either in parallel or right angle mode, accommodating single, two & three conductors.

Part Number	Length (mm)	Pack Qty
D-LGR1918	1800	5
D-LGR1920	2000	3
D-LGR1924	2400	3
D-LGR1930	3000	3
D-LGR1936	3600	3
D-LGR1945	4500	3

Earth Rods & Accessories



Earthing Bond

For Commercial Earthing Installations

The earthing bond system provides an earth connection welded to the steel reinforcement, thus offering a virtually indestructible, stable and low resistance path to earth soil. Please enquire about other sizes available.

Part Number	Description
D-C70	Bonding Cable: 70mm ² 1 sec Short Current Rating: 5kA Weldable Lug Dia: 12mm Terminal Thread: M10 Thread Depth: 20mm Cable Length: 3m
D-C95	Bonding Cable: 95mm ² 1 sec Short Current Rating: 8kA Lug Dia: 16mm Terminal Thread: M10 Thread Depth: 20mm Cable Length: 3m
D-C120	Bonding Cable: 120mm ² 1 sec Short Current Rating: 10kA Lug Dia: 20mm Terminal Thread: M10 Thread Depth: 20mm Cable Length: 3m

Heavy Duty Earthing Connector

Type CEC

- High strength, high conductivity connection
- Shake-proof, permanent and corrosion resistant
- High fault current capacity
- Versatile: covers wide variety of single or multi-earthing applications including grid systems
- Two profiles - '6' and 'C' - cover a wide variety of applications

Profile 6



Profile 6 Part Number	Open Sec.	Tap Off Conductor		Die Set	Pack Qty
		Dia. (mm)	Cross Sec. mm ²		
D-CEC15035	Conductors 50 - 120mm ² or Earth rods 13 - 15mm diameter	8.4	25 - 40	DU1315	5
D-CEC15070		11	50 - 70	DU1315	3
D-CEC15120		15	95 - 120	DU1315	3
D-CEC15150		16.5	120 - 150	DU1315	3

Profile C



Profile C Part Number	Die Set	Conductor Combination mm ²	Pack Qty
D-CEC070	DUOT	70 - 35 50 - 50 70 - 50 70 - 70	50
D-CEC095	DU1315	70 - 95 95 - 95	50
D-CEC12070	DU1315	120 - 120	50

Earth Rods & Accessories

Earth Rod Clamps

Types GB & EL



This clamp is designed for either parallel or right angle connections.

Material: High copper content alloy, with stainless steel U bolt, spring washers and nuts.

Part Number	Conductor Range		Diameter of Electrode (mm)
	mm ²	Dia. (mm)	
D-GB1	16 - 35	5.10 - 7.65	13 - 19
D-GB2	50 - 120	8.90 - 14.21	13 - 19
D-GB3	150 - 185	15.75 - 17.64	13 - 19
D-EL21090	35 - 120	7.65 - 14.21	12 - 15

Earth Rod Clamps

Types EP & ET For Multi-Conductor Earthing



Type EP

For two earth conductors parallel to rod, or two or three earth conductors at right angles to rod.

Materials: Body - high copper content alloy; Hardware - stainless steel.



Type ET

Part Number	O.D. Ground Rod (mm)	Conductor Range		Fig No.	No. Of Conductor
		Multiple Conductor Installations			
		mm ²	Dia (mm)		
D-EPO1	14-16	16 - 35	5.10 - 7.65	1	1
D-EP1	17-19	16 - 120	5.10 - 14.21	1	1
D-EP3	17-19	16 - 35	5.10 - 7.65	2	2
D-EP4	17-19	50 - 120	8.90 - 14.21	2	2
D-ET1	17-19	16 - 35	5.10 - 7.65	3	2
D-ET2	17-19	50 - 120	8.90 - 14.21	3	2
D-ET4	17-19	50 - 120	8.90 - 14.21	4	3



Type EP3

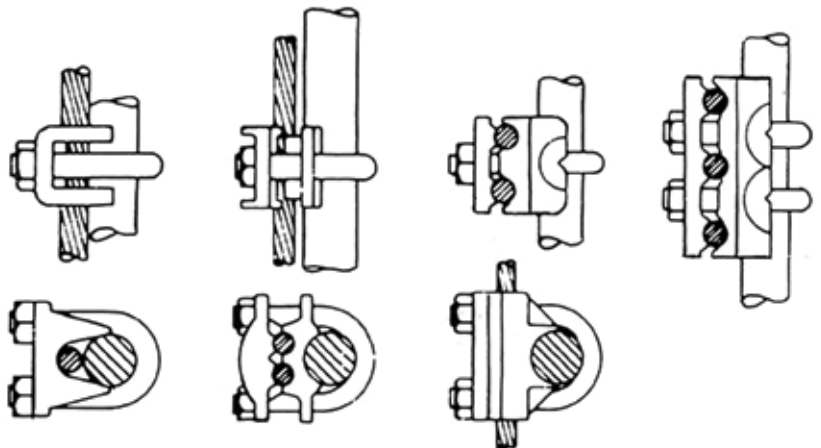


Fig.1

Fig.2

Fig.3

Fig.4

Earth Rods & Accessories



Earth Rod Clamps

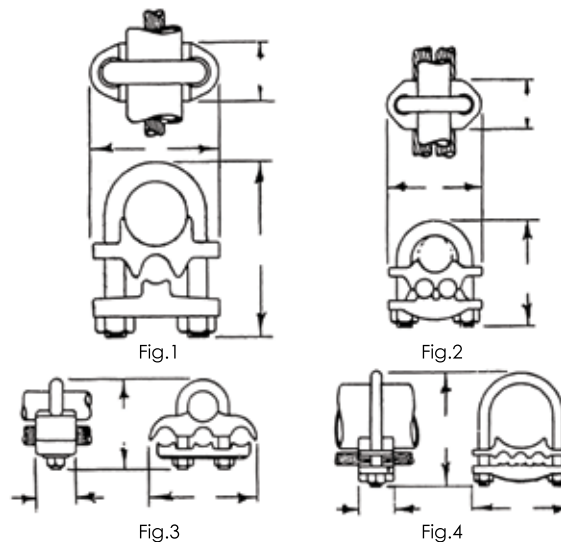
Type GP For Connecting Up To 3 Conductors To Galvanised Pipe

This clamp makes all connections parallel to the pipe.

Materials: Clamp body - high copper content alloy.

Hardware: Comprising U-bolts, washers and nuts - stainless steel.

Part Number	BS Pipe Series		Conductor Range		Fig. No.	No. of Cond	A	B	C	U-bolt Dia.
	OD of Pipe	Nom. Bore	mm ²	Dia. (mm)						
D-GP01	26	19.00	16 - 35	5.10 - 7.65	1	1	57	32	71	M10
D-GP1	34	25.40	16 - 35	5.10 - 7.65	1	1	65	32	86	M10
D-GP3					2	2	76	32	86	
D-GP5					3	3	95	38	86	
D-GP7	43	32.00	16 - 35	5.10 - 7.65	1	1	73	32	95	M10
D-GP9					2	2	81	32	95	
D-GP11					3	3	103	38	95	
D-GP13	48	38	16 - 35	5.10 - 7.65	1	1	80	32	102	M10
D-GP15					2	2	80	32	102	
D-GP19	60	51.00	16 - 35	5.10 - 7.65	1	1	100	32	124	M12
D-GP21					2	2	100	32	124	
D-GP23					4	3	100	38	124	
D-GP02	26	19.00	50 - 120	8.90 - 14.21	1	1	57	32	71	M10
D-GP2	34	25.40	50 - 120	8.90 - 14.21	1	1	65	32	86	M10
D-GP4					2	2	76	32	86	
D-GP6					3	3	95	38	86	
D-GP8	43	32.00	50 - 120	8.90 - 14.21	1	1	73	32	95	M10
D-GP10					2	2	81	32	95	
D-GP12					3	3	103	38	95	
D-GP14	48	38.00	50 - 120	8.90 - 14.21	1	1	80	32	102	M10
D-GP16					2	2	80	38	102	
D-GP20	60	51.00	50 - 120	8.90 - 14.21	1	1	100	32	124	M12
D-GP22					2	2	100	32	124	
D-GP24					4	3	100	38	124	





Earth Rods & Accessories

Earth Rod Clamps

Type FSC For Earth To Flat Bar

For connecting copper earthing strip at right angles or parallel to the earthing electrode.

Material: High strength copper casting; stainless steel U-bolt, nuts and spring washers.



Part Number	Earth Rod Dia. (mm)
D-FSC4	13 - 14
D-FSC5	15 - 16
D-FSC6	17 - 19

Earth Rod Clamps

Type GF For Conductor To Flat Bar

For clamping earth cable to flat metal. Needs only one spanner as head of bolt has square shank to prevent turning. Standard bolt grips 6mm bar.

Material: Cast copper alloy body accommodates range of cable sizes; stainless steel bolt, nut and spring washer.



Part Number	Conductor Range	
	mm ²	Dia. (mm)
D-GF42	16 - 70	5.10 - 10.70
D-GF58	70 - 135	10.70 - 15.25

Earth Rod Clamps

Single Conductor - Parallel

Simple and robust, these pinch and U-Bolt type clamps have a vee groove embodied in the casting to accommodate the earthing cable.

Material: Bodies are made from a high copper content alloy.



CLAMP210



GRC5



EP1

Part Number	Rod Dia. (mm)	Conductor Range	
		mm ²	Dia. (mm)
D-GRC5	13 - 15	10 - 35	4.05 - 7.65
D-CLAMP210	13 - 15	16 - 120	5.10 - 14.21
D-EP1	17 - 19	16 - 120	5.10 - 14.21

Earth Rods & Accessories



Earthing Enhancement Compounds

Features: Stable, high conductivity providing long term low ground resistance. High expansion, low shrink characteristics.
Non-toxic, non-corrosive.

Installation: Apply as a dry mix or pourable slurry. Dry mix will yield a volume of approximately 0.0176m³ (roughly 57 bags to the cubic metre). Slurry will yield a volume of approximately 0.030m³ when mixed with 20 to 25 litres of water (roughly 33 bags to the cubic metre).

Packaging: 20kg non-tear, plastic lined bags.

Part Number	Composition	Standard
D-EARTHFIL	Bentonite, Gypsum, Sodium Sulphate	Conforms to AS2239
D-EARTHRITE	Bentonite, Gypsum, Sodium Sulphate	N/A
D-EARTH5050	Bentonite, Gypsum	Conforms to AS2239



ERB1

Connection Boxes

Boxes ERB1 and ERB3 feature hinged inspection lids & cable entry holes on the sides. Both boxes provide ample space for conductors and clamps.

Part Number
D-ERB1
D-ERB3



ERB3

Portable Earth

Earth Heads



Available in the following formats

LLC13 - 32mm Brass Ring

LLC13S - Tee Spindle - 6mm

LLC13H - Insulated Moulded Handle

- Aluminium Alloy Body - Stainless steel spindle
- Accepts conductors - 5 up to 35mm Diameter
- 2 bolt lug attachment - M10
- Short time current rating - min 40kA for 1 sec



Available in the following formats

LLC14A - Blank Spindle

LLC14R3 - 32mm Brass Ring

LLC14T - Tee Spindle - 6mm

LLC14H - Insulated Moulded Handle

- Aluminium Alloy Body - Stainless steel spindle
- Accepts conductors - 5 up to 40mm Diameter
- Also accepts Busbar in two orientations, Horizontal - 40 x 35mm & Vertical - 7 x 50mm
- Single lug attachment hole - M12
- Short time current rating - min 31.5kA for 1 sec



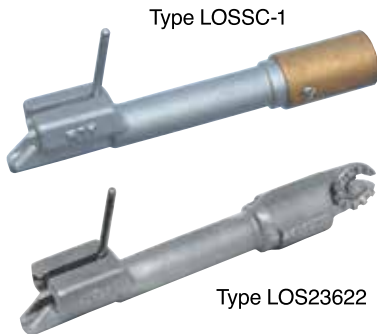
Available in the following formats

L4A202W - Tee Spindle - 3mm

L4A202WP - Blank Spindle

- Cast Gunmetal Body - Tin Plated - Stainless steel spindle
- Accepts conductors and busbars - 10 up to 50mm Diameter
- Spring tensioned main jaw - constant force
- Single lug attachment hole - M12
- Short time current rating - min 37.3kA for 0.5 sec

Portable Earth



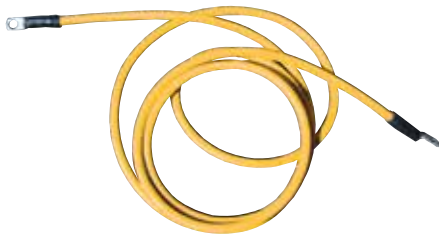
Operating Heads

Sprung Loaded

Earthing stick accessories are utilised, for the temporary attachment of Earth clamps, pulling fuses and carriers, as well as disconnecting dropout fuses. Accessories are typically either clamped or screwed onto earth sticks, as shown on prior pages in this section. Compatibility is as indicated.

- Cast Aluminium Body
- Stainless Steel operating hook to capture brass ring on earth clamp
- Spring loaded for positive alignment
- Captures the 32mm Brass Ring on all types of earth clamps

Part Number	Connection Type	Suits Stick No/s
D-LOSSC-1	Screw - Female - 5/8" UNF	Type FOS#-1 & Type FXS#-1
D-LOS23622	Universal	Type FOS#-1A & FXS#-1A



Earthing Leads

Due to the nature and variety of lead sizes, lugs and end configurations, it is not possible to list the available products in this catalogue. An inquiry sheet is located on page 4-17 which allows you to specify both the earth clamps and stick requirements, as well as the lead lengths and end attachment options. Earth leads are generally designed to meet short time current rating requirements unless specified otherwise.

Portable Earth



TYPE FOS6-1



TYPE FOS6-2



TYPE FOS6-1A



TYPE FXS6-1



TYPE FEHX-2



TYPE FEX6-1A

Insulated Earthing Sticks

A comprehensive range of insulated earthing sticks are available, for both permanent attachment or temporary removable attachment, to all types of earthing clamps.

Where a permanent attachment is required to create a rigid earthing stick assembly or 3 phase earthing set, the earth clamps are pinned or screwed to attaching fixtures to join the insulated stick to the earthing head. Where there is a need to temporarily connect an earth stick to an earth clamp, a series of standard earth sticks and attachment devices are available. All Earth sticks are provided with warning labels which include recommended voltage rating clearances, and handling warning. All Earth sticks are rated at 100kV per foot (300mm).

TYPE FOS6-1: One piece sticks - All fitted with rubber end boots

Part Number	Length (mm)	End Connection Type
D-FOS6-1	1830	Screw - Male - 5/8" UNF
D-FOS8-1	2440	Screw - Male - 5/8" UNF
D-FOS12-1	3660	Screw - Male - 5/8" UNF

TYPE FOS6-2

Part Number	Length (mm)	End Connection Type
D-FOS8-2	2440	Bayonet - Male

TYPE FOS6-1A

Part Number	Length (mm)	End Connection Type
D_FOS6-1A9	900	Universal
D-FOS6-1A	1830	Universal

TYPE FXS6-1: Extension Sticks - To be used with one piece sticks

Part Number	Length (mm)	End Connection Type
D-FXS4-1	1220	Screw - Male - 5/8" UNF
D-FXS6-1	1830	Screw - Male - 5/8" UNF

TYPE FEHX-2

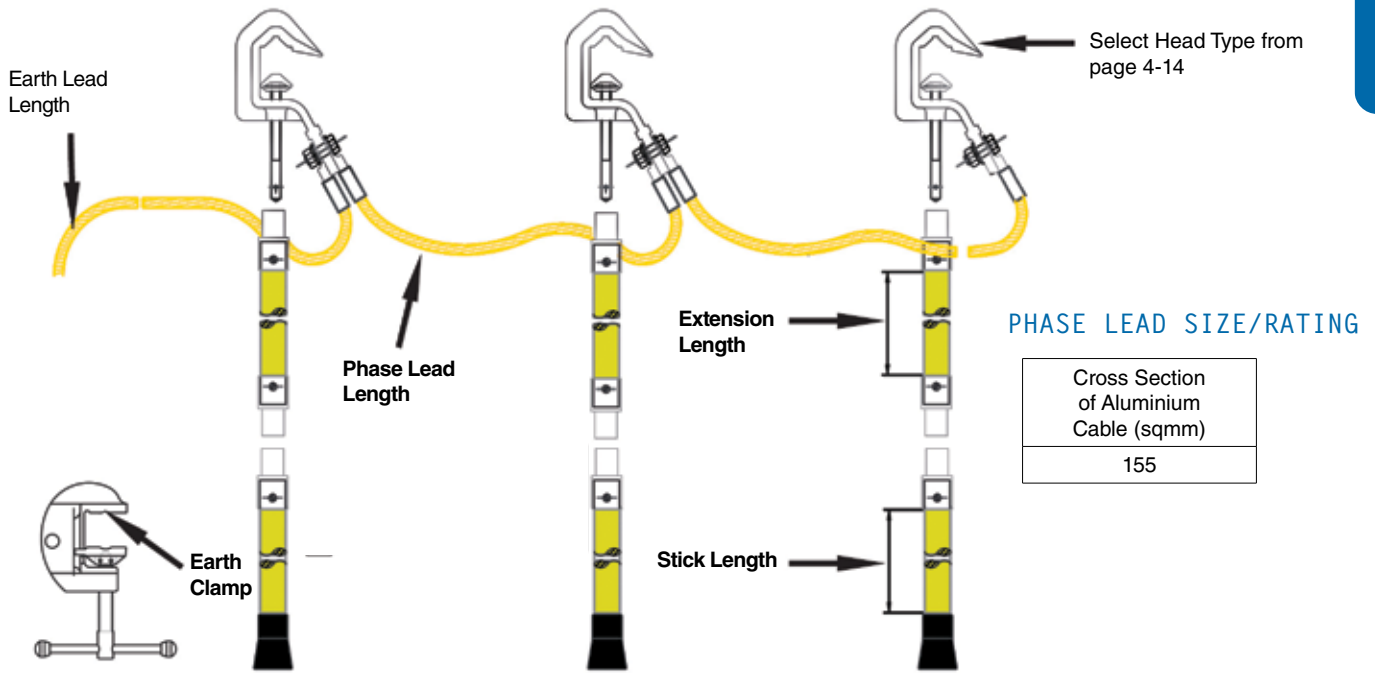
Part Number	Length (mm)	End Connection Type
FEHX-2	300	LV Fuse Extractor - Pigtail
FXSX6A	1830	LV Fuse Extractor - Pigtail

TYPE FXS6-1A

Part Number	Length (mm)	End Connection Type
FXS6-1B9	900	Universal
FXS6-1A	1830	Universal

Portable Earth

Earth Selection Guide



New Configurations

For a new Earth-set configuration, simply fill in the part number description below.

Part Number Description								
Phase	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>					
Head Type	<input type="text"/> Select Head Type from page 4-14							
Phase Lead Length (m)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	Other <input type="text"/>
Earth Lead Length (m)	3 <input type="checkbox"/>	5 <input type="checkbox"/>	7 <input type="checkbox"/>	9 <input type="checkbox"/>	12 <input type="checkbox"/>	24 <input type="checkbox"/>	25 <input type="checkbox"/>	Other <input type="text"/>
Phase Lead Size (mm ²)	35 <input type="checkbox"/>		95 <input type="checkbox"/>					
Stick Length (m)	1.8 <input type="checkbox"/>		3.6 <input type="checkbox"/>		Other <input type="text"/>			
Extension Length (m)	1.8 <input type="checkbox"/>		3.6 <input type="checkbox"/>					