

RAIL EQUIPMENT

CATALOGUE



PENTA
ELECTRICAL SAFETY PRODUCTS

Your life,
Our work.

pentaesp.com

Our Story

Since our first innovation in 1932, we have developed our expertise by bringing together companies with expertise in the health and safety of those who work on and off electrical networks.

Our growth has been based on:

- our understanding of national markets
- our mastery of international standards
- anticipating changes in electrical energy requirements.

Today, PENTA, our new brand, embodies our expertise, our capacity for innovation and our unified desire to work closely with you.

Our teams are committed to working alongside you, from analysis to operational implementation. We mobilize all our resources (research and development, design, manufacturing, supply chain, training, commissioning, operational maintenance) to serve you.

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

We design and manufacture our products in dedicated factories. Our offer covers all your live and dead operations for the construction, maintenance and operation of electrical networks.

As part of our commitment to co-construction, we work with you in a long-term partnership to build the best offer, by mobilizing all our resources and all our expertise acquired in each field of activity throughout the world.

Our Offer



Our areas of activities

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

PENTA P&B range of Portable Earthing equipment for rail tracks and the over head lines have been developed following our many years of work with rail operators across UK&I with our Portable Earthing equipment being approved for rail tracks and overhead lines.

PENTA is proud to have gained Network Rail PADs Approval for certain key Rail products. As well as supplying a standard range of approved equipment. PENTA can also design new solutions for any Rail Portable Earthing requirement.

Our Products



Arc Flash Clothing



Head Protection



Hand Protection



Insulated Tools



Portable Earthing



Voltage Detectors



Operating Poles



Cable Preparation Tools



**Power Cable Cutting &
Spiking Tools**






















Wall Mounted Rescue Kit



Rail Infrastructure Equipment



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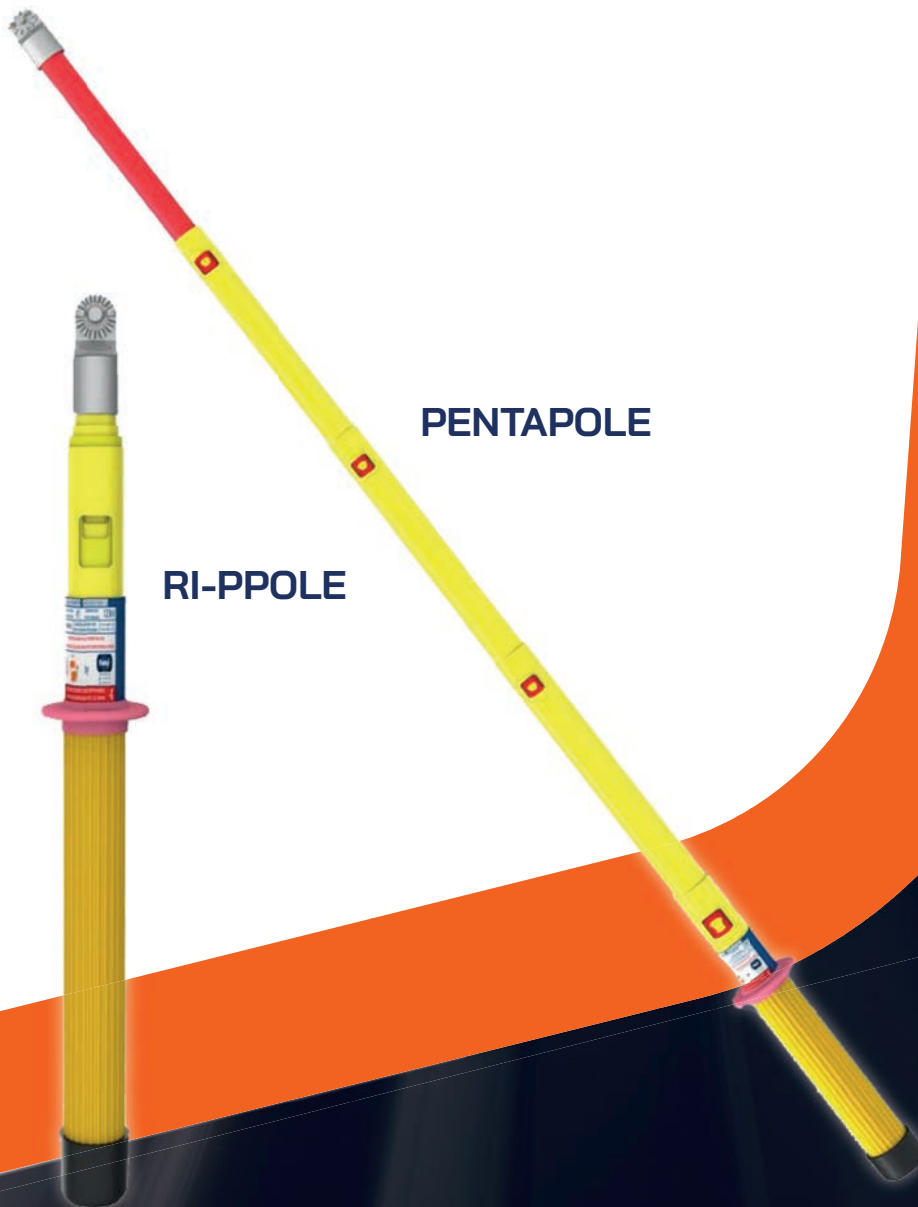


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ELECTRICAL SAFETY PRODUCTS

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Our work.

MULTI PURPOSE PENTAPOLE

Penta is a market leader in the design, manufacture, and distribution of high-quality electrical safety products.





RAIL TELESCOPIC & OPERATING POLES

PENTAPOLE

Multi-purpose telescopic
insulating stick PENTAPOLE

The PENTAPOLE is specially designed for installing, removing and also changing out cutout fuse barrels on end pylon distribution, through its remarkable mechanical properties described below, the pole gives multiple complementary application as:

- Installation and removal : lifeline, hook measuring, cleaning drivers.
- Proving dead with voltage detector
- Pruning
- Conductive cable lifting (special transport)
- Grounding from floor to grid deployment with the pole upright

- 1 top tube diameter 28mm in accordance with IEC 60855 and ASTM F 711 standards
- 2 – 8 tubes of pentagonal shape in accordance with IEC 62193 and ASTM F 1826 standards
- 1 universal end fitting (see Figure 6) to accommodate multiple accessories and adapter
- The hook accessorise CMU2 is included



Technical Specification

Ref.	Number of Sections	Length When Extended	Length When Retracted	Average Weight
PPOL3/035U	3	3,80m - 12'5"	1,45m - 4'9"	1,89 kg
PPOL4/050U	4	5,00m - 16'4"	1,54m - 5'0"	2,48 kg
PPOL5/060U	5	6,40m - 21'0"	1,60m - 5'2"	3,16 kg
PPOL6/075U	6	7,80m - 25'7"	1,67m - 5'5"	3,96 kg
PPOL7/090U	7	9,20m - 30'2"	1,74m - 5'8"	4,70 kg
PPOL8/105U	8	10,60m - 34'9"	1,80m - 5'10"	5,52 kg
PPOL9/120U	9	12,00m - 39'4"	1,84m - 6'0"	6,35 kg



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NEW

STAR Pole

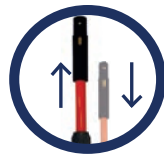
Insulated Reinforced Telescopic Pole



Screw Action



Telescopic



Adjustable



Rigid



Bowthorpe Style Fitting

Universal Style Fitting



The STAR Pole comprises 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 the STAR Pole to be one man operational making it an ideal pole for overhead line works from the ground including voltage detection, the application and removal of earthing equipment of both push/pull or screw design.

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





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RAIL VOLTAGE RANGE



PENTA is a market leader in the design, manufacture, and distribution of high-quality electrical safety products.

**TBE25K TEST
BEFORE EARTH
DETECTOR**

**TBT60 LIVE
LINE INDICATOR**



**ALADIN PERSONAL
VOLTAGE ALARM**





PENTA is the leading supplier of voltage detector products, with our products tested and approved by the UK rail industry. Penta offers over 40 years of electrical maintenance and safety experience. Penta has come a long way, and we now offer a diverse range of products.



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NEW

TBT60V

TEST BEFORE TOUCH LIVE LINE INDICATOR



PENTA is a market leader in the design, manufacture, and distribution of high-quality electrical safety products.





RAIL VOLTAGE DETECTOR

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 (presence or absence of voltage)
- Detection of residual DC voltage measuring the unloading of the line
- Detection of nominal or induced AC voltage (presence or absence of voltage)



Technical Information

- 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



GET
QUOTE



SCAN



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NEW

TBE25k

TEST BEFORE EARTH DETECTOR



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 voltages the unloading of the line
- Detector is applied using standard insulated operating poles





RAIL VOLTAGE DETECTOR

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.



TECHNICAL INFORMATION

- AC voltage range : 25 kV phase to ground
Network frequency: 50 and 60 Hz
- Designed for outdoor and indoor use.
- Operating temperature: -25 °C to +55 °C
- Humidity: 96 % max
- Power supply voltage: 9V alkaline cell – IEC 6LR61 (PP3)
- Accepts the use of rechargeable battery with identical supply voltage
- Dimensions: Ø 59 mm, L = 280 mm without the contact electrode / Net weight: 0.390 kg
- Dimensions Detector + electrode extension: 1420 x 80 x 110 mm / Net Weight: 0,9 kg

GET
QUOTE



SCAN



VISAR

WHEN TECHNOLOGY

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.

Various available functions

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





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.



CHOOSE YOUR ARC FLASH PROTECTION



APC1 protection
4kA / 0,5s
Colorless 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



01

I CHOOSE MY FLASH ARC PROTECTION

Depending on my field of work,
I choose one of the 3 models:

- APC1 (4kA / 0,5s)
- APC2 (7kA / 0,5s et ATPV 12 cal/cm²)
- APC2 (7kA / 0,5s et ATPV 25 cal/cm²)

02

I CHOOSE MY ON-BOARD ELECTRONICS

Depending on my needs,
I equip my helmet with :

- 1 headlamp
(with integrated battery)
- 1 headlamp
+ 1 battery with red LEDs at the rear
- 1 headlamp
+ 1 battery with red LEDs at the rear
+ 1 personal alarm at the rear



03

I CHOOSE MY CREST COLOUR

Thanks to a choice of colours,
you can personalise the full crest
of the helmet with the colour
that suits you best:



Black
(standard)

White

Red

Yellow

Green



PROTECTION AGAINST

Blast and sound wave effects

Heat and flames with projection of molten metal fragments

UV radiation



THINGS TO KNOW

Strangely enough, electric current can travel through the air (the perfect illustration is lightning between the sky and the earth). This phenomenon can also occur in electrical installations, when ionised air becomes conductive under certain conditions, causing flash arcs.

These are extremely powerful thermal discharges, which can reach temperatures of 18,000°C, accompanied by the projection of molten metal and intense UV radiation. The consequences can be serious, even fatal, burns.



04

I CHOOSE MY ACCESSORIES

I add the right accessories to my helmet :

- Neck protector
- Retro-reflective strips
- Ear muffs



05

I CHOOSE TO CUSTOMIZE

I can highlight my company name.

There is a dedicated space on the front of the helmet.

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

pentaesp.com





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Our work.

NEW

ALADIN

PERSONAL VOLTAGE ALARM



ALADIN Personal Voltage
Alarm helps wearer where:

- They inadvertently walk to the wrong (energised) location or make a sudden movement into an energised area.
- The safe working zone becomes re-energised through equipment failure or human error.
- The wearer becomes disorientated after leaving the safe working area to collect more equipment, for example, or becomes distracted for some reason and steps into an energised area.
- This unique device that fits to the helmet of the user and provides 360 degree detection around the operator, means that the Aladin will provide the ultimate warning in all these situations and more.





RAIL VOLTAGE DETECTOR

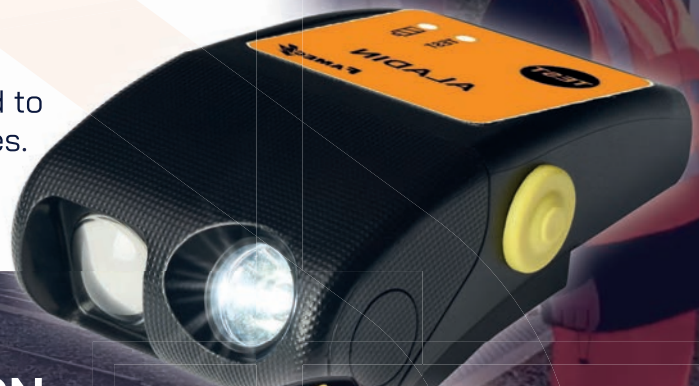
ALADIN is designed to provide additional safety level for workers operating near energised equipment (during maintenance, rescue operations, painting, pruning,...) in electrical environment.



This device is a personal voltage alarm with head light.



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



TECHNICAL INFORMATION



Calibrated sympathetically to 25 kV at 9'



Personal voltage detector



Fits to helmet (fittings included)



Audible in working environment



Lightweight



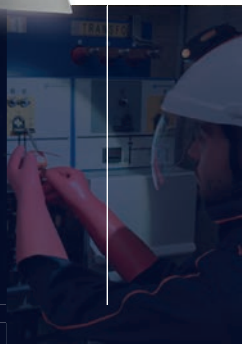
Compact



"Smart mute" feature



Nearly 360° detection



Staff walks to a wrong location.



Inadvertent re-energisation due to staff error, equipment failure, etc.



Involuntary approach - quick movement in a direction towards an energised area during working



Reduced situational awareness - e.g. staff being distracted by bad news or stress and moving towards a high potential energised conductor in error.



The device is designed like a head light and fixed onto helmets or hard hats by various means. In this position, the device will detect nearly 360° around the operator.



In all these situations and many others ALADIN will provide the ultimate WARNING.





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Our work.**

NEW

CTS

CONTACT WIRE TENSION MEASUREMENT SYSTEM

MEASURE THE TENSION OF THE CONTACT WIRE
FROM THE GROUND

APPLICATION

- ✓ Measurements are taken without leaving any marks on the wire
- ✓ Measurements can be taken under live conditions
- ✓ Fast measurement time
- ✓ Data is downloaded instantly to a smartphone or tablet via Bluetooth

TECHNICAL SPECIFICATION

	Operational Voltage :	up to 25kV
	Measurement Range :	100 daN to 2500 daN
	Wire Size Range :	up to 21mm dia
	Temperature Range :	-15°C to +50°C
	Measurement Time :	40 seconds for 1 measurement
	Working Time :	250 measurements
	Weight :	4.5kg



**SCAN TO WATCH
CTS IN ACTION**





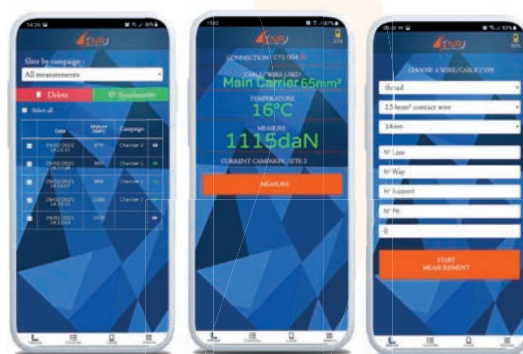
CONTACT TENSION SYSTEM

ADVANTAGE

- Measurement from the ground **WITHOUT** the need for lifting equipment or ladder, etc.
- SELF-TESTING** feature
- BLUETOOTH CONNECTIVITY**
- INSTANTANEOUS RESULT** via smartphone application
- HEAVY DUTY CASE** for easy transportation
- QR CODE** for user guide, certificate of conformity, DATA history etc.

KIT INCLUDING

- Protective carry case
- Tensiometer CTS
- Emergency extraction tool
- Control gauge
- Charger
- Insulating pole and carrying bag



READING AND RECORDING MEASUREMENTS CAMPAIGNS

Access to measurements done with smartphone, PC and Tablet

Software update everytime the application is used

- Measurement parameters
- Cable diameters database





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NEW

MFC





CONTACT WIRE WEAR MEASUREMENT USING LASER PROFILING



MEASURE THE CONTACT WIRE FROM
THE GROUND

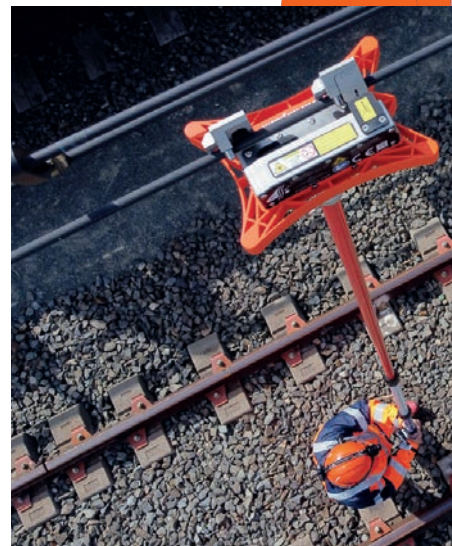
APPLICATION

- ✓ The perfect solution for measuring the contact wire thickness without lifting equipment
- ✓ Simple to use with instant readings by Bluetooth
- ✓ All results can be stored on a smartphone/ tablet or on private a server

TECHNICAL SPECIFICATION

- | | | |
|---|-----------------------|---|
|  | Operational Voltage : | up to 25kVac |
|  | Measurement Range : | 2mm to 16mm dia |
|  | Resolution : | 0.1mm |
|  | Accuracy : | $\pm 0.05\text{mm}$ for wires
up to 12mm dia

$\pm 0.08\text{mm}$ for wires
over 12mm dia |
|  | Working Time : | 6 hours |
|  | Weight : | 1.5kg |



**SCAN TO WATCH
MFC IN ACTION**





CONTACT WIRE THICKNESS MEASUREMENT

ADVANTAGE

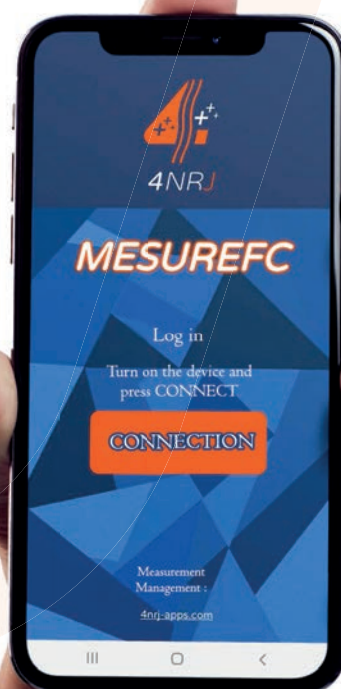
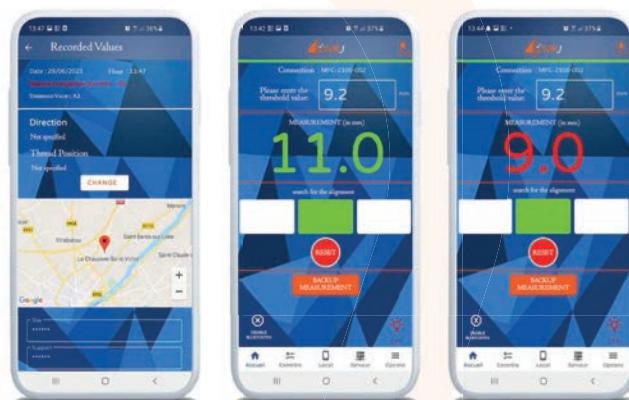
-  **WIRE SPREADER TOOL**
For 1500 V network
-  **SMARTPHONE SUPPORT**
Width 55mm to 100mm
-  **OPERATED AND CONTROLLED REMOTELY VIA MOBILE APPLICATION**
MESUREFC 4NRJ

KIT INCLUDING

-  Protective carry case
-  Measuring Tool
-  Cable spacer
-  Support smartphone
-  Control gauge
-  Charger
-  Two insulated poles and carry bag for two poles

READ AND SAVE MEASUREMENTS CAMPAIGNS

Access to measurements done with smartphone, PC and Tablet





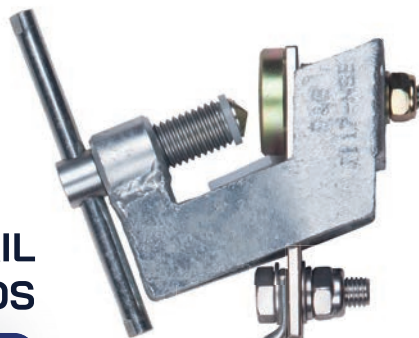
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RAIL BOND & DEP SHORT EARTH

RAIL SHORTING BONDS

PART NUMBER: EFT-16735/1
PADS NUMBER: 050/001303



SHORT ORANGE DEP RAIL EARTH

PART NUMBER: EFT-19316



RAIL BLUE LEAD CONTINUITY KIT

PART NUMBER: MISC-00287
PADS NUMBER: URLT/023549





RAIL BOND & DEP SHORT EARTH

Rail Blue Lead Continuity Kit

The Penta Rail Jumper Bond is comprised of two off S9B clamps joined by a 50sqmm and 8m long blue lead. Bonds and Jumpers can be supplied at any length required for non-Network Rail applications.



Reference	PADS Number
MISC-00287	URLT/023549

DEP Short Orange Rail Earth Kit 1.5m

The Penta short orange rail earth (DEP) comprises two CE62 Snap-on style Line End clamps and an interconnecting 50sqmm Arctic 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.



Reference	PADS Number
MISC-00232	0091/020322



WE ALSO OFFER EQUIPMENT SERVICING

- VOLTAGE DETECTOR TESTING
- OPERATING POLE TESTING
- GLOVE TESTING
- EARTHING EQUIPMENT TEST & REPAIR



SCAN QR CODE
FOR MORE INFORMATION



RAIL BLUE LEAD CONTINUITY KIT

Rail Blue Lead Continuity Kit

Comprising of 2 x CE62 with removal plates



CE62 LINE
END CLAMP WITH
SPECIAL
REMOVAL PLATE



50sqmm 8.0m
BLUE ARCTIC
LEAD

Reference

MISC-00280

J117 NSE Rail Clamp

The J117-NSE clamp is designed for fitting all types of rail commonly used throughout the UK. The clamp is ruggedly constructed from steel, which is zinc galvanised to protect from site atmospheres. Copper busbar tin-plated.

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



Reference

EFT-16729

PADS Number

0050/001303

J117-D Rail Clamp

The J117-D clamp is designed for fitting all types of rail commonly used throughout the UK. The clamp is ruggedly constructed from steel, which is zinc galvanised to protect from site atmospheres. Busbar material aluminium.

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



Reference

EFT-16736

PADS Number

0091/002251



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RAIL BLUE INTERLOCKED EARTH

S9B INTERLOCK RAIL KIT

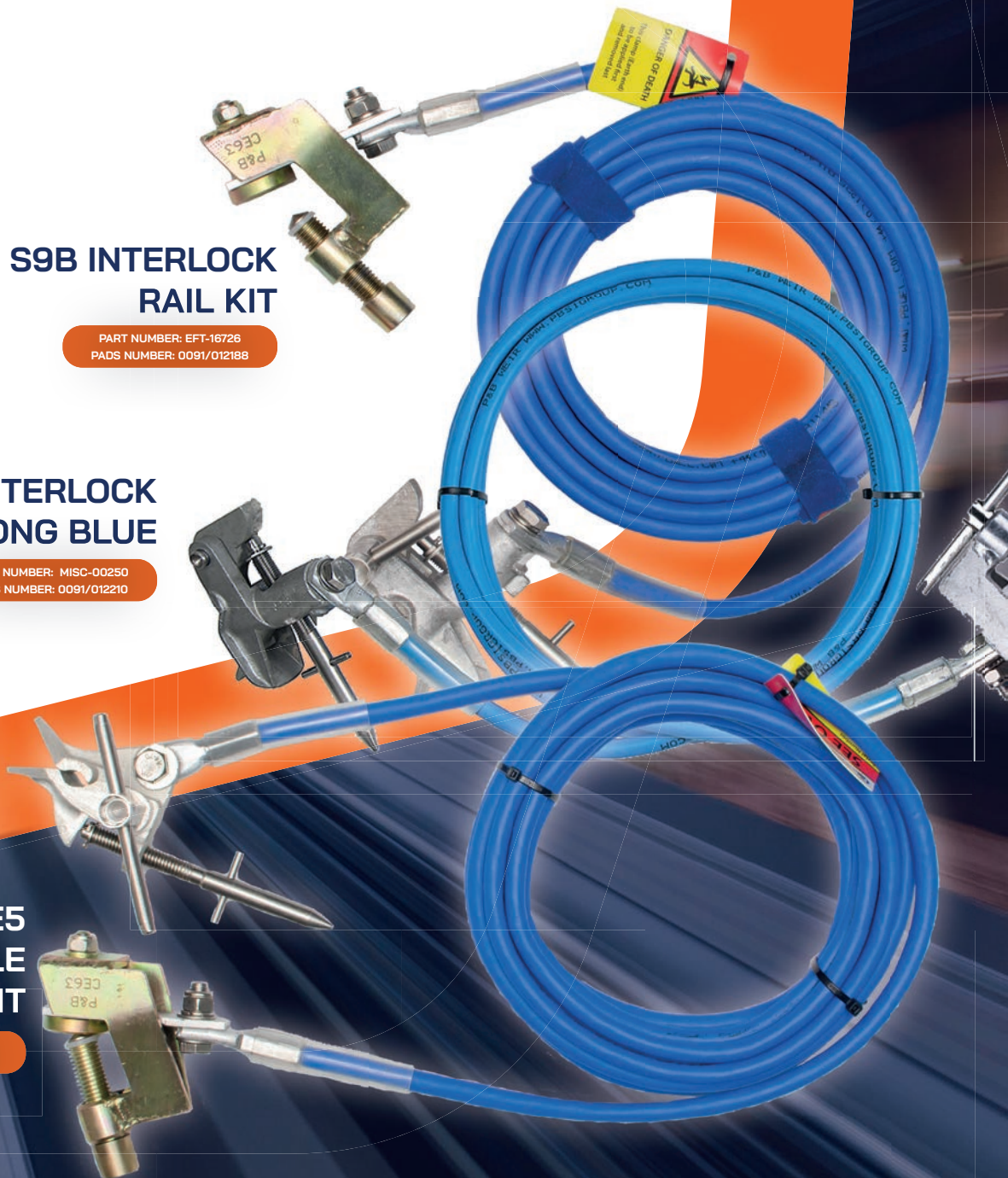
PART NUMBER: EFT-16726
PADS NUMBER: 0091/012188

RAIL NON-INTERLOCK LONG BLUE

PART NUMBER: MISC-00250
PADS NUMBER: 0091/012210

TYPE B CE5 STYLE INTERLOCK KIT

PART NUMBER: EFT-16741
PADS NUMBER: 0091/012568





RAIL BLUE INTERLOCKED EARTH

S9B Style Interlock Rail Kit

Long Earth comprising of CE63 interlock earth end and S9Bi interlock line end clamps, interconnecting 50sqmm and 8m long blue aluflex lead.



50sqmm BLUE ARCTIC LEAD



CE63 INTERLOCK EARTH END



S9BI INTERLOCK LINE END

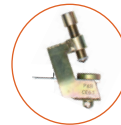
Reference	PADS Number	Short Circuit Rating
EFT-16726	0091/012188	8.9kA/ 1s & 12.5kA/ 0.25s

Type B CE5 Style Interlock Rail Kit

Line earth comprising of CE63 earth end and CE5i line end clamp and interconnecting 50sqmm blue Aluflex lead x 8m long.



50sqmm BLUE ARCTIC LEAD



CE63 INTERLOCK EARTH END



CE5I INTERLOCK CLAMP

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

Rail Non-Interlock Long Earth

Comprising of 1x 8m blue earth lead with J117-D on one end and S9B on the other end.



50sqmm BLUE ARCTIC LEAD



S9B/A/ST CLAMP



J117-D RAIL CLAMP

Reference	PADS Number	Short Circuit Rating
MISC-00250	0091/012210	8.9kA/ 1s & 12.5kA/ 0.25s



SHORT CIRCUITING STRAP & BOND

Short Circuiting Strap

The PENTA Rail Shorting Strap is comprised of three J117-NSE clamps with special 70sqmm insulated tinned copper cable assy.

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



Reference	PADS Number
EFT-16732/1	0091/012196

Rail Shorting Bond

The PENTA Rail Shorting Bond is comprised of two J117-NSE clamps with a special 70sqmm insulated tinned copper cable assy.

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



Part No.	Description	Catalogue No.
EFT-16732/1	3 x J117-NSE Clamp Rail Shorting Strap consists of three J117-NSE Clamps and 1.5m Clear Tinned Copper Lead	091/012196
EFT-16732/3	3 x J117-NSE SKT Clamp Rail Shorting Strap consists of three J117-NSE SKT Clamps and 1.5m Copper Lead	091/012091
EFT-16735/4	2 x J117-NSE Clamp Rail Shorting Bond consists of two J117-NSE Clamps and 1.0m 70sqmm Orange Copper Lead	054/212149
EFT-16735/8	2 x J117-NSE SKT Clamp Rail Shorting Bond consists of two J117-NSE SKT Clamp and 1.0m Orange Tinned Copper Lead	091/012109
EAT-19609	Hexagonal Key for use with J117-NSE SKT Clamp	091/012217

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





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Your life,
Our work.

NEW AND IMPROVED

Reflect

DEP PORTABLE EARTH



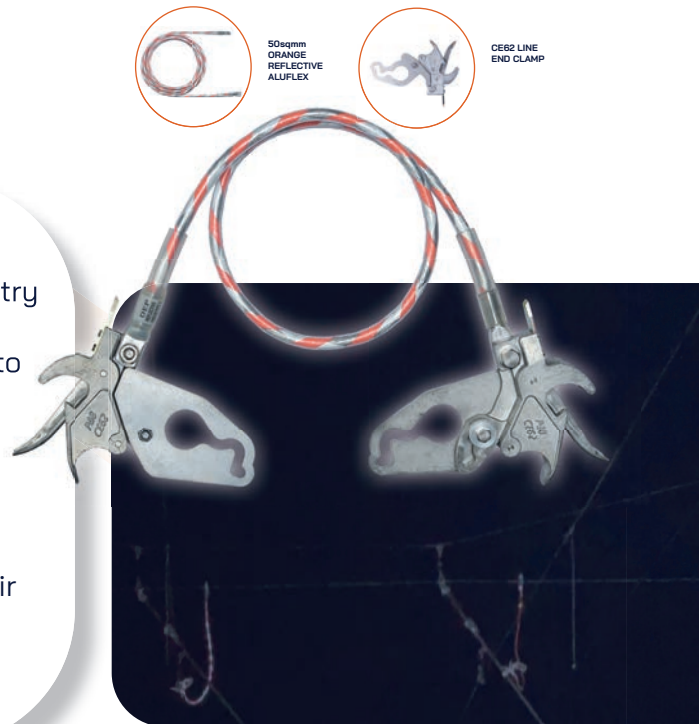
Specially designed for the rail industry and for
night time operation



REFLECT DEP PORTABLE EARTH

NEW REFLECT DEP PORTABLE EARTH

- The PENTA Reflect DEP Portable Earth is specially designed for use within the rail industry
- Its reflective properties allow people on track to more easily identify the existence of portable earth on overhead line equipment in darkness the unloading of the line
- The better visibility would help the staff 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



- It would also reduce the likelihood of the trip-on-cable incidents' occurrence usually in early mornings when portable earth is left on overhead line equipment after an isolation is given up
- Penta Reflect 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
- An improved removal plate profile ensures better performance when the clamp is subjected to excessive force when dropped directly from extreme height

FOR SAFETY & PEACE OF MIND





PENTA
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Your life,
Our work.

RAIL TELESCOPIC & OPERATING POLES



RAIL POLE KIT

PART NUMBER: MISC-00341
PADS NUMBER: 0091/012305



STAR POLE

PENTAPOLE





RAIL TELESCOPIC & OPERATING POLE

4' Bottom Section Pole Rail

Material: Glass Cloth reinforced epoxy resin tubing

Length: 4ft (1.22m)

Weight: 0.700kg



Reference	PADS Number
EFR-18183	0091/002480

4' Intermediate Section Pole Rail

Material: Glass Cloth reinforced epoxy resin tubing

Length: 4ft (1.22m)

Weight: 0.700kg



Reference	PADS Number
EFR-18182	0091/002061

4' Top Section Rail Pole

Material: Glass Cloth reinforced epoxy resin tubing

Length: 4ft (1.22m)

Weight: 0.700kg



Reference	PADS Number
EFR-18180	0091/002062



RAIL TELESCOPIC & OPERATING POLES

4' Top Section Rail Pole Style 2

Material: Glass Cloth reinforced epoxy resin tubing
Length: 4ft (1.22m)
Weight: 0.700kg

Reference	PADS Number
EFR-18181	0091/002356



Primary Insulator Pole

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

Reference	PADS Number
EFT-17451	0091/002470



CATU Dispensing Head MT630C

Pole Type: Bowthorpe

Reference	PADS Number
EBT-20128	0091/001987





RAIL TELESCOPIC & OPERATING POLES

CATU Dispensing Head with P&B Adaptor

Reference	PADS Number
EFT-20126	0091/001986



Rail Operating Pole Kit Bag

The rail operating bag is created from nylon reinforced PVC. 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
EBB-18514	0111/196948



Rail Pole Kit

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





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RAIL SOCKETS & HEADS

CEA/S2 ESI:S2 OPERATING SOCKET

PART NUMBER: EFS-11203
PADS NUMBER: 0054/063207



FEMALE SPIGOT ADAPTOR

PART NUMBER: 4927
PADS NUMBER: 0054/003008



P331 OPERATING SOCKET

PART NUMBER: EFS-18314
PADS NUMBER: 0091/020526



P3313 OPERATING SOCKET

PART NUMBER: EFS-18319
PADS NUMBER: 0091/002477





RAIL SOCKETS & HEADS

CEA/S2 ESI:S2 OPERATING SOCKET

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

Reference	PADS Number	Weight
EFS-11203	0054/063207	0.385kg



FEMALE SPIGOT ADAPTOR

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



P3313 OPERATING SOCKET

Pole Type: Bowthorpe

Reference	PADS Number
EFS-18319	0091/002477





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TREE PRUNING TOOLS

The PENTA Arboriculture Equipment is ideal for removing branches and tree debris from near overhead lines.



**SAW
PRUNING
HEAD
ASSEMBLY**

PART NUMBER: EFS-18324

**TREE PRUNING
HEAD**

PART NUMBER: SK130296-0/1



**BRANCH
CLEARANCE
SAW**

PART NUMBER: EFD-18404



TREE PRUNING TOOLS

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.

Reference
SK130296-0/1 (Top pole fitting)



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





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SIGNAL SIGHTING TARGET

The Signal Sighting Target features a flashing white LED light array, to aid signal sighting in low visibility conditions.

SST TARGET LED UNIT

PART NUMBER: EAT-17480
PADS NUMBER: 0086/011542





SIGNAL SIGHTING TARGET

Signal Sighting Target Complete Kit Complete Kit

SST LED target unit, ground signal foot, standard signal foot, primary insulator pole & high visibility durable fabric reinforced pvc carrying bag.

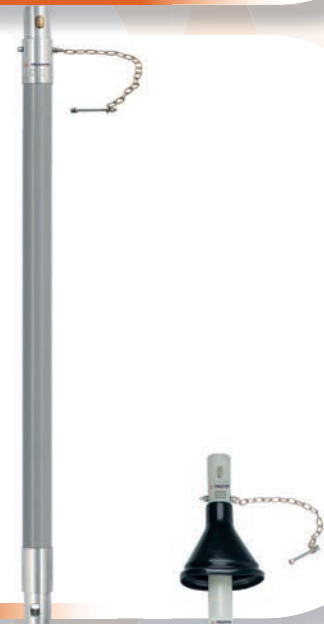
Reference	PADS Number
EFT-17479	0086/011540



Primary Insulator Pole

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

Reference	PADS Number
EFT-17451	0091/002470



SST Bottom Section Pole Assembly

For sighting standard signals.

Reference	PADS Number
EFT-17400	0086/011541





SIGNAL SIGHTING TARGET

SST Foot Short Bottom Pole

For sighting ground signals.

Reference	PADS Number
EFT-17477	0086/011543



SST Target LED Unit

For the top section of the sighting, ground signals include an LED target unit.

Reference	PADS Number
EAT-17480	0086/011542



SST Carry Bag

A carry bag suitable for the Penta SST Complete Kit for ease of transport.

Size: 1550mm x 420mm
Specification: With velcro fastening top flap and 50mm webbing strap with outside pocket

Reference	PADS Number
EBB-18512	0086/011545



TOUCH-E

A SECOND SKIN FOR BETTER

**DEXTERITY
SENSITIVITY**

3-IN-1

A standardized approach



Class
0

1000 V AC / 1500 V DC
protection for high voltage vehicles



CHLORINATION
easy donning



THICKNESS
30% thinner than traditional gloves



GRIP
better grip on tools and small parts



ORANGE
the colour of electrical risk



SHAPE
respects the anatomy of the hand
at rest, limiting fatigue and ensuring
excellent dexterity



Electrical hazard
EN 60 903 class 0



Mechanical hazard
EN 388 : abrasion 2, cut 1, tear 2,
puncture 1



Arc flash hazard
IEC 61 482-1-2
Class 1 – 4kA

Recommended size	7	8	9	10	11
Hand outline (cm)	16 cm	18 cm	21 cm	24 cm	26 cm

Reference	Class	Max operating voltage	Length	Size
JFO36-0/07	0	1 000 V AC / 1 500 V DC	36 cm	7
JFO36-0/08				8
JFO36-0/09				9
JFO36-0/10				10
JFO36-0/11				11



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REGLIGHT

Selfcentering Laser Ruler Height & Misalignment

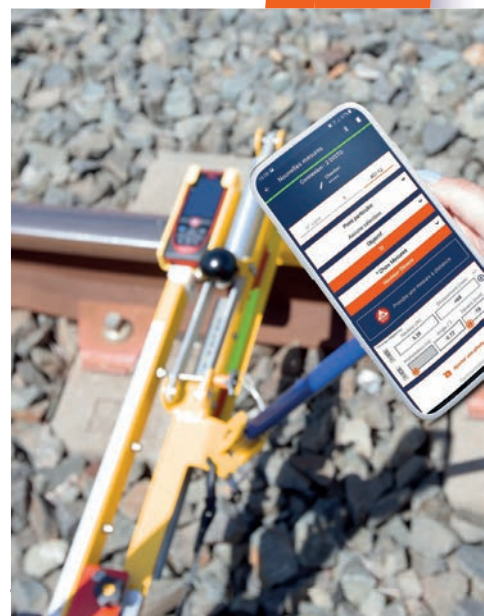
This light Laser ruler allowing measurements of catenary contact wire height and misalignment versus the axis of the tracks.

Recording of the measurement series into a accessible Database with your PC, tablet or Smartphone.

- ⬡ **Misalignment range :** ± 450 mm (900 mm)
- ⬡ **Compatiblity with tracks width :** 1430 to 1470 mm
- ⬡ **Electrical isolation between the two rail wires.**
- ⬡ **Dimensions (with mast) :** 1700 x 130 x 1260 mm
- ⬡ **Dimensions (without mast) :** 1700 x 130 x 270 mm
- ⬡ **Mass weight :** 7 kg

LASER / CAMERA

- ⬡ **Scope :** 200 meters
- ⬡ **Autonomy :** ± 4000 measures
- ⬡ **Bluetooth connection**












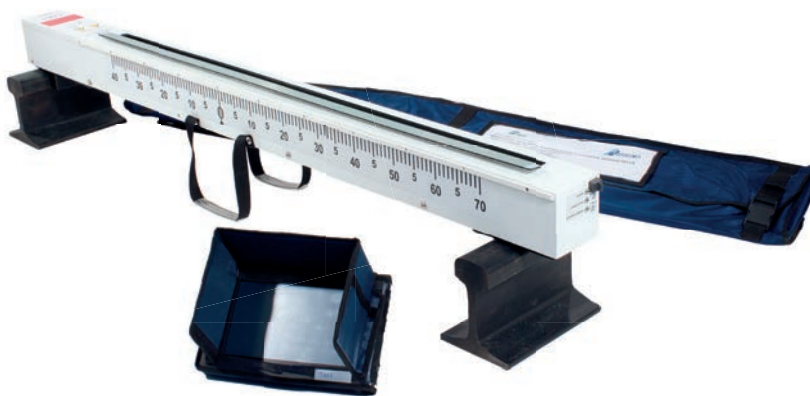
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HEIGHT & STAGGER GUAGE

Lightweight and portable device for height and geometry measurement of overhead lines. Safe and easy to use (not necessary to remain on the tracks during the measurement) with automatic measurement recording.

-  **Power supply** : Rechargeable battery
-  **Self-test** : at power on
-  **Resolution** : 1 mm
-  **Measuring range** : + 70 / -70 cm (with rotation of the device)
-  **Accuracy** : ± 1.5 cm
-  **Typical measurement time** : 2 / 3 minutes
-  **Number of measures** : > 50





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J1R1




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

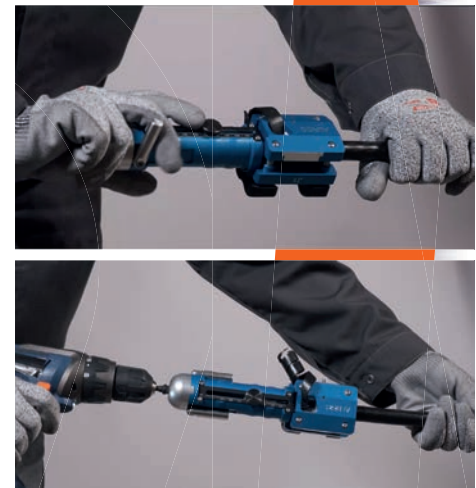


The J1R1 tool allows to remove the outer insulation of a large number of LV aerial or industrial cables.

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 100 mm



SCAN TO WATCH
J1R1 IN ACTION



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

/ 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

PF3/06

Pliers for MV cable corrugated shield (LC SHIELD)



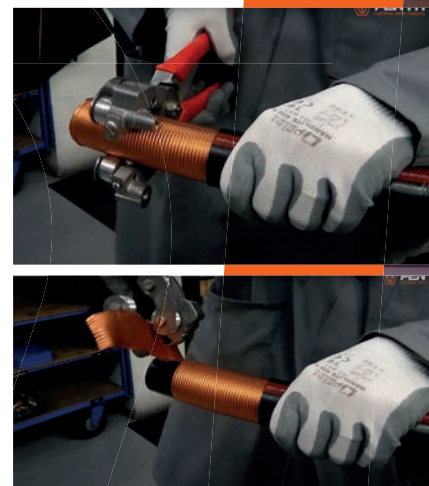
Easily remove the LC shield without the need to touch with hands. The grooves on the bushing make sure to score the LC shield without touching the semicon laying under.

/ Technical Specification :

-  **Diameter :** 26 - 52 mm
-  **Circular cutting thickness capacity :** 0,6 mm
-  **Operating voltage :** HTA (1 000 V to 50 000 V)

/ Specification

Reference	Dimensions	Weight
PF3/06	265 x 95 x 80	0,6 kg



SCAN TO WATCH
PF3/06 IN ACTION



OGA

Outer sheath opener.



The OGA enables the user to perform a longitudinal cut on the outer sheath of the cables, more specifically on the outer sheath of three-core cables.

/ Technical Specification :

-  **Diameter :** 20 - 200 mm
-  **Longitudinal cutting depth :** 5 mm
-  **Operating voltage :** HTA (1 000 V to 50 000 V)

/ Other information :

Reference	Dimensions	Weight
OGA	180 x 26 x 62	0,27 kg

/ Spare parts

Reference	Description
LKMS	Spare blade



SCAN TO WATCH
OGA IN ACTION





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IS80C

Insulating knife with ceramic blade.



- Ceramic blades, contains absolutely no metal parts.
- Long-lasting performance: stainless ceramic blades, no wear, no sharpening.
- Hand guard to avoid hand slipping.
- Grip designed to improve handling.
- Protective cap to protect the operator and the blade when not in use
- The cap is united to the handle to avoid loss.

/ Benefits :

-  Insulated knife for total safety
-  Ergonomic Tool
-  Lightweight / Easy to Handle
-  High Cutting Performance / Accurate Cutting / Gesture Control

/ Other information :

Reference	Dimensions	Weight
PF3/06	265 x 95 x 80	0,6 kg



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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.

/ Weight / Dimensions :

	Length :	185 mm
	Weight :	160 g
	Width :	58 mm
	Thickness :	38 mm





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IS77






Insulated knife with long blade.



For overhead and underground networks and indoor electrical installations.

Sharpening is recommended using sharpener A02.

/ Technical Specification :

-  Stainless steel blade, insulation by injection.
-  The blade insulation is locked by 6 fixing points to ensure that both blade and insulation stay 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.



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WALL MOUNTED RESCUE KIT

A kit that is necessary and rapidly accessible with all the essential safety equipment for rescue in the event of an incident with or near low or medium voltage electrical installations.

HEAVY DUTY CASE AND ACCESSIBLE RESCUE TOOLS

Large box : 790 x 790 x 291 mm

Small box : 790 x 400 x 291 mm

- May be fitted with a shelf. (A set of MV fuses can be stored horizontally or two helmets)
- Boxes with transparent sealed lid (IP54),
- Handle for keeping the box closed, which can be fitted with seals.



KIT COMPONENTS

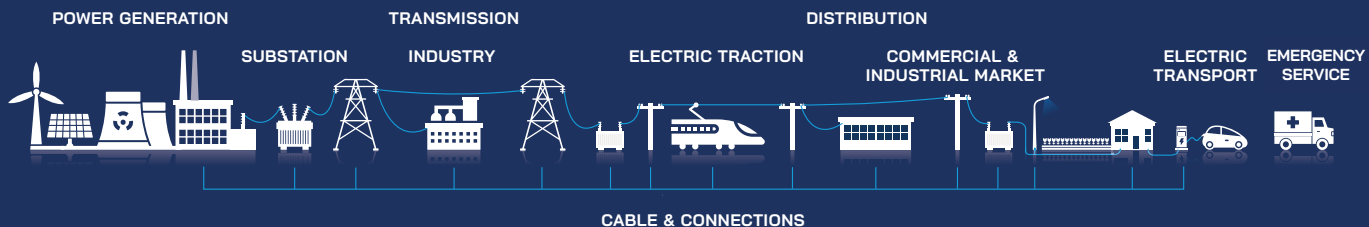
Low voltage version :

- Class 0 insulating gloves
- Class 0 insulating mat

36kV version :

- Class 4 insulating gloves
- 36kV stool

- Rescue stick
- Insulating gloves
- Insulating Mat
- Insulating Boots
- Voltage Detector
- Adhesive barrier tape
- Talc Bottle



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