

RAIL EQUIPMENT



PENTA
ELECTRICAL SAFETY PRODUCTS

Your life,
Our work.

pentaesp.com

Our Story

Since our first innovation in 1932, we have built our expertise by uniting companies dedicated to the health and safety of people working both on and around electrical networks.

Our growth has been driven by a deep understanding of national markets, strong understanding of international standards, and a forward looking approach to evolving electrical energy needs.

Today, PENTA Electrical Safety Products (our new brand) reflects our expertise, our capacity for innovation, and our shared commitment to working closely with you.

Our teams support you at every stage, from initial analysis through to operational implementation. We bring together all our capabilities, research and development, design, manufacturing, supply chain, training, commissioning, and ongoing maintenance, to deliver a complete, reliable service.

15000 product references

+ 90 years of innovation

+ 5000 customer accounts on 5 continents

550 employees and 18 subsidiaries

5% of sales reinvested in R&D

We are active members of international and national standards committees, including ASTM and IEC, etc.

Protect / Secure / Work

Our Offer

We design and manufacture our products in dedicated facilities. Our offering supports all live and dead operations involved in the construction, maintenance, and operation of electrical networks.

As part of our commitment to collaboration, we work alongside you in long term partnership to develop the most effective solutions, drawing on our global expertise and the full breadth of our capabilities across every area of activity.



Our
**areas of
activities**

- / Power Generation
- / Transmission
- / Distribution
- / Substation
- / Cables and Connections
- / Industry
- / Rail
- / Electrical Transport
- / Emergency Service



**Your life,
Our work.**

PENTA Electrical Safety Products' range of portable earthing equipment for rail tracks and overhead line (OHL) systems has been developed through many years of collaboration with rail operators across the UK & Ireland. Our solutions are approved for use on both rail tracks and OHL.

We are proud to have achieved Network Rail PADs approval for a number of key rail products. In addition to supplying a standard range of approved equipment, PENTA Electrical Safety Products can also design bespoke solutions to meet any rail portable earthing requirement.

Our Products



Catenary Maintenance



Arc Flash Clothing



Head Protection



Hand Protection



Insulated Tools



Portable Earthing



Voltage Detector



Operating Poles



Cable Preparation Tools



Power Cable Cutting & Spiking Tools



Wall Mounted Rescue Kit





Catenary Maintenance

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Voltage Detection

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PPE

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Operational Hardware

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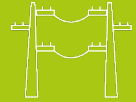
CATENARY MAINTENANCE

- / CTS 07
- / MFC 08
- / MILCAT 09
- / REGLIGHT 09



PENTA
ELECTRICAL SAFETY PRODUCTS

Your life,
Our work.



/ CONTACT WIRE TENSION MEASUREMENT SYSTEM

CTS

The tensiometer measures all type of cables and catenary contact wires (brand new or used cables) with simplicity and efficiency.

Simply & quickly screwed on an insulating pole ready for hanging on the chosen cable (support cable, contact wire, feeder).

The operator can easily receive measurements via smartphone application (PENTA ESP RAIL). The measuring process is done in a few seconds.

All captured data can also be exported to a PC server if necessary.



/ TECHNICAL SPECIFICATION

- Operational voltage : up to 25kV
- Measurement range : 100 daN to 2500 daN (1daN = 10N)
- Wire size range : up to 21mm dia
- Temperatures range : -15°C to +50°C
- Measurement time : 40 seconds for 1 measurement
- Working time : 250 measurement
- Weight : 4.5kg

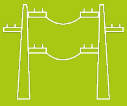
/ ADVANTAGE

- The CTS is designed to be used on **DEAD** or **LIVE OHL**.
- Measurement from the ground **WITHOUT** the need for lifting equipment or ladder, etc.
- SELF-TESTING** feature
- INSTANTANEOUS RESULT** via smartphone application
- BLUETOOTH CONNECTIVITY**
- QR CODE** for user guide, certificate of conformity, DATA history etc.



WATCH
CTS IN
ACTION





CATENARY MAINTENANCE

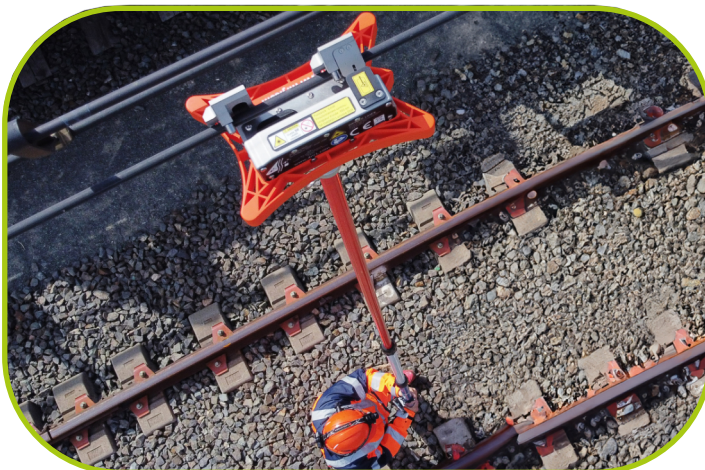
/ CONTACT WIRE THICKNESS MEASUREMENT USING LASER PROFILING

MFC

Check wear of the catenary contact wire from the ground. Simply & quickly screw on an insulating pole ready for lifting & hanging on the contact wire.

The operator can easily receive measurements via smartphone application (PENTA ESP RAIL). The measuring process is done in a few seconds.

Adaptor also available for pole to attach & hold smartphone securely for performing laser alignments and measurements.



/ TECHNICAL SPECIFICATION

- Operational voltage : up to 25kV
- Measurement range : 2mm to 16mm dia
- Laser Resolution : ± 0.1mm
- Accuracy : ± 0.05mm for wires up to 12mm dia
± 0.08mm for wires over 12mm dia
- Working time : 6 hours
- Weight : 1.5kg

/ ADVANTAGE

- WIRE SPREADER TOOL** for 1500 V network also included
- SMARTPHONE HOLDER** width 55mm to 100mm
- CALIBRATION TOOL** included
- Measurement from the ground **WITHOUT** the need for lifting equipment or ladder, etc.



WATCH MFC IN ACTION

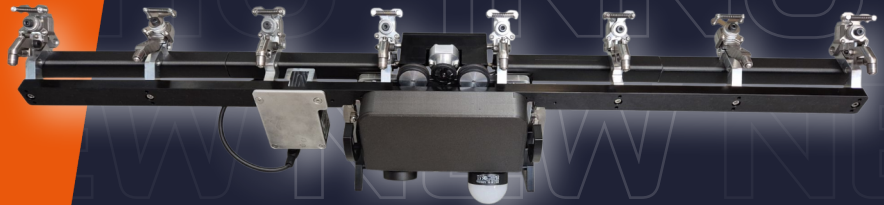


NEW INNOVATION

/ MILCAT

Introducing the first autonomous measuring device capable of :

- Overcoming obstacles in the overhead contact wire
- Dynamically measures wire wear along a section



/ SELF-CENTERING LASER HEIGHT & STAGGER GAUGE

REGLIGHT

Laser ruler allowing measurements of catenary contact wire height and stagger.

All measurements are taken via the free smartphone app (PENTA ESP RAIL) allowing data be stored on the device or recorded on server.



/ TECHNICAL SPECIFICATION

- Compatibility with the tracks width 1430 mm to 1470 mm
- Stagger range : ± 450 mm (900 mm)
- Electrical isolation between the two rail tracks
- Bluetooth connectivity



COMPANION APP





VOLTAGE DETECTION

/ SKY RADIO 3 11

/ TBT60 12

/ TBE25K 13

/ ALADIN NR 14



VOLTAGE DETECTION

Product range summary

NEW INNOVATION

/ SKY RADIO 3

SKY RADIO 3 is a prevention system which operates according to a principle of proximity detection based on several sensors, depending on the number of arms of the crane/aerial bucket/machine to be equipped.

It warns the operator by an audible alarm and a visual signal when the moving parts of the vehicle are approaching the risk zone.

The detection distance can be configured between 3 and 6 meters (10 to 20 feet) from the high voltage line.

| Products | Proximity detection from 3 to 6m configurable (Wireless) | | |
|----------------------------------|--|--|---------------------------------|
| | SKY RADIO 3 with outside control monitor | SKY RADIO 3 with cabin control monitor | SKY RADIO 3 SKY NACELLE RADIO 3 |
| Conveyor belt | ✓ 4 sensors | | |
| Concrete Pump 3 arms | ✓ 5 sensors | | |
| Concrete Pump 4 arms | ✓ 7 sensors | | |
| Concrete Pump 5 arms | ✓ 9 sensors | | |
| Basket from 16 to 22 m | | | ✓ 4 sensors |
| Basket from 22 to 30 m | | | ✓ 6 sensors |
| Auxiliary cranes ≤16 m | ✓ 2 sensors | | |
| Auxiliary cranes from 16 to 22 m | ✓ 4 sensors | | |
| Auxiliary cranes from 22 to 30 m | ✓ 6 sensors | | |
| Hydraulic excavators | | ✓ 2 sensors | |
| Food tanker | | ✓ 1 sensor | |

/ APPLICATION

- ✧ Concrete pump
- ✧ Food tanker
- ✧ Hydraulic excavators
- ✧ Conveyor belt
- ✧ Aerial bucket
- ✧ Auxiliary cranes
- ✧ Fire-fighting vehicles
- ✧ Agricultural machinery

/ OPERATION

SKY RADIO 3 is activated when the Power Take-Off of the vehicle (PTO) is engaged. When the device detects the presence of the line, it triggers an audible and visual alarm while blocking the movement of the moving part at risk (optional). The blocking and alarms can be remotely deactivated under the responsibility of the operator from the cabin control monitor or the external control monitor. The visual alarm remains active as long as a danger is present.

- ✧ Self-test system at each power-on
- ✧ Sensitivity limits of the system do not allow the detection of 230 V - 380 V line
- ✧ The system does not detect the presence of DC voltage
- ✧ Hand held proving unit is available as an additional unit



CENTRAL UNIT



CABIN CONTROL MONITOR



OUTSIDE CONTROL MONITOR



SENSOR



VOLTAGE DETECTION

/ TEST BEFORE TOUCH LIVE LINE DETECTOR **TBT60V**

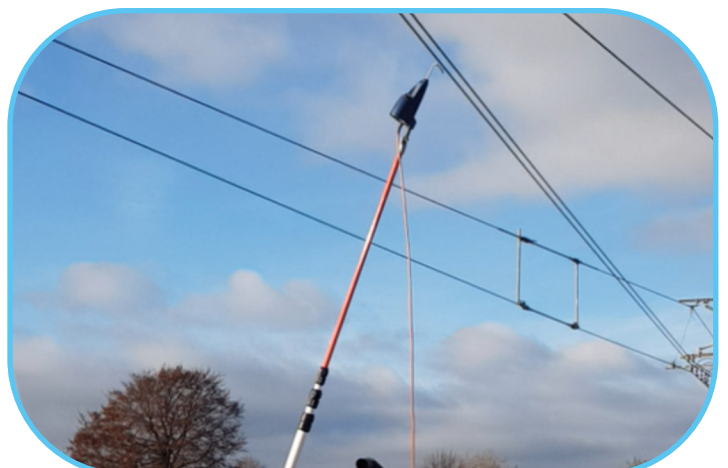
This device is used for proving dead operation of direct current on overhead conductor especially for railway contact wires (metro, trains).

- Detection of DC voltage threshold 60V
- Detection of residual DC voltage measuring
- Detection of nominal or induced AC voltage (presence or absence of voltage)



/ TECHNICAL SPECIFICATION

- Avoids false nominal DC voltage detection: Double measurement circuit to discriminate nominal voltages from stray voltages coming from surrounding circuits
- Constantly checking the continuity of the earth lead
- Direct access to the battery and sealed electronics compartment when the battery is replaced, this design prevents the following:
 - Damage to electronic circuits
 - Humidity ingress into the device when the battery is replaced out doors





/ TEST BEFORE EARTH LIVE LINE DETECTOR **TBE25K**

This voltage detector is designed for “proving dead” (absence of 25kV traction voltage) prior to fitting earths “Test Before Earth” :

- The device will detect any nominal voltage on over head lines of the rail network
- The detector is not influenced by induced
- Detector is applied using standard insulated operating poles



The TBE25k Test Before Earth detector provides clear indication that can be understood clearly in all working conditions:

- Visual indication is clear in all usual working environments, including direct sunlight or fog, with a wide angle of visibility with the use of an optic ring.
- The 100 dB sound signal is designed to remain audible even with passing traffic, in fog or strong wind, due to its acoustic “horn” the unloading of the line.
- Simple battery replacement with prohibited humidity ingress into the device when the battery is replaced outdoors.





VOLTAGE DETECTION

/ RAIL PERSONAL VOLTAGE ALARM


ALADIN NR

ALADIN NR Personal Voltage Alarm helps the operator:

-  To avoid inadvertently walking to an energised location.
-  To become aware of re-energisation through equipment failure or human error.



ALADIN NR fits to VISARC helmet or any other existing helmet. The device provides 360° detection around the operator meaning that the **ALADIN NR** is the ultimate personal voltage alarm.

-  This device is a personal voltage alarm with head light.

-  The **ALADIN NR** device is not intended to replace standard safety procedures.
It is an addition.

WATCH
ALADIN IN
ACTION



ALADIN NR is a personal voltage alarm with head light on which is designed to provide additional safety for workers operating near the safe working distance of 25kV energised equipment (during maintenance, rescue operations, painting, pruning etc).





PPE

/ VISARC 16

/ TOUCH-E 17

/ WALL MOUNTED
RESCUE KIT 18



PENTA
ELECTRICAL SAFETY PRODUCTS

Your life,
Our work.



PPE



NEW INNOVATION

/ VISARC HELMET FOR ELECTRICIANS WITH INTEGRATED APC1 / APC2 ARC-FLASH FACE SHIELD

VISARC is an award winning helmet that provide an unrivalled protection against thermal effects from an electric arc and arc flash, falling objects, UV radiation and molten metal splashes in particular.

ELECTRONICS

ON-BOARD TECHNOLOGY

We have created a revolutionary helmet with integrated electronic capabilities, similar to the electronic functions found in pilot helmets used in aviation.

Available electronic features

- Head lamp
- Head lamp with auxiliary battery
- Personal Integrated Voltage Detector*

* Audible beeps confirm the accurate positioning of the screen or shield, thanks to sensors integrated into the helmet (only available on versions with personal alarm).

THE BEARD

NO MORE HOODS...

This rigid protection is optional for helmets with an APC1 face shield and essential for APC2 helmets.

When lowered, the BEARD fits perfectly over the face shield, completing the protection on the bottom and sides of the face. This patented technology is an advantageous replacement for traditional textile protectors avoiding hygiene and cleaning problems.

The BEARD's lowering mechanism ensures a perfect fit with the screen.



More information

CHOOSE YOUR ARC FLASH PROTECTION



APC1 protection
4kA / 0,5s
Clear face shield



APC2 protection 7kA /
0,5s ATPV 12 cal/cm2
Light grey tint face shield



APC2 protection
7kA / 0,5s
ATPV 25 cal/cm2
Light grey tint face shield

THE HELMET

UNRIVALLED SAFETY & COMFORT

The «double shell» design allows us to go even further in controlling dielectric insulation. The balance and quality of the harness contribute to carrying comfort.

THE FACE SHIELD

UNRIVALLED VISUAL COMFORT

It protects the face and eyes from the thermal effects of an electric arc short-circuit (projection of molten metal, heat, UV radiation, etc.).

Injection moulded into high-tech materials, it uses patented technology used in helicopter helmets to eliminate image distortion.

5 STEP CONFIGURATION



01 Choose ARC FLASH PROTECTION

02 Choose ON-BOARD ELECTRONICS

03 Choose CREST COLOUR



04 Choose ACCESSORIES



05 Personalise ADD COMPANY LOGO

Complete all these steps in our **configurator** on our website





NEW INNOVATION TOUCH-E

INSULATED GLOVES FOR WORK IN ELECTRICAL ENVIRONMENTS

A SECOND SKIN FOR BETTER

DEXTERITY AND SENSITIVITY



1000 V AC / 1500 V DC

Protection suitable for vehicle voltages



GRIP

Better handling of tools and small parts



THICKNESS

30% thinner than a traditional class 0 glove



SHAPE

Respects the anatomy of the hand at rest, reducing fatigue and ensuring excellent pinching



ACCESSORIES



Glove Box
RGX-BGT



Pneumatic glove tester ø 100 mm
EOSE9030



Transport pouch
RGX-SAC



Glove cleaner
RGX-1704/200



Overglove



Leather overgloves
TG55 to TG58

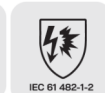
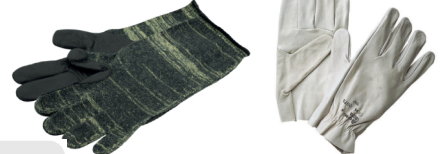
OVERGLOVES

Complete your insulating glove with superior mechanical protection.

Depending on use and risk analysis, we recommend wearing a dedicated protector such as a leather/technical fiber overgloves.

A standardised
3-IN-1
Protection

Kevlar.





PPE

PS2

WALL-MOUNTED
ELECTRICAL
EMERGENCY KIT

FOR SERIOUS ELECTRICAL ACCIDENTS

QUICK-ACCESS KIT FOR
RESCUE INTERVENTION IN
CASE OF ACCIDENT OR IN THE
PROXIMITY OF A LOW- OR
HIGH-VOLTAGE ELECTRICAL
INSTALLATION



ROBUST AND COMPACT
CASE TO HOUSE ALL
NECESSARY KIT
CONTENTS IN THE EVENT
OF EMERGENCY

Large module cabinet :

790 x 790 x 291 mm

Small module cabinet:

790 x 400 x 291 mm

- Organisational option with a shelf
- High-voltage enclosure with a transparent, watertight cover (IP54)
- Includes wall mounting kit



KIT CONTENTS



Rescue Pole



Voltage
Detector



Insulating
Gloves



Insulated
Boots



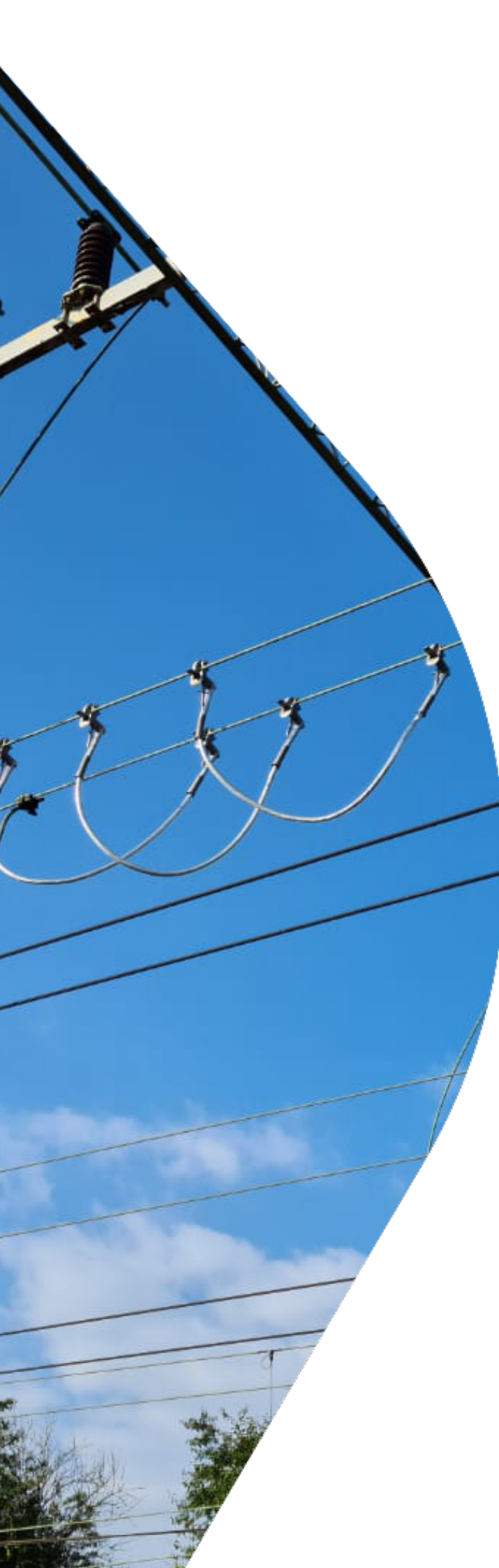
Talcum Powder



Adhesive tape for
demarcation



Insulating
Stool



EARTHING EQUIPMENT

| | |
|---|----|
| / S9B STYLE INTERLOCK RAIL KIT | 20 |
| / TYPE B CE5 STYLE INTERLOCK RAIL KIT | 20 |
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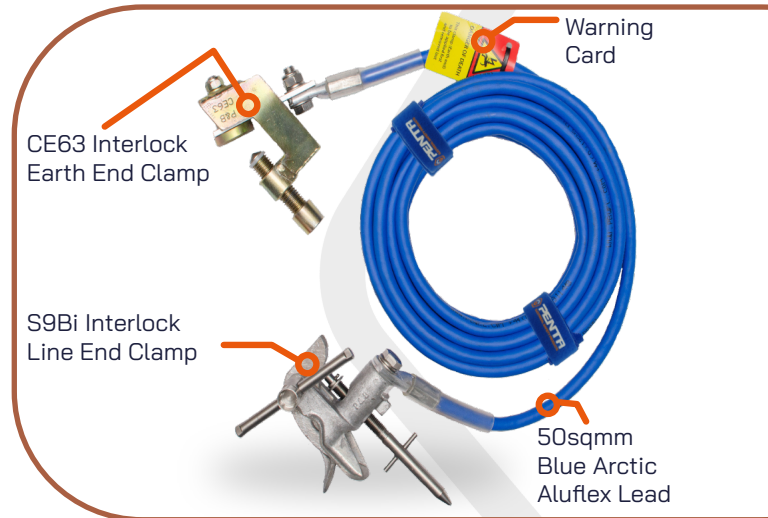


EARTHING EQUIPMENT

/ S9B STYLE INTERLOCK RAIL KIT

Interlock Rail Kit comprising of one CE63 Interlock Earth End Clamp, with one S9Bi Interlock Line End Clamps and interconnecting 8m 50sqmm Blue Arctic Aluflex Lead.

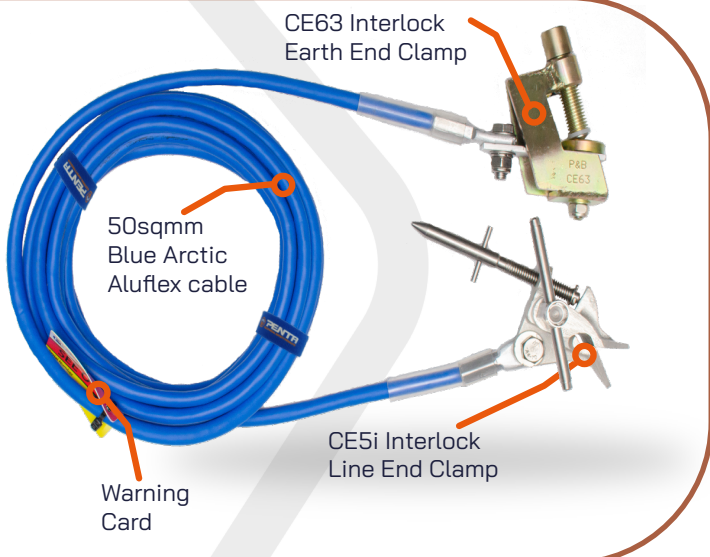
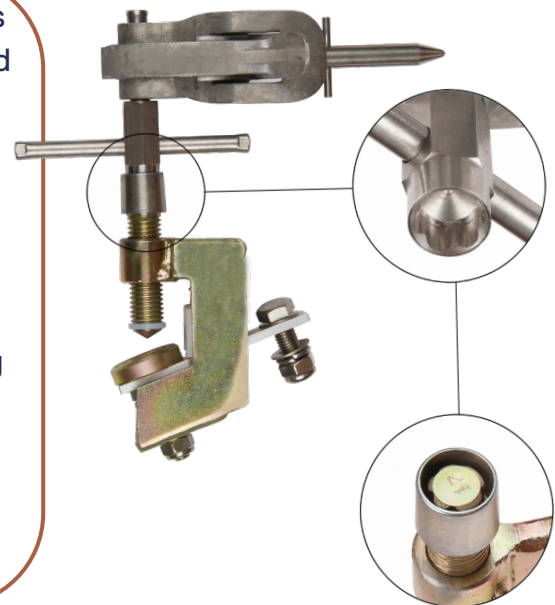
| Reference | PADS Number | Short Circuit Rating |
|-----------|-------------|---------------------------|
| EFT-16726 | 0091/012188 | 8.9kA/ 1s & 12.5kA/ 0.25s |



This equipment is for providing temporary earth bonds between overhead catenary or contact conductors and earthed rail sections or recognised earthing points.

The equipment has been specially enhanced in order to address the potentially fatal procedure of removing the equipment in the incorrect order from service.

To ensure that the Line End Clamp is removed prior to the Earth potential clamp it incorporates a special key which must be used to remove the Earth End Clamp. The tamperproof lock arrangement is an integral part of both clamps and up to 20 combinations are provided, to deter 'master keys' being used to fool the system.



/ TYPE B CE5 STYLE INTERLOCK RAIL KIT

Type B CE5 Style Interlock Rail Kit comprising of one CE63 Earth end, with one CE5i Line End Clamp, and interconnecting 8m 50sqmm Blue Arctic Aluflex lead.

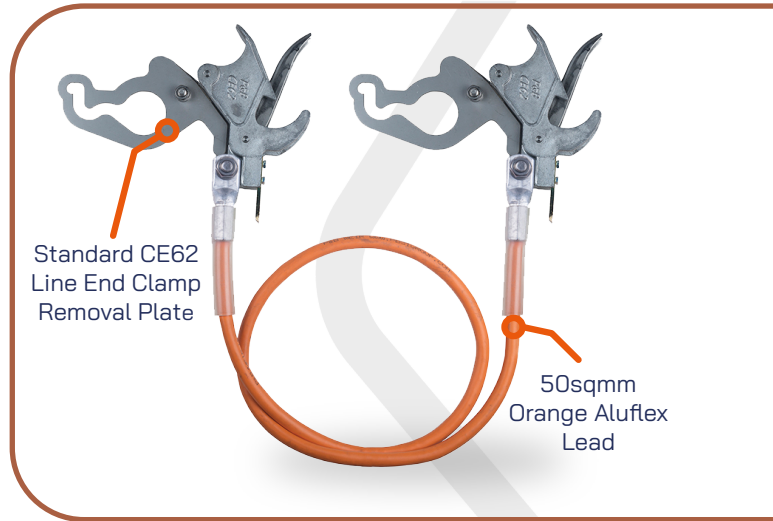
| Reference | PADS Number | Short Circuit Rating |
|-----------|-------------|---------------------------|
| EFT-16741 | 0091/012568 | 8.9kA/ 1s & 12.5kA/ 0.25s |



/ DEP SHORT ORANGE RAIL EARTH KIT 1.5M

The Designated Earth Point (DEP) Short Orange Rail Earth Kit comprises of two CE62 Snap-on style Line End clamps and an interconnecting 1.25m 50sqmm Orange Aluflex lead.

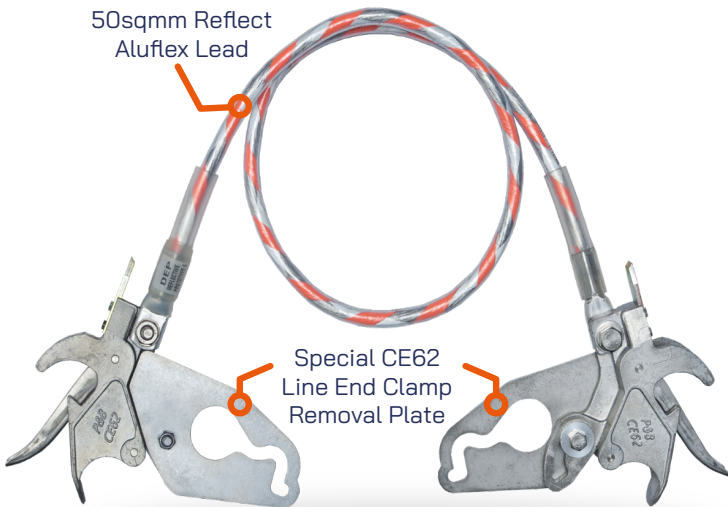
The CE62 (PADS 0091/020271) incorporates a stainless-steel jaw, which is spring-loaded to reduce application and removal time associated with typical clamps of the screw type. The CE62 is suitable for a conductor range between 4mm to 20mm diameter. A Stainless-Steel removal plate is added to ease the location and removal of the clamps.



Standard CE62 Line End Clamp Removal Plate

50sqmm Orange Aluflex Lead

| Reference | PADS Number |
|------------|-------------|
| MISC-00232 | 0091/020322 |



50sqmm Reflect Aluflex Lead

Special CE62 Line End Clamp Removal Plate

/ Available CE62 REMOVAL PLATE types



Standard CE62 Removal Plate

Network Rail Approved

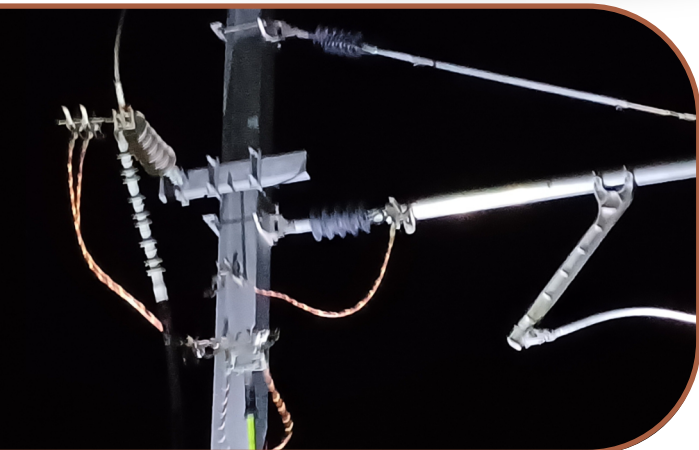


Special CE62 Removal Plate

2 mm thicker than standard removal plate for extra durability and strength

/ Also available in REFLECT ALUFLEX CABLE

- The Reflect DEP Portable Earth is specially designed by PENTA Electrical Safety Products for use within the rail industry.
- Its unique reflective properties allows operators on the track easily identify the presence of portable earth on the overhead lines in darkness.
- The better visibility allows the operator to double check the earthing arrangement of their isolation and to gain an additional assurance that portable earth is applied to protect them from receiving electric shocks.



Bright

Ideal for working in dark environments or at night



DURING DAY

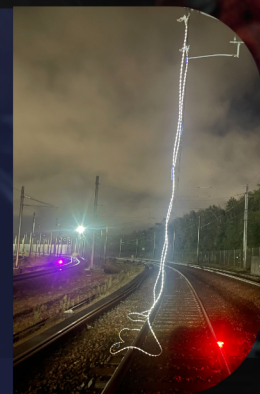


DURING NIGHT



WHY REFLECT?

- Reduce the likelihood of the trip-on-close incidents' occurrence usually in early mornings when portable earth is left on overhead line equipment after an isolation is given up
- Reflect Aluflex cable is a revolutionary new product. Its construction allows for quick identification due to its helical orange and reflective bands easing location during the day and night
- The clear outer sheath allows for visual inspection of the cable strands

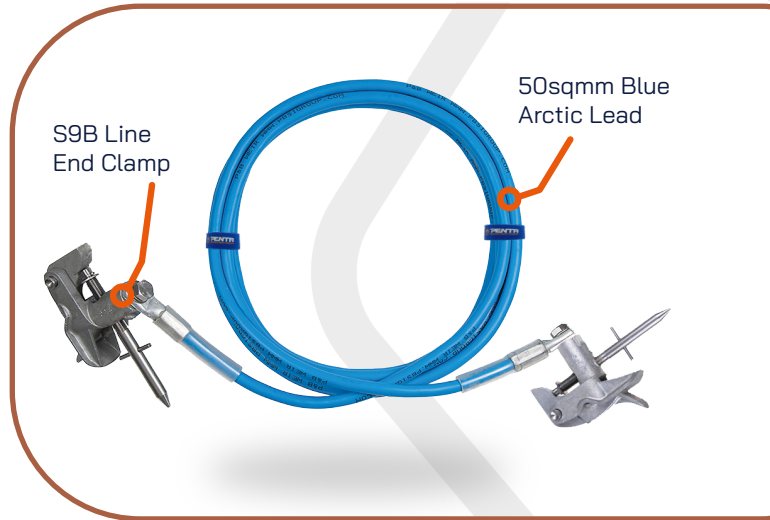




/ RAIL BLUE LEAD CONTINUITY KIT

Rail Jumper Bond is comprised of two S9B Line End Clamps and interconnecting 8m 50sqmm Blue Arctic Lead.

Bonds and Jumpers can be supplied at any length required for non-Network Rail applications.

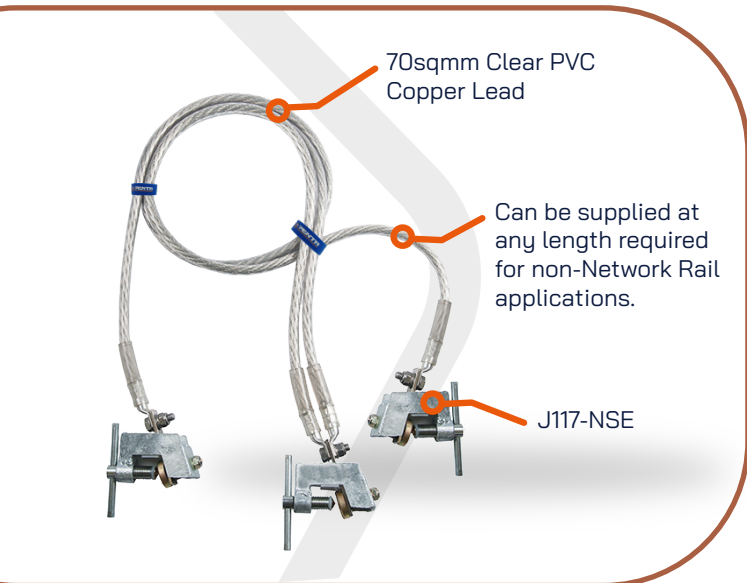


| Reference | Lead Type | PADS Number |
|--------------------|-------------------------------|-------------|
| MISC-00287 | 8m 50sqmm Arctic Blue Lead | URLT/023549 |
| MISC-00287/6_01_50 | 1.50m 50sqmm Arctic Blue Lead | |

/ SHORT CIRCUITING STRAP

Rail Short Circuiting Straps are used to short the positive and negative circuit of a D.C Feeder section. Each strap consists of three J117-NSE clamps fitted with flexible Copper Lead.

The body of the J117-NSE has an insulating shield to prevent welding to the Rail in the event of a fault current. Clamps are suitable for fitting to both Bull-Head and Flat Bottomed rails, and use a hardened Steel tip to penetrate corrosion.

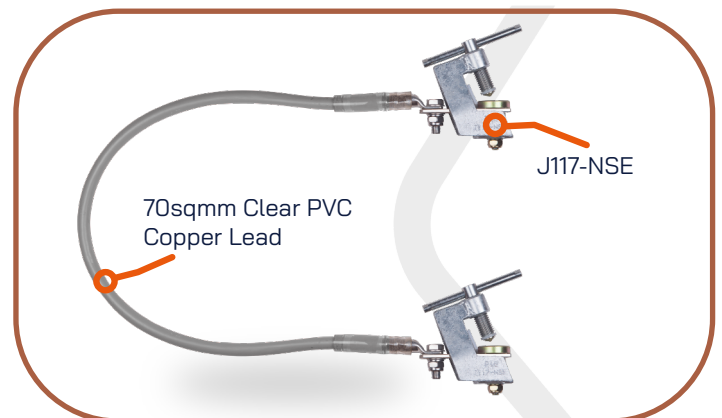


| Reference | Lead Type | PADS Number |
|-------------|--|-------------|
| EFT-16732/1 | 2x 1.5m 70sqmm Clear PVC Copper Lead | 0091/012196 |
| EFT-16732/2 | 2x 2m 70sqmm Clear PVC Copper Lead | |
| EFT-16732/3 | 2x 1.5m 70sqmm Clear PVC Copper Lead but with J117-NSE/SKT | 0091/012091 |

/ RAIL SHORTING BOND

Rail Shorting Bond is comprised of two J117-NSE clamps with a special 1.8m 70sqmm insulated tinned copper lead assy.

Bonds can be supplied at any length required for non-Network Rail applications. Please contact us to discuss your requirement.



| Reference | PADS Number |
|-------------|-------------|
| EFT-16735/1 | 0050/001303 |

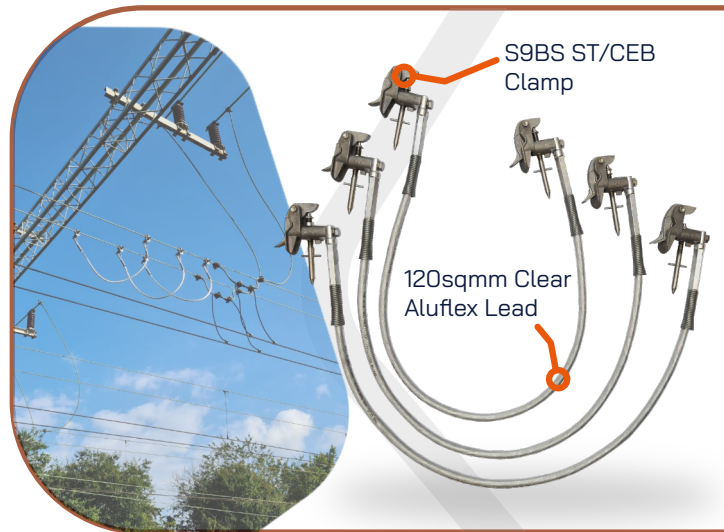


EARTHING EQUIPMENT

/ TEMPORARY RAIL JUMPER KIT

A temporary jumper to be used in emergency feeding scenarios in the event of broken jumpers or isolators. The Temporary Rail Jumper Kit is accepted for use on Network Rail controlled 25kV OLE infrastructure.

| Reference | PADS Number |
|-----------|-------------|
| EFT-19319 | 0006/120053 |

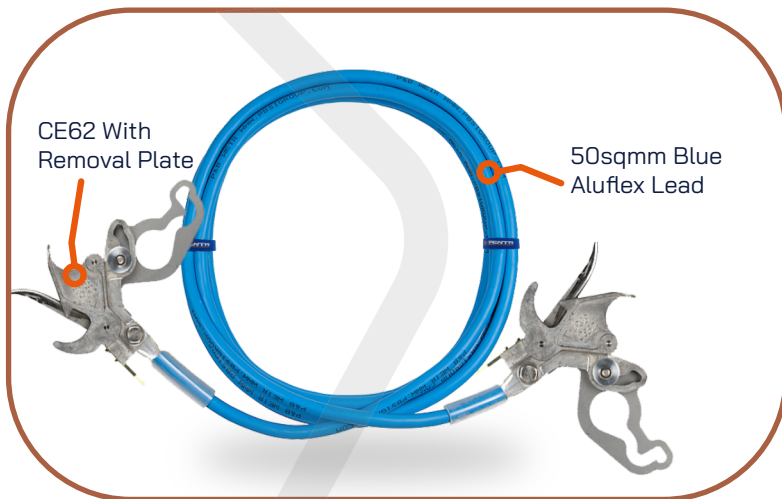


/ RAIL BLUE LEAD CONTINUITY KIT

Comprising of 2 x CE62 with removal plates on 8m 50sqmm Blue Aluflex Lead.

Available in other cable lengths for non-Network Rail applications.

| Reference | PADS Number |
|------------|-------------|
| MISC-00280 | 0091/010019 |



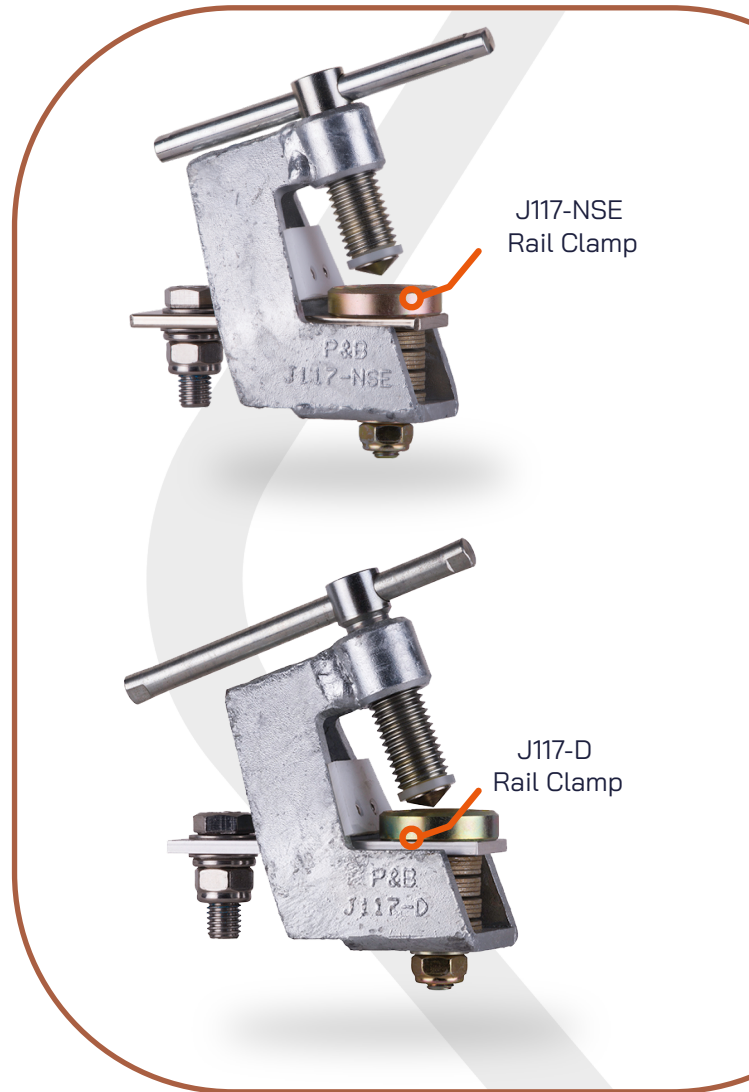


/ J117 RAIL CLAMP

The J117 Rail Clamps are designed to fit on all types of rail commonly used throughout the UK. The clamp is ruggedly constructed from steel, which is zinc galvanised to protect from site environment.

The J117 clamp contact arrangement allows for the use of both 'flat-Bottomed' and 'Bull-Head' rail types.

| Reference | Description | PADS Number |
|-----------|--|-------------|
| EFT-16729 | J117-NSE Clamp with Aluminium busbar | 0050/001303 |
| EFT-16736 | J117-D Clamp with Copper busbar tin-plated | 0091/002251 |



/ J117-NSE/SKT & 12mm Hexagonal Key



| Reference | Description | PADS Number |
|-------------|-------------------------|-------------|
| EFT-16729/3 | J117-NSE/SKT Rail Clamp | 091/012215 |
| EAT-19609 | 12mm Hexagonal Key | 091/012217 |



We provide on-site after-sales service for all your electrical safety equipment, including maintenance, repairs, and standards compliance checks.

This approach is part of sustainable and eco-friendly management at the heart of our concerns.

By participating in our service program, you extend the lifespan of your equipment and manage its operating costs.



PORTABLE EARTHING EQUIPMENT

- Visual inspection of the entire assembly
- Mechanical check of the operation of cable, termination/ lugs, clamps, and terminal plates
- Cleaning of the cable, termination/ lugs clamps, terminal plates
- Torque check
- Dielectric test
- Certification & report



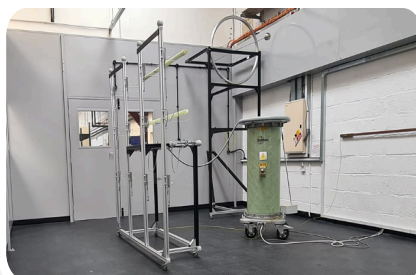
INSULATING GLOVES

- Visual inspection
- Inflation test
- Dielectric test according to glove class
- Glove drying
- Certification & report



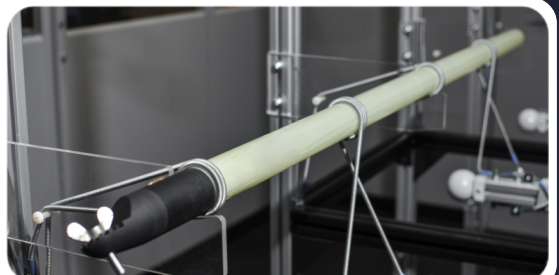
OPERATING POLE

- Check of overall appearance
- Cleaning with isopropanol
- Visual inspection of the operating pole
- Inspection of fittings, end caps, and accessories
- Dielectric test of the 100 kV rod every 1ft for 1 minute
- Certification and test report (Pass or Fail)



VOLTAGE DETECTORS

- Overall appearance check **presence of impact, cracks, markings**
- First self-test check: **perception of the sound signal and the indicators**
- Checking the battery compartment opening and its connections
- Battery replacement
- Measurement and verification of operating thresholds
- Max test voltage 110kV AC
- Certification & report





OPERATION HARDWARE

/ STAR POLE 28

/ RAIL POLE KIT 29

/ RAIL POLE SECTIONS 29

/ OPERATING POLE HEADS 32

/ OPERATING SOCKETS 33

/ SIGNAL SIGHTING TARGET (SST) KIT 34



PENTA
ELECTRICAL SAFETY PRODUCTS

Your life,
Our work.

STAR Pole

NEW

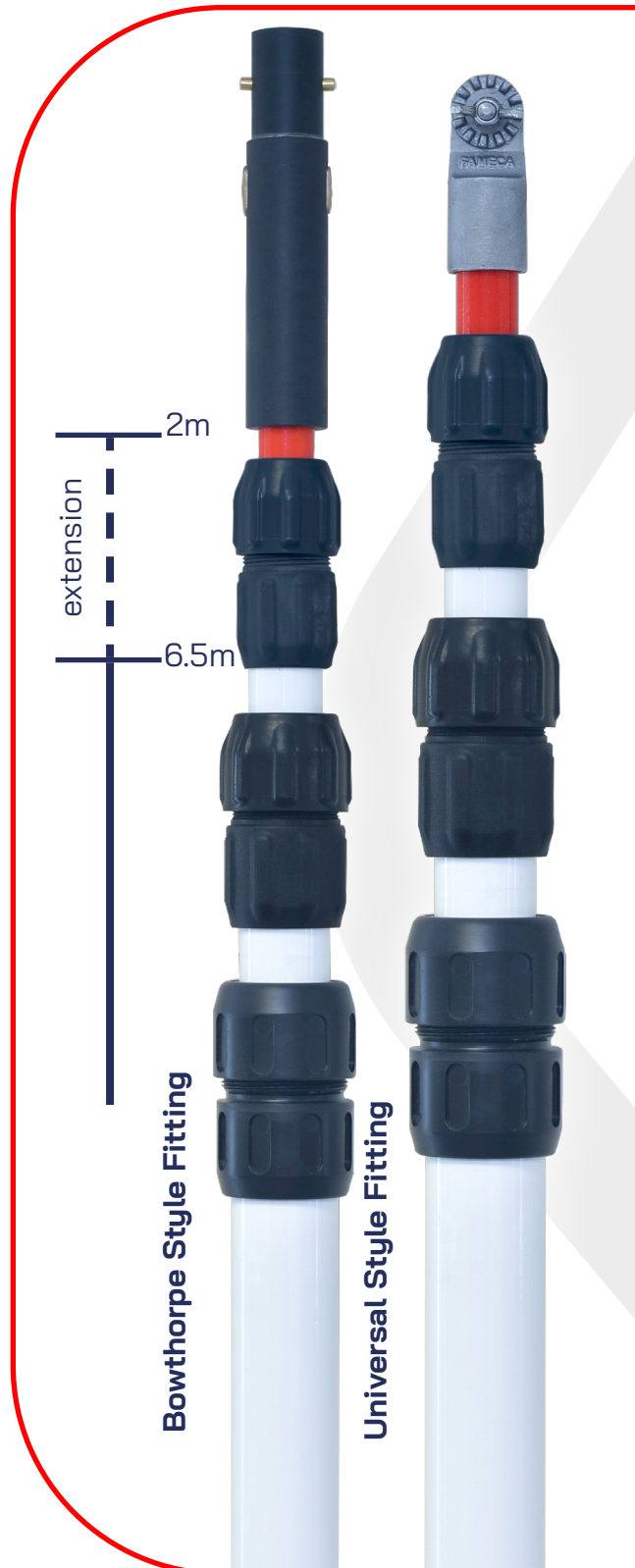
Insulated Reinforced Telescopic Pole

-  Screw Action
-  Telescopic
-  Adjustable
-  Rigid

The **STAR Pole** comprises of three or four sections. The length of the pole is adjustable between 2m and 6.5m and an additional 1m or 2m extension can be screwed into the bottom section where additional height is required.

The lightweight and compact design helps **STAR Pole** to be a one person operation making it an ideal pole for overhead line works from the ground including voltage detection and applying and removing earthing equipment of both push/pull or screw application.

Tested for use on high voltage equipment up to 170kV.





/ RAIL POLE KIT

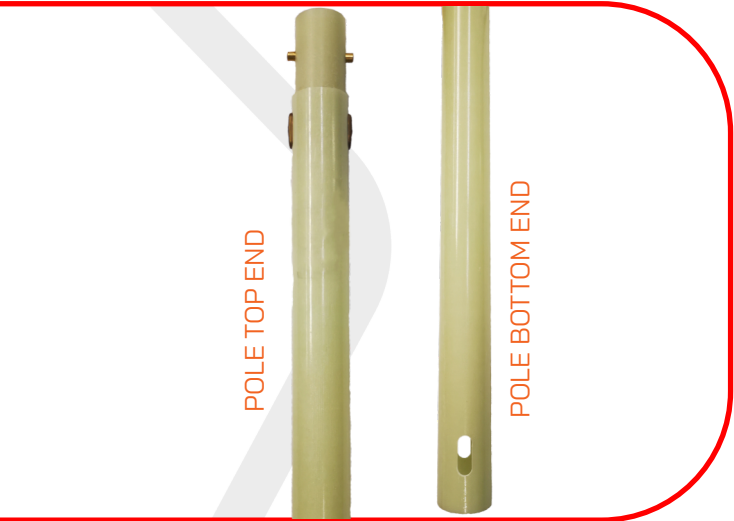
PADS approved kit contains 1x Top Section Pole, 1x Primary Insulator Pole, 3x Intermediate Section Poles, 1x Bottom Section Pole, 1x Applicator Head and 1x Carry Bag.

Pole kits can also be supplied with a range of fittings such as CEA/S2 socket, P331 socket, alternative adaptors for applicator heads or additional pole sections.

Please enquire for details.



| Reference | PADS Number |
|------------|-------------|
| MISC-00341 | 0091/012305 |



/ 4' TOP SECTION RAIL POLE STYLE 2

Material: Fiberglass reinforce epoxy resin hollow pole
 Length: 4ft (1.22m)
 Weight: 0.700kg

| Reference | PADS Number |
|-----------|-------------|
| EFR-18181 | 0091/002356 |

/ 4' INTERMEDIATE SECTION RAIL POLE

Material: Fiberglass reinforce epoxy resin hollow pole
 Length: 4ft (1.22m)
 Weight: 0.700kg

| Reference | PADS Number |
|-----------|-------------|
| EFR-18182 | 0091/002061 |



OPERATION HARDWARE

/ 4' BOTTOM SECTION RAIL POLE

Material: Fiberglass reinforce epoxy resin hollow pole
Length: 4ft (1.22m)
Weight: 0.700kg

| Reference | PADS Number |
|-----------|-------------|
| EFR-18183 | 0091/002480 |



/ PRIMARY INSULATOR POLE

Primary insulator pole conforming to Network Rail specification NR/PS/ELP/27188.

| Reference | PADS Number |
|-----------|-------------|
| EFT-17451 | 0091/002470 |



/ RAIL OPERATING POLE KIT BAG

The rail operating bag is created from nylon reinforced PVC which has a large internal compartment for poles and an external pocket for pole accessories.

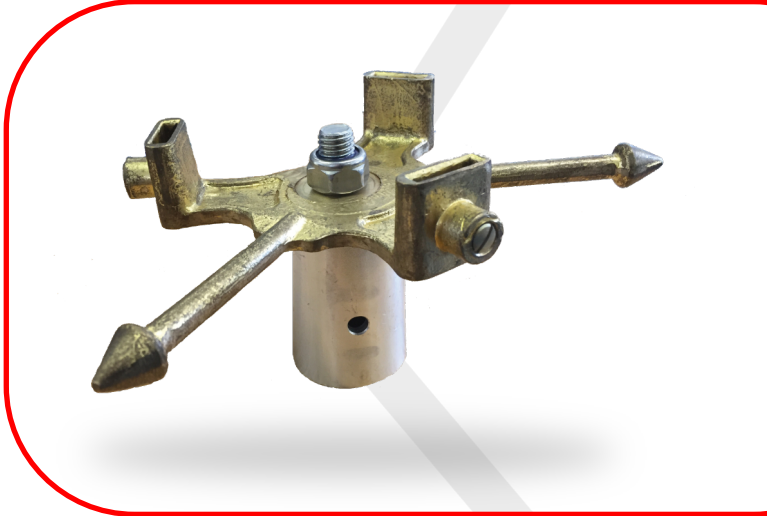
| Reference | PADS Number |
|-----------|-------------|
| EBB-18514 | 0111/196948 |





**/ DISPENSING HEAD WITH
P&B ADAPTOR**

High tensile brass dispenser head for
CE62 Line End clamps.



| Reference | PADS Number |
|-----------|-------------|
| EFT-20126 | 0091/001986 |



OPERATION HARDWARE



POLE TOP END



POLE BOTTOM END

/ 4' TOP SECTION RAIL POLE

Material: Fiberglass reinforce epoxy resin hollow pole
 Length: 4ft (1.22m)
 Weight: 0.700kg

| Reference | PADS Number |
|-----------|-------------|
| EFR-18180 | 0091/002062 |

/ DISPENSING HEAD MT630C

Pole Type: Bowthorpe

| Reference | PADS Number |
|-----------|-------------|
| EBT-20128 | 0091/001987 |



/ 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.



| Reference | Pole Type | PADS Number |
|-----------|-----------------|-------------|
| EFS-18352 | Bowthorpe Style | 0091/002559 |



/ CEA/S2 ESI:S2 OPERATING SOCKET

Sprung bayonet socket recommended for use with S9Bi and CE5i clamps. Provides greater control of clamp. Fits P&B style Top Pole directly or Bowthorpe Top Pole using Adapter 4927.

| Reference | PADS Number | Weight |
|-----------|-------------|--------|
| EFS-11203 | 0054/063207 | 0.39kg |



/ MACH OP-SOCKET ADAPTER

Pole Type: Bowthorpe Top Pole

Application: Allows fitting of P&B Heads to Bowthorpe Poles

| Reference | PADS Number |
|-----------|-------------|
| 4927 | 0054/003008 |

/ P331 OPERATING SOCKET

Pole Type: Bowthorpe Top Pole

Taper Type: Long or Short Taper

| Reference | PADS Number |
|-----------|-------------|
| EFS-18314 | 0091/020526 |





OPERATION HARDWARE

/ P3313 OPERATING SOCKET

Pole Type: Bowthorpe

Op-screw: LEL or S&E Fuse Isoltors

Reference

EFS-18319

PADS Number

0091/002477



/ SIGNAL SIGHTING TARGET (SST) KIT

/ USE

The Signal Sighting Target is positioned further along the rail track beyond the worksite, providing an advance warning to approaching train drivers and other rail operators of activities ahead.

The kit can be assembled quickly and placed on the rail track, and stored in a weatherproof, heavy-duty PVC bag when not in use.

It also features a flashing white light to aid sighting in poor visibility conditions.

/ KIT CONTENT

- SST LED Target Unit
- SST Foot Short Bottom Pole
- SST Foot Long Bottom Pole
- Primary Insulator Pole
- High Visibility Durable Fabric Reinforced PVC Carrying Bag

Reference

EFT-17479

PADS Number

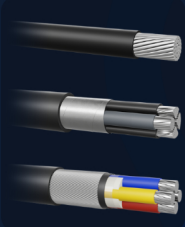
0086/011540



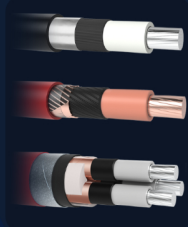


CABLE PREPARATION TOOLS CONFIGURATOR

LOW VOLTAGE (LV)



MEDIUM VOLTAGE (MV)



HIGH VOLTAGE (HV)



THE RIGHT
CABLE TOOL,
JUST A CLICK
AWAY.



TOOLING

/ J1RI 38
Tool for LV cables insulation

/ OGA 39
Outer sheath opener

/ IS82R 40
Knife with retractable blade

/ IS77 40
Insulated knife with long blade

/ ARBORICULTURE
EQUIPMENT 41



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TOOLING

/ J1R1




Tool for LV cables insulation Ø6-21mm with K7 Depth 1mm

The J1R1 is a tool which removes the outer insulation of a large number of LV OHL or industrial cables.

The tool fits the diameter of the cable and the thickness of the layer to be removed without changing the socket.



/ TECHNICAL SPECIFICATION

-  Diameter : 6 - 21 mm
-  Depth of cut : 0.8 to 2.5 mm
-  Stripping length : 25 to 100mm

**OPERATION BY
HAND**



**OPERATION BY
DRILL**



| Reference | Diameter | Depth of cut | Stripping Length | Length | Width | Height |
|-----------|-----------|-----------------------------|------------------|--------|-------|--------|
| J1R1 | 6 - 21 mm | 0.8 to 2.5mm | 25 to 100mm | 224mm | 65mm | 82mm |
| J1R12 | 6 - 21 mm | 0.8 to 2.5mm & 2.3 to 3.5mm | 25 to 100mm | 224mm | 65mm | 82mm |
| J1R2 | 6 - 21 mm | 2.3 to 3.5mm | 25 to 100mm | 224mm | 65mm | 82mm |

/ SPARE PARTS

| Reference | Description |
|-----------|-------------|
| MTCP4/465 | Spare blade |

/ OPTIONS

| Reference | Description |
|-----------|---|
| R2 | K7 for LV tool 2.5 mm for a cut from 2.3 mm to 3.5 mm |
| SGM | Large size pouch |








/ OGA

Outer sheath opener

The OGA outer sheath opener enables the user to perform a longitudinal cut on the outer sheath of multi-core cables.

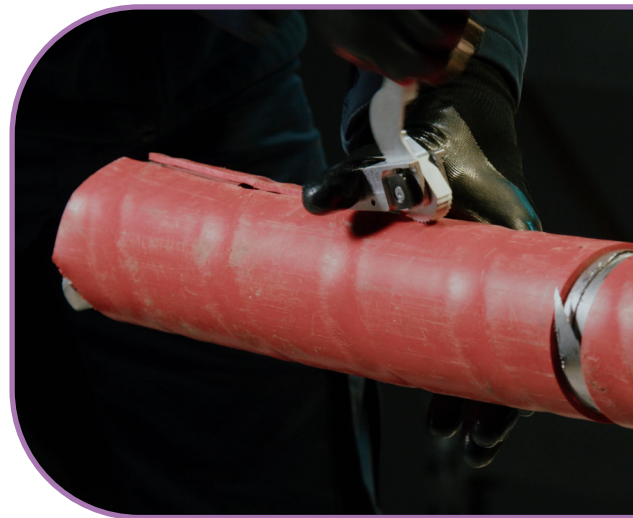


/ TECHNICAL SPECIFICATION

-  Diameter : 20 - 200 mm
-  Longitudinal Cutting Depth : 5 mm
-  For network cables : HTA
-  Dimension : 180 x 26 x 62
-  Weight : 0,27 kg

/ SPARE PARTS

| Reference | Description |
|-----------|-------------|
| LKMS | Spare blade |





TOOLING

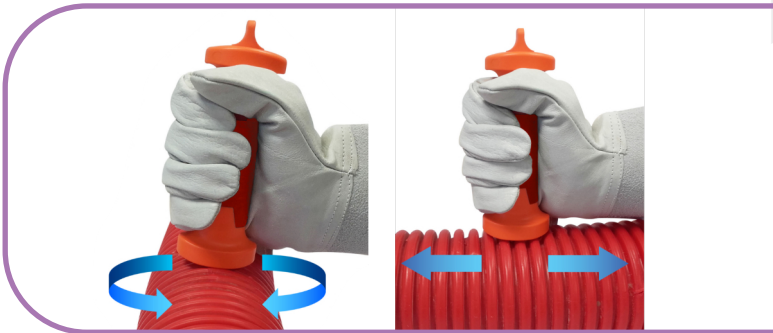
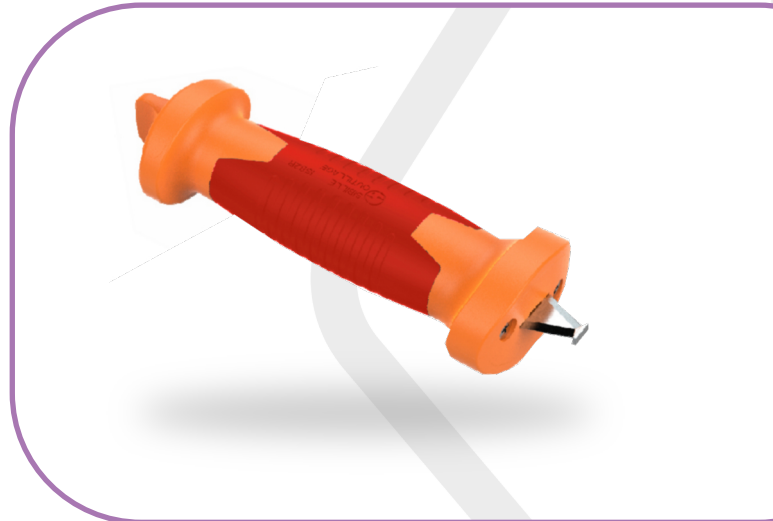
/ IS82R

**Knife with retractable blade
1000V for TPC cable protection tubes**

Knife designed for cutting and opening ribbed cable protection tubes with a diameter of 200mm max.

Triangular double-edged blade with protect blunt “buttoned” tip.

Retractable blade with push button at the end of the handle.



For overhead and underground networks and indoor electrical installations.

Sharpening is recommended using sharpener A02.

/ IS77

Insulated knife with long blade

/ TECHNICAL SPECIFICATION

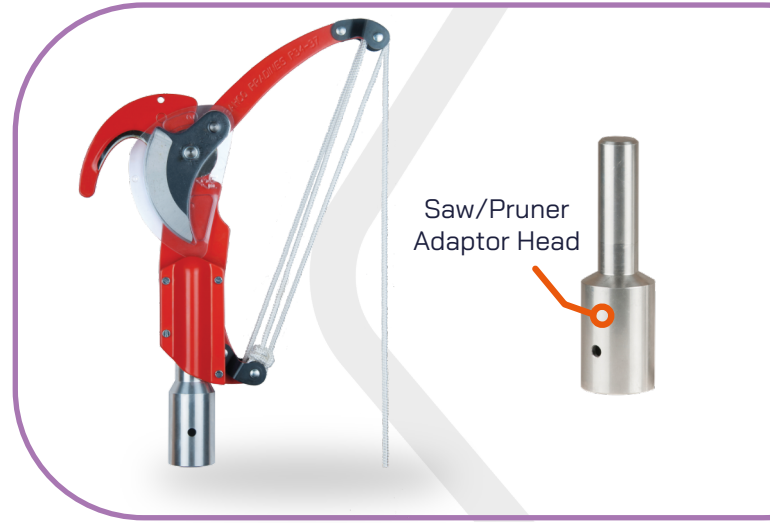
- Stainless steel blade, insulation by injection.
- The blade insulation is locked by 6 fixing points to ensure that both blade and insulation stays in place during the stripping operation.
- Weighted handle for a good balance and to avoid the tool falling on the blade.
- Slit on the guard to guide the tool during longitudinal cut.
- Delivered in a soft case.



/ TREE PRUNING HEAD

High quality steel side action cutting blade. Suitable for fitting upon a standard Bowthorpe type 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.

Saw/Pruner Adaptor Head also available as spare ref. EMS-18320.



Reference

SK130296-0/1

/ 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.

Reference

EFD-18404

/ SAW PRUNING HEAD ASSEMBLY

Suitable for fitting to standard Bowthorpe type top section poles. The curved 6-TPI blade is 355mm long and manufactured from lacquered stainless steel to ensure long service life.



Reference

EFS-18324



v. 21_05_2026



pentaesp.com

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