

PORTABLE EARTHING EQUIPMENT



PORTABLE EARTHING EQUIPMENT

INTRODUCTION

MOSDORFER CCL - LEADERS IN ELECTRICAL EQUIPMENT AND ACCESSORIES

Providing personnel with efficient and approved safety equipment is one thing. Ensuring that they use it is another. Where electricity is concerned, failure to achieve the second objective can be fatal. That is why Mosdorfer CCL's range of L.V. and H.V. portable earthing equipment has been designed with the operator very much in mind. Whether he is a linesman working on overhead line equipment or a maintenance engineer in a substation or power plant, the operator will find Mosdorfer CCL earthing equipment:

- Quick and simple to install
- Light and easy to transport and handle.
- Competitively priced.

All Mosdorfer CCL equipment is designed and tested to withstand the maximum possible thermal and electromechanical forces of an installation short circuit AND all equipment complies with U.K. electricity supply industry (ESI) standards including ESI 43-81 and ESI 41-21. Short circuit tests confirm the rating of all standard equipment.

The Mosdorfer CCL's Systems factory, is stringently monitored to British Standard quality assurance specification BS 5750 - ISO 9000, and for over 50 years electrical equipment and electrical safety have been Mosdorfer CCL's business.

Mosdorfer CCL supply earthing equipment to customers worldwide - so we understand YOUR problems.

We recognise the need for versatility and flexibility in situations away from what might be called "standard" installations, and a glance at the comprehensive choice of clamps and other accessories available illustrates our range of customised assemblies. This is further reinforced by our unique snap-on and snap-on/screw-on clamps, which ensure a positive connection is achieved every time.

Versatility, flexibility - but above all **Safety**.

Always remember that safety rules concerning adequate temporary earthing of plant and equipment clearly state that protection should be via effective, purpose-made and designed portable earthing equipment of adequate short circuit rating for the prospective fault level.

PORTABLE EARTHING AND SHORT CIRCUITING EQUIPMENT

Standard Kits Mosdorfer CCL portable earthing equipment standard kits are tested and approved for low voltage and high voltage applications including:

- Overhead transmission and distribution power lines.
- Sub-station bus bars - indoor and outdoor.
- Railway electrified traction systems.
- Electrostatic precipitator plant.
- Transformer and switchgear terminals.

Customised equipment Mosdorfer CCL can design and supply customised equipment based on customer information concerning the service application for example.

- Dimensions between points to be earthed.
- Any limiting dimensions including enclosed plant restricting access.
- Prospective fault level of plant or short circuit rating of earthing equipment required.

FOR SAFETY'S SAKE

Regular maintenance programmes for portable earthing equipment are vital. Preventive maintenance is always preferable to accident risk. Guidance notes on equipment maintenance are freely available from Mosdorfer CCL Systems sales office.

EARTHING EQUIPMENT - SEQUENCE OF USE

Standard practice requires operatives to observe the following sequence when using portable earthing equipment.

- Switch out and de-energise the apparatus or overhead line section to be worked on.
- Check the apparatus is de-energised by means of an approved device - usually a hand held voltage detection instrument with direct reading meter or audio/visual signal.

- After proving voltage absence, connect to a known earth point with a hard tightened clamp. To this clamp connect a cable with interconnections to similar clamps arranged to connect with phase or other potentially live apparatus terminals. Use insulated operating handles or rods.

This ensures that if the plant is accidentally re-energised the short circuit caused by the temporary connections will activate the back up protection and protect the personnel from electric shock.

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Product Improvement: - CCL reserve the right to make changes without notice

PRODUCT SELECTION

GENERAL PURPOSE PORTABLE EARTHING EQUIPMENT

In the event of our standard equipment designs being unsuitable for specific field installations, CCL recommend that engineers refer to pages 1, 2, 3, and 4, and select the elements which combine to provide the preferred solution.

ALL applications for portable earthing require the following elements:

CLAMPS – Line and earth end, which can be speedily and effectively secured at the point of work.

CABLES – Short circuit tress to interconnect the clamps and sustain any fault or induced current levels between the point of work and final earth point connection.

OPERATING RODS & ADAPTOR HEADS – Insulated members, to ensure safe application and effective remote removal of clamps.

EARTH ELECTRODE – Point of final earth for connecting earth end clamp.

Carrying bags are always supplied by CCL to ensure equipment can be protected and effectively stored when not in use or in transit to site.

TO ORDER EQUIPMENT

SELECT THE FOLLOWING:-

- **TYPE OF STANDARD KIT** – i.e. EC3.1 – 0400(5) or EC1.1 – 1133 (Trident) etc., etc.
- **OPERATING ROD REQUIRED.**

ALTERNATIVELY

- **CUSTOMISED KIT** – State type of line end clamp, earth end clamp, area and length of tress cables for phase and earth connections. Fault level required.
- **OPERATING ROD TYPE.**

CLAMPS LINE AND EARTH END

DISTRIBUTION



EC3.1 "Snap & Screw on" clamp with integral insulated 300mm long handle.
Typical use L.V. O.H. line
Capacity 28mm dia.
TD Ref 272/31
Tested 7.5kA/2 sec



EC1.1D "Snap on" clamp
Typical use O.H. line 11/33kV circuits
Capacity 22mm dia.
TD Ref 272/30
Tested 12.5kA/2 sec



EC3.1 "Snap & Screw on" clamp.
Typical use O.H. line 11/33kV circuits
Capacity 28mm dia.
TD Ref 272/31
Tested 17.5kA/1 sec
E Eyescrew also with:
B Bayonet or



EC4.1 "Screw on" clamp.
Typical use General purpose earth end applications
Capacity 25mm dia. x or flat 40mm section
TD Ref 272/32
Tested 21kA/2 sec
Tommy bar hand apply also with:
B Bayonet
E Eyescrew or
H Hexagon



EC2.1 "Screw on" hand apply clamp. (Heavy duty)
Typical use Railway or steelwork connection earth end:
Capacity 40mm x 25mm flat section
TD Ref 272/50
Tested 21kA/2 sec

TRANSMISSION



ECS9/1-B "Screw on" clamp
Typical use H.V. O/H. line
Capacity 6mm to 38mm dia.
TD Ref 272/51
Tested 17.5kA/2 sec



ECS9/2-B "Screw on" clamp
Typical use H.V. O/H. line
Capacity 38mm to 76mm dia.
TD Ref 272/52
Tested 17.5kA/2 sec



ECS9/3-B "Screw on" clamp
Typical use Outdoor sub-station
Capacity 90mm dia.
TD Ref 272/53
Tested 17.5kA/2 sec



ECS9/4-B "Screw on" clamp
Typical use Outdoor sub-station
Capacity 100mm dia.
TD Ref 272/54
Tested 17.5kA/2 sec

EC 3.3B "Snap & Screw on"
Typical use H.V. O/H. line
Capacity 12mm to 38mm dia.
TD Ref 295/84
Tested 17.5kA/2 sec



EC2.2 "Screw on" hand apply clamp
Typical use Steel work connection earth end
Capacity 11mm thick max
TD Ref 272/56
Tested 17.5kA/2 sec



EC2.3 "Screw on" hand apply clamp
Typical use Copper or aluminium strip on sub-station earths
Capacity 3mm x 7mm thick
38mm x 50mm wide
TD Ref 272/57
Tested 17.5kA/2 sec

For further physical and design information please request appropriate technical data sheet drawing Ref. TD272/

CABLES SHORT CIRCUIT TRESS

Single Bond

Standard sizes:

ALUMINIUM

50mm² x 3m long
50mm² x 15m long
120mm² x 3m long
120mm² x 15m long
150mm² x 6m long

COPPER

Special to order per customer specification



Series Bond

Standard sizes:

ALUMINIUM

50mm² x 15m earth cable with 3m long phase link cables

COPPER

Special to order per customer specification



Convergent Bond

Standard sizes:

ALUMINIUM

50mm² x 15m earth cable with 3m long phase cables - 50mm or 120mm²

COPPER

Special to order per customer specification

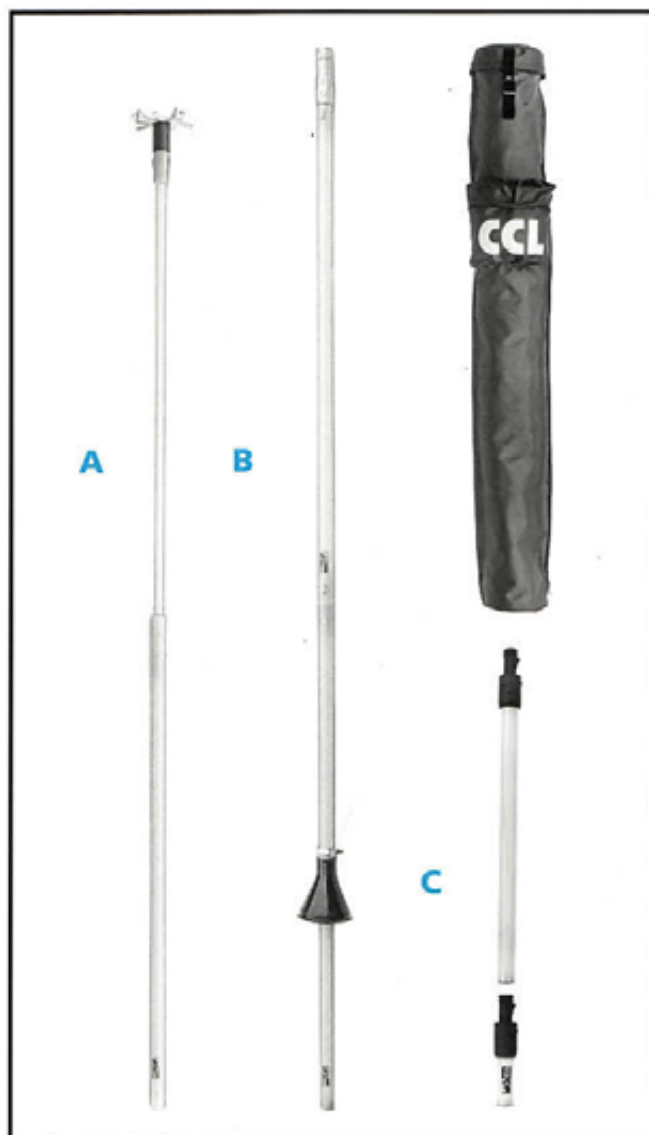


- Aluminium cables 50mm² & 120mm² are supplied with "Arctic Grade" P.V.C. sheathed (bright orange finish) and 150mm² (transmission) with non arctic clear P.V.C. sheathed finish.
- All copper cables are clear P.V.C. sheathed.
- Tresses are fitted with compression terminals and strain damper gaiters to ensure efficient short circuit performance and service life.

Table of Stock Sizes

Nominal Cable Area (mm ²)	Strand Detail	Nominal Continuous Current Rating (amps)	Short Circuit Rating (kA/sec)	Insulation Sheath	Length of Cable Metres
50	312/0.45	120	7.5	P.V.C. "Arctic Grade" Colour Bright Orange	Per Standard or Supplied to Customers Specifications
120	755/0.45	205	17.5		
150	925/0.45	235	23.0		
16	16/32/0.2	90	4.5	P.V.C. Clear Self Colour	
25	12/65/0.2	110	7.5		
35	16/70/0.2	145	10.0		
70	3/32/24/0.2	225	19.5		
95	4/32/24/0.2	275	27.5		

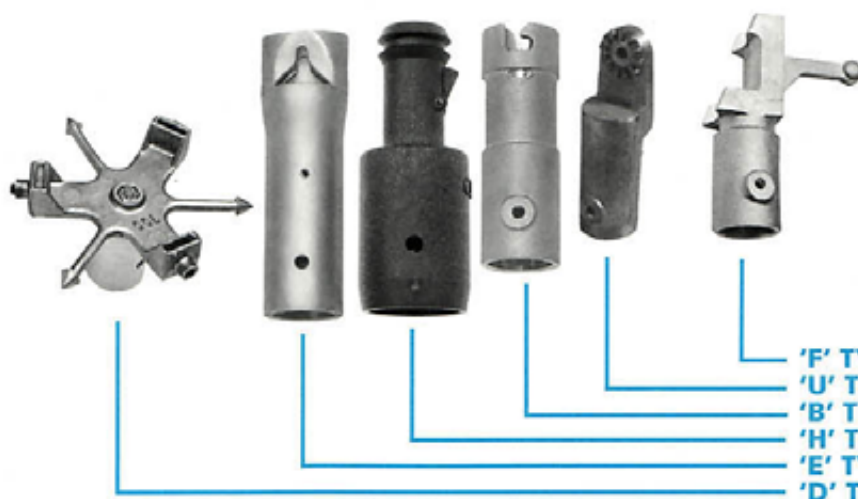
OPERATING RODS AND ADAPTOR HEADS



INSULATED RODS

- A** **GF2-2.4T** Heavy duty glass fibre re-inforced telescopic tubular rod. - OUTDOOR USE
 Closed length 1.2M
 Full extended 2.4M
 Extra 1.2M length can be added by fitting extra butt end.
- GF2-1.4T**
 Closed length 0.8M
 Fully extended 1.2M
 Extra 1.2M length can be added by fitting extra butt end
 TD Ref. 272/15
- B** **GF1-1.2** Heavy duty glass fibre re-inforced multi section construction with spring loaded button couplers on each section. - OUTDOOR USE
 Length 1.2M
 Recommended for H.V. live line tapping and switching operations per ESI standards. Also remote application of voltage detection instruments.
 TD Ref. 272/6
- C** **GF3-0.5H** Re-inforced plastic tubular handle for application of 'H' hexagon stem clamps to INDOOR APPARATUS
 Length 0.5M
 TD Ref. 272/16
- GF3-0.2H** For applying bond lead clamps to earth electrodes etc. when short insulated handle is preferred to hand application.
 Length 0.2M
 TD Ref. 272/16

STANDARD OPERATING ROD ADAPTORS



- 'F' TYPE** Fuse pull adaptor TD272/23
'U' TYPE Universal adaptor TD272/22
'B' TYPE For bayonet clamps TD272/28
'H' TYPE For hexagon clamps TD272/25
'E' TYPE For eyering clamps TD272/29
'D' TYPE For EC1.1 clamps TD272/27

EARTH ELECTRODES AND BOND LEADS



Earth Rods

CCL recommend outdoor H.V. portable overhead line earth kit series

EC1.1 - 1133 (Trident)

EC3.1 - 1133 (Triplex)

EC3.1 - 1133 (Polepark)

Should have the tress earth cable EC4.1 clamp securely tightened to a ground driven earth electrode (earth rod) (A) or earth rod cluster (B)

A = 16mm dia x 1.2M long rod

B = 4 - 16mm dia x 0.8M long rods interconnected by 50mm² cable TD Ref. 272/5B

Typical Earth Rod Cluster 'B'

Bond Leads

Compression terminals have M8 fixing holes for ensuring effective current carrying contact with clamps and apparatus.

Protective strain relief damper gaiter



Size mm ²	Length	Materials
50	As required	Aluminium
120		Aluminium
150		Aluminium
16		Copper
25		Copper
35		Copper
70		Copper
95		Copper



Carrying Bag

Carrying bags with shoulder straps are provided as standard for all CCL earthing equipment.

LOW VOLTAGE (L.V.) OVERHEAD DISTRIBUTION LINES



EC3.1 - 0400(5)

Standard equipment is designed for application to 5 wire, bare conductor, low voltage networks comprising:

- 3 - Phase wires
- 1 - Neutral
- 1 - Control wire/switch wire (street lighting etc.)

The clamps are EC3.1 "snap on screw on" with 300mm insulated extension handles.

The standard set provides a shorting cable tress capable of attaching all clamps securely on conductors spaced 305mm (12") apart vertically. If used on 3 or 4 wire systems, the spare clamps should be parked on the lowest conductor. Should a 6th wire be present, it is recommended to apply a separate 2-clamp bond lead to complete the short circuit bond.



"0400" equipment is supplied contained in a heavy duty P.V.C. carrying bag with hand grip. Cable leads are flexible copper braid clear P.V.C. covered as standard.

Rating 7.5kA/1 sec

Tested by ECRC

Weight 2.8kg

TD Ref. 272/46

Available on request to sales office.

OPTIONAL EXTRAS

1. 2 - clamp bond lead 610mm (22") long
2. Earth bond lead 15M long
3. Earth rod (electrode).

Tel: +44 (0)1572 768381

Fax: +44 (0)1572 767531

Email: office@mosdorferccl.co.uk

Web: www.mosdorferccl.co.uk



EC3.1 - 0400 (5) STANDARD SET COMPRISES:



Line End Clamp

Type EC3.1-300
Part No. 272313
Range 3 - 28mm dia
Rating 7.5kA/1 sec
TD Ref. 272/31



Cable Tress

Type Flexible Copper
Clear P.V.C. sheathed
Self Colour
Complete with
Compressed terminals,
M8 stud fixing holes
and protective gaiters
Part No. 272150
Size 25mm²
Rating 7.5kA/1 sec



(Optional Extra) Earth Bond Lead

Type Flexible Aluminium
"Arctic Grade"
P.V.C. sheathed (bright orange)
Complete with
Compressed terminals,
M8 stud fixing holes
and protective gaiters
Line end clamp EC3.1-300
Earth end clamp EC4.1



Carrying Bag

Carrying Bags are supplied
as standard with all CCL
earthing equipment

LOW VOLTAGE (L.V.) OVERHEAD DISTRIBUTION LINES



EC3.1 - 0400(5)

Standard equipment is designed for application to 5 wire, bare conductor, low voltage networks comprising:

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Rating 7.5kA/1 sec

Tested by ECRC

Weight 2.8kg

TD Ref. 272/46

Available on request to sales office.

OPTIONAL EXTRAS

1. 2 - clamp bond lead 610mm (22") long
2. Earth bond lead 15M long
3. Earth rod (electrode).

Tel: +44 (0)1572 768381

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EC3.1 - 0400 (5) STANDARD SET COMPRISES:



Line End Clamp

Type EC3.1-300
Part No. 272313
Range 3 - 28mm dia
Rating 7.5kA/1 sec
TD Ref. 272/31



Cable Tress

Type Flexible Copper
Clear P.V.C. sheathed
Self Colour
Complete with
Compressed terminals,
M8 stud fixing holes
and protective gaiters
Part No. 272150
Size 25mm²
Rating 7.5kA/1 sec



(Optional Extra) Earth Bond Lead

Type Flexible Aluminium
"Arctic Grade"
P.V.C. sheathed (bright orange)
Complete with
Compressed terminals,
M8 stud fixing holes
and protective gaiters
Line end clamp EC3.1-300
Earth end clamp EC4.1



Carrying Bag

Carrying Bags are supplied
as standard with all CCL
earthing equipment

HIGH VOLTAGE (H.V.) OVERHEAD DISTRIBUTION LINES



EC1.1 - 1133 (TRIDENT)

Standard equipment used by many electricity supply companies who prefer the simple "snap on" action, lightweight and rapid deployment of the EC1.1 clamp. Particularly useful where the conductor to be earthed is in tension, or where a rigid terminal point is available EC1.1.D must be applied using type D dispenser head fitted to the operating rod.

"Trident" equipment is supplied contained in a heavy duty P.V.C. carrying bag with shoulder strap, for easy handling. Cable leads to inter-connecting clamps are flexible aluminium cable, arctic grade P.V.C. sheathed - (bright orange) as standard.

Rating 12.4kA/2 sec
Tested to ESI 43 - 81 Specification
Weight 10kg
TD Ref. 272/20
Available on request to sales office.

Recommended operating rod
GF2-2.4 tel. with 'D' Type adaptor.

OPTIONAL EXTRAS

1. Steelwork ('X' arm) bond lead
2. Earth rod (electorde)





EC1.1 - 1133 (TRIDENT) STANDARD SET COMPRISES:



Line End Clamp

Type EC1.1.D
Part No. 272300
Range 4 - 22mm dia.
Rating 12.4kA/2 sec
TD Ref. 272/30



Earth End Clamp

Type EC4.1T
Part No. 272362
Range 4 - 25mm dia.
6 - 40mm section
Rating 17.5kA/1 sec
TD Ref. 272/32



Cable Tress

Type Flexible Aluminium
"Arctic Grade"
P.V.C. sheathed (bright orange)
Complete with
Compressed terminals,
M8 stud fixing holes
and protective gaiters
Size 3 - 120mm² x 3m long phase leads
1 - 50mm² x 15m long earth lead
Rating 12.4kA/2 sec



Operating Rod

Type GF2-2.4T 2-piece telescopic
Closed length 1.2m
Extended 2.4m



Adaptor Head

Type D (dispenser)
Part No. 272811



(Optional Extra) Steelwork Bond

Type As cable tress
Specification 50mm² x 2m long

HIGH VOLTAGE (H.V.) OVERHEAD DISTRIBUTION LINES



EC3.1 - 1133 (TRIPLEX)

Standard equipment used by electricity supply companies who require clamps able to be "snapped" onto the overhead conductor and then screw tightened for extra contact and security. The equipment is lightweight incorporating a parking bar for location on the centre phase conductor from which the remaining phase connections are easily deployed.

It is recommended that the parking bar connection be located on a tensioned conductor.

EC3.1 clamps are fitted with "eyering" application stems requiring the operating rod to be equipped with a Type E adaptor. Alternative bayonet stems may be fitted if customers prefer, in which case Type B adaptor is required.

"Triplex" equipment is supplied contained in a heavy duty P.V.C. carrying bag with shoulder strap, for easy handling. Cable leads to inter-connecting clamps are flexible aluminium cable, arctic grade P.V.C. sheathed - (bright orange) as standard.

Rating 17.5kA/1 sec
Tested to ESI 43 - 81 specification
Weight 9kg
TD Ref. 272/5
Available on request to sales office.

Recommended operating rod
GF2-2.4T with 'E' Type adaptor.



OPTIONAL EXTRAS

1. Steelwork ('X' arm) bond lead
2. Earth rod (electrode)



EC3.1 - 1133 (TRIPLEX) STANDARD SET COMPRISES:



Line End Clamp

Type EC3.1E
Part No. 272317
Range 3 - 28mm dia.
Rating 17.5kA/1 sec
TD Ref. 272/31



Earth End Clamp

Type EC4.1T
Part No. 272362
Range 4 - 25mm dia.
6 - 40mm section
Rating 17.5kA/1 sec
TD Ref. 272/32



Cable Tress

Type Flexible Aluminium
"Arctic Grade"
P.V.C. sheathed (bright orange)
Complete with
Parking bar,
Compressed terminals,
M8 stud fixing holes
and protective gaiters
Size 2 - 120mm² x 3m long phase leads
1 - 50mm² x 15m long earth lead
Rating 17.5kA/1 sec

Operating Rod

Type GF1.2
Extendable section
ESI Standard
see TD Ref. 272/15
Length to customers requirement



Adaptor Head

Type "E" eyesystem
Part No. 229016

(Optional Extra) Steelwork Bond

Type As cable tress
Specification 50mm² x 2m long



HIGH VOLTAGE (H.V.) OVERHEAD DISTRIBUTION LINES



EC3.1 - 1133 (POLEPARK)

Standard equipment used by electricity supply companies who have a preference for the "snap on screw on" clamp design, but with the parking bar arrangement secured at a convenient working height on the overhead line pole.

This equipment is particularly suitable for situations where conductors are not tensioned, such as down leads or jumper connections to pole mounted transformers, isolators, fuses etc. The parking bar is ratchet tightened onto the wood or steel pole for maximum rigid positioning. EC3.1 clamps are fitted with bayonet application stems requiring the operating rod to be equipped with a Type 'B' adaptor. Alternative "eyering" stems may be fitted if customers prefer, in which case a Type 'E' adaptor is required.

"Polepark" equipment is supplied contained in a heavy duty P.V.C. carrying bag with shoulder strap, for easy handling. Cable leads to inter-connecting clamps are flexible aluminium cable, arctic grade P.V.C. sheathed - (bright orange) as standard.

Rating 17.5kA/1 sec
Tested to ESI 43 - 81 specification
Weight 12kg
TD Ref. 272/10
Available on request to sales office.

Recommended operating rod
GF2-2.4T with 'B' Type adaptor.

OPTIONAL EXTRAS

1. Steelwork ('X' arm) bond lead
2. Earth rod (electorde)





EC3.1 - 1133 (POLEPARK) STANDARD SET COMPRISES:



Line End Clamp

Type EC3.1
Part No. 272318
Range 3 - 28mm dia.
Rating 17.5kA/1 sec
TD Ref. 272/31



Earth End Clamp

Type EC4.1T
Part No. 272362
Range 4 - 25mm dia.
6 - 40mm section
Rating 17.5kA/1 sec
TD Ref. 272/32



Cable Tress

Type Flexible Aluminium
"Arctic Grade"
P.V.C. sheathed (bright orange)
Complete with
Parking bar,
ratchet tensioning strap,
compressed terminals,
M8 stud fixing holes
and protective gaiters
Size 2 - 120mm² x 3m long phase leads
1 - 50mm² x 15m long earth lead
Rating 17.5kA/1 sec

Operating Rod

Type GF1-1.2
Extendable section
ESI Standard
see TD Ref. 272/16
Length to customers requirement



Adaptor Head

Type "B" bayonet
Part No. 272812

(Optional Extra) Steelwork Bond

Type As cable tress
Specification 50mm² x 2m long



HIGH VOLTAGE (H.V.) OVERHEAD TRANSMISSION LINES & BARS



EC S9 - 33400

Standard equipment used by electricity supply companies who require to apply earth bonds to overhead power lines and outdoor sub-station bars of large diameter, generally exceeding 25mm.

System voltage 33 to 400 kV. The equipment is lightweight commensurate with fault level rating and designed to comply with both British Electricity Board Standard (B.E.B.S.) S9 - 1967 and Electricity Supply Industry (ESI) Standard 41-21 - 1985. Reference to National Grid Co. (NGC) Standard 439201 T.P.S. 1/113 (overhead lines) has also been considered.

EC S9 clamps are fitted with "bayonet" application stems requiring the operating rod to be equipped with a Type B adaptor.

Kits are supplied in a heavy duty P.V.C. carrying bag with shoulder strap for easy handling. Cable leads to inter-connecting clamps are flexible aluminium braid.

Circuit main earths (C.M.E.) 150mm² clear P.V.C. sheath
Drain earths (D.E.) 50mm² "arctic grade" P.V.C. sheath - (bright orange)

Rating 17.5kA/2 sec (main circuit earths)
Tested to ESI 41 - 21
Weight (Dependent on customers requirements)
TD Ref. 295/6
Available on request to sales office.

Recommended operating rod
GF1-1.2 with 'B' Type adaptor.

OPTIONAL EXTRAS

Customised design to users special requirements.





ECS9 - 33400 STANDARD SET COMPRISES



Line End Clamp

Type ECS9/1B
Part No. 272040
Range 6.5 - 38mm dia.
Rating 17.5kA/2 sec
TD Ref. 272/51

Note ECS.9/2B = 38 - 76mm dia
ECS.9/3B = 76 - 90mm dia.
ECS.9/4B = 90 - 102mm dia.



Earth End Clamp

Type EC2.3
Part No. 295083
Range 3mm x 7mm thick
38mm x 50mm wide
Rating 17.5kA/2
TD Ref. 272/57

Note EC4.1 clamp is used
for drain earth leads



Cable Tress

Type Flexible Aluminium Clear or
bright orange P.V.C. sheathed
CW compressed terminals,
M8 stud fixing holes
and protective gaiters
Part No. 272055 (150mm² C.M.E.)
Part No. 272051 (50mm² D.E.)
Rating 17.5kA/2 sec (C.M.E.)

Operating Rod

Type GF1-1.2
Extendable section comprise
1-top section
3-intermediate sections
1-bottom section
Total Assembled Length 6m



Adaptor Head

Type "B" bayonet
Part No. 272812

PORTABLE EARTHING EQUIPMENT



EC9.5 - 33400

Standard equipment is designed for use by electrical supply companies who require to apply additional earth bonds to protect against induced voltage when erection or maintaining overhead transmission lines.

This equipment is lightweight and supplied with push/screw-on line end clamp and hand applied tower earth which penetrates through painted, weathered or non conductive surfaces.

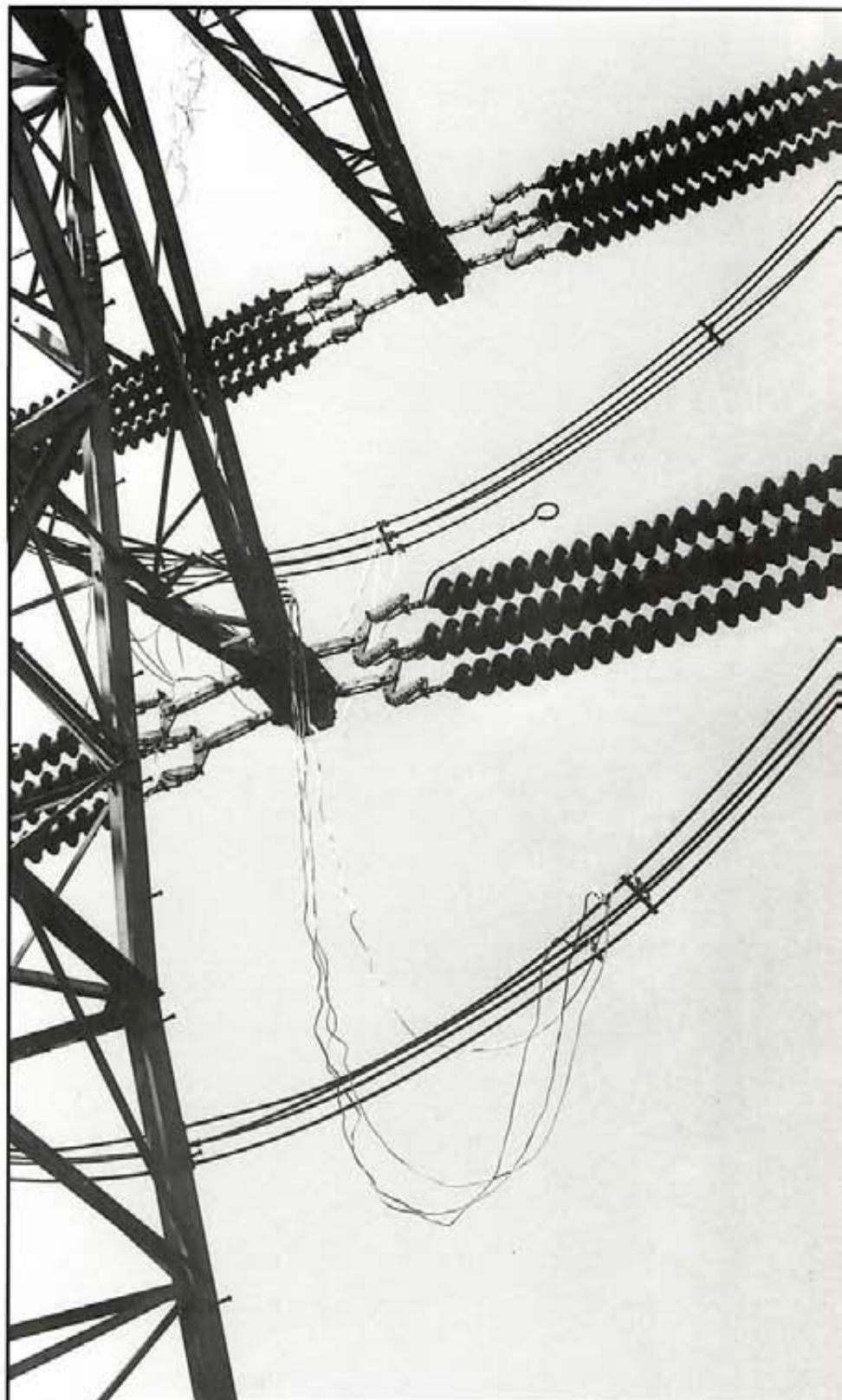
Kits are supplied in a heavy duty P.V.C. carrying bag comprising:-
line end clamps
earth end clamps
down leads 50mm
Aluflex, 8m long

Rating -7.5kA/1 sec
TD Ref. 272/57

Recommended operating rod
GF1-1.2 with 'B' adaptor.

OPTIONAL EXTRAS

Customised design to users special requirements.



Tel: +44 (0)1572 768381
Fax: +44 (0)1572 767531

Email: office@mosdorferccl.co.uk
Web: www.mosdorferccl.co.uk



EC9.5 - 33400 STANDARD SET COMPRISES



Line End Clamp

Type EC 3.3
Part No. 295374
Range 12 - 38mm
Rating 17.5kA/2 sec



Earth End Clamp

Type EC 2.2
Part No. 295237
Range 11mm thick max
Rating 17.5kA/2 sec



Cable Tress

Type Flexible Aluminium
P.V.C. sheathed
Part No. 272029
Rating 7.5kA/1 sec

Operating Rod

Type GF1-1.2
Extendable sections comprise
1 x top section
1 x bottom section
Total Assembled Length 2.4m

Adaptor Head

Type "B" bayonet
Part No. 272812



DISTRIBUTION PLANT AND EQUIPMENT (H.V. AND L.V.)



EC4.1 - 1133 (TRIDENT)

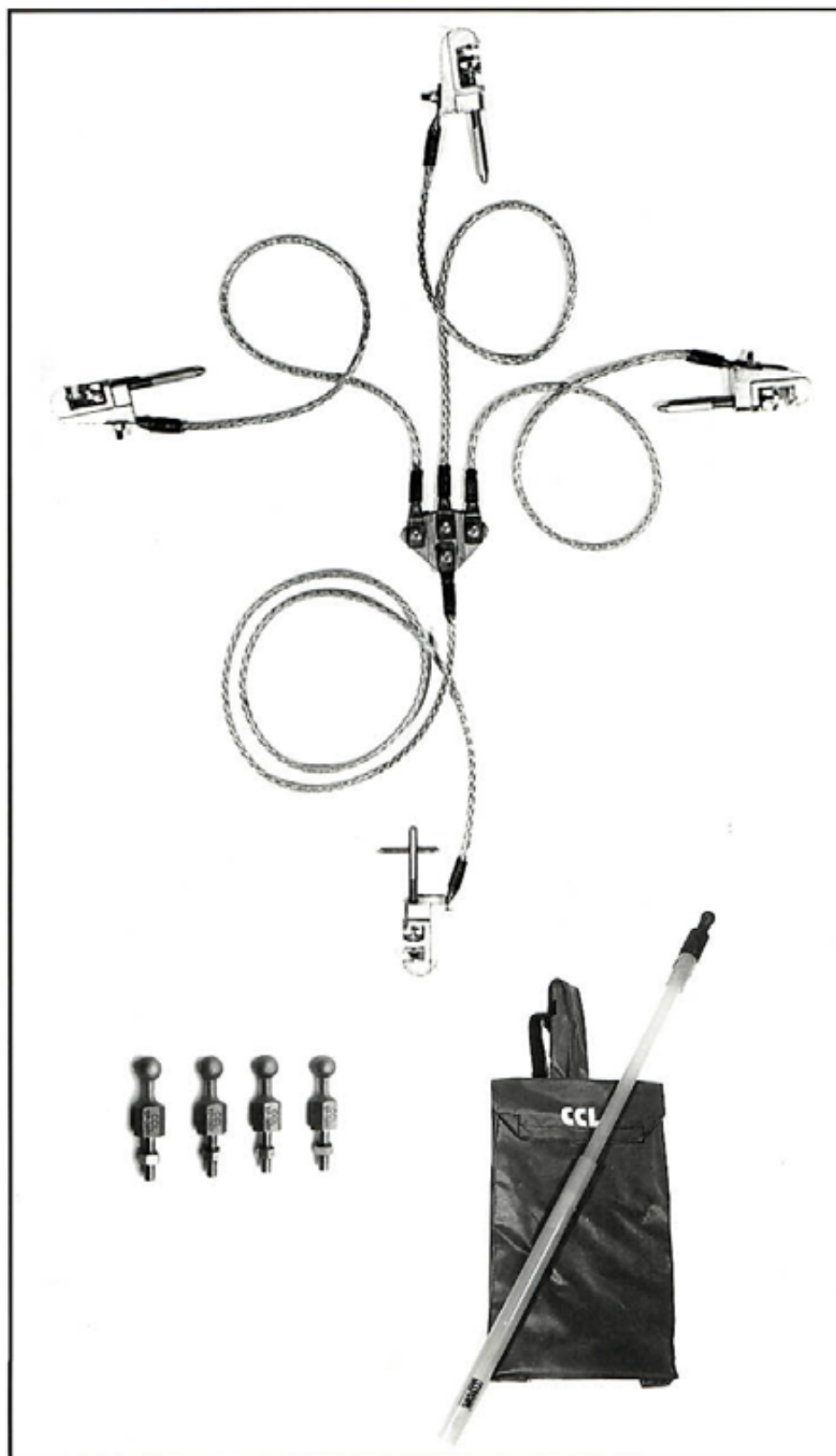
Standard equipment is designed for installations where temporary earths have to be applied to bus-bars and a point of earth. The additional feature of the fixed earth point is particularly useful for original equipment manufacturers to design into switch gear, transformers, electro static precipitator plant etc.

This equipment is supplied in a heavy duty P.V.C. carrying bag complete with shoulder strap for easy handling.

TD Ref. 272/71
Available on request to sales office.

CUSTOMISED EQUIPMENT

The standard kit illustrated shows the concept, special equipment can be provided to suit specific installation requirements.
Contact CCL Sales for more information.





EC4.1 - 1133 COMPRISES:



Line End Clamp

Type EC4.1 - H
Part No. 272365
Range Round 6 - 25mm dia.
Flat 6 - 40mm
Rating 25kA/1 sec
TD Ref. 272/32



Earth End Clamp

Type EC4.1T
Part No. 272362
Range Round 6 - 25mm dia.
Flat 6 - 40mm
Rating 25kA/1 sec
TD Ref. 272/32



Permanent Earth Point

Type EP1.1
Part No. 272378
TD Ref. 272/35



Operating Rod

Type GF2-1.4T telescopic
Part No. 272211
TD Ref. 272/15



Adaptor Head

Type "H" clamp
Part No. 272805
TD Ref. 272/25



Cable Tress

Type Flexible Copper Braid
Clear P.V.C. covered
Complete with
Compressed terminal inter-connections
See Table for alternatives

Cable Tress Section		Cable Tress Section	
25mm ²		50mm ²	
Length	1m Phase 2m Earth	Length	1m Phase 2m Earth
Rating:-	7.5kA/1 sec	Rating:-	15kA/1 sec
Part No.	272900	Part No.	272901

HIGH VOLTAGE (H.V.) OVERHEAD ELECTRIC TRACTION LINES



EC1.1 - 1525 (TRACTION) (Approved for 1.5 to 25kV systems)

Standard equipment used by many railway companies throughout the world, for providing temporary earth bonds between overhead catenary or contact conductors and the earthed rail line or designated earth points.

This equipment incorporates the EC1.1 - 'D' "snap-on" line clamp for rapid engagement and disengagement from the line conductor.

EC1.1 clamp must be applied using Type 'D' dispenser head fitted to the operating rod.

"Traction" equipment is supplied contained in a heavy duty P.V.C. carrying bag with shoulder strap, for easy handling. Cable leads to inter-connecting clamps are flexible aluminium braid, arctic grade P.V.C. sheathed - (bright orange) for maximum visibility when installed at the point of work.

Rating 7.5kA/1 sec (tested to British Rail Standard)
TD Ref. 272/60
Available on request to sales office.

Recommended operating rod
GF1-1.2 with 'D' adaptor.

OPTIONAL EXTRAS

EC1.1 adaptor plate to assist disengagement of overhead line clamp from ground level.





EC1.1 - 1525 (TRACTION) COMPRISES:



Optional Extra
Adaptor plate
Part No. 272309

Line End Clamp

Type EC1.1.D
Part No. 272300
Range 3 - 25mm dia.
Rating 7.5kA/1 sec
TD Ref. 272/30



Earth End Clamp

Type EC2.1
Part No. 272380
Range 40mm x 25mm flat
Rating 7.5kA/1 sec
TD Ref. 272/34



Cable Tress

Type Flexible Aluminium
"Arctic Grade"
P.V.C. sheathed (bright orange)
Complete with
Compressed terminals,
M8 stud fixing holes
and protective gaiters
Part No. 272291
Size 50mm² x 15m long
Rating 7.5kA/1 sec

Operating Rod

(Extendable)
Type GF1-1.2 (Extendable)
Comprises
1-Top Section
2-Intermediate Sections
1-Bottom Section
Total Assembled Length 4.8m

Adaptor Head

Type "D"
Part No. 272811

