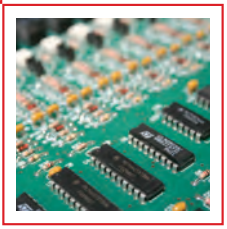
WALLiS



Product Catalogue

Welcome to the latest edition of the A. N. Wallis Product Catalogue, which features our complete range of industry leading Earthing, Exothermic Welding, Surge and Lightning Protection products.

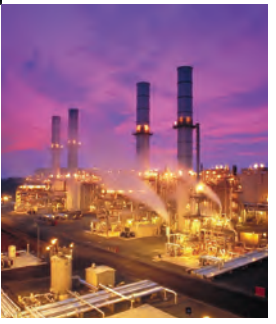
This year we have increased our already comprehensive range with the addition of a number of new lines, all of which have been specifically developed for the ever changing needs and requirements of our customers. New illustrative images, an updated layout and exceptionally detailed product information tables, make product specifying simple - enabling you to find the right solution, first time.

All A. N. Wallis products are manufactured in Nottingham (U.K.) and are distributed to customers across the world, with many being used on extremely prestigious projects including:

- The **Yas Marina Grand Prix Circuit** in Abu Dhabi
- **Hospitals** in Jordan, Kuwait and Qatar
- **Petrochemical Installations** in Saudi Arabia, Egypt and Oman
- **Mosques** in Bahrain and Kuwait
- **Telecommunication Towers** in Nigeria and Thailand
- **Rail Installations** in Hong Kong and the U.K.
- **Airports** in UAE, Oman and Europe
- The world's largest women's **university** in Riyadh - Saudi Arabia
- **Substations** in Kuwait, Malaysia, Dubai, Abu Dhabi and the U.K.
- **The Presidential Palace** in Abu Dhabi

These are just a few projects that are benefitting from lifelong protection through the use of A. N. Wallis products - why not add your project to the list?

We are constantly striving to provide our customers with the highest quality products, supported by first class customer service. To help us achieve this, we welcome your feedback, comments and suggestions. Please visit our website www.an-wallis.com and register your feedback online.



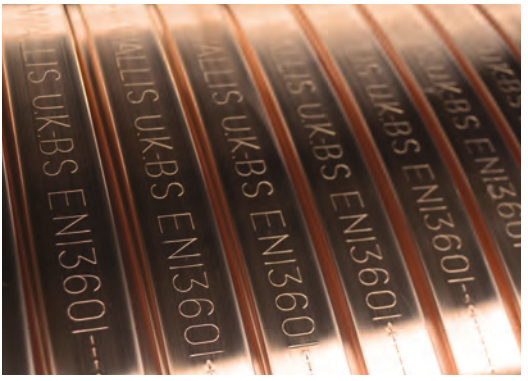
A. N. WALLIS & Co. Ltd | **Tel** +44 (0)115 927 1721 | **Fax** +44 (0)115 875 6630 | **Email** info@an-wallis.com | **Website** www.an-wallis.com

Welcome to Wallis

Founded over 70 years ago, we have a long tradition of providing first class Earthing, Lightning Protection and Low-Voltage Surge Protection Products.

What's more, we have as broad a range of products as can be found anywhere in the industry.

Wallis also provide a complete range of Technical services, whether you require Lightning Protection Design Services, Earthing Designs, Soil Resistivity Testing, Site Support or Supervision Services we can help you. Contact our office, we are ready to assist you.



All Wallis products are manufactured and tested to British, European and International standards BS EN 62305 and BS 7430. Manufacturing and headquarters are all in Nottingham. UK, with branch offices in Dubai, U.A.E. and Kuala Lumpur, Malaysia. Wallis are accredited with and quality audited to BS EN ISO 9001:2015 and BS OHSAS 18001:2007.

A commitment to excellent customer service also drives what we do. Part of this is ensuring that we maintain good stock levels so you can rely on same-day despatch for many of our products.

Our catalogue continues to evolve - following customer demand we have created a smaller, more portable version without compromising on content. Each edition contains more product information than its predecessor, creating an invaluable resource for all of our customers.

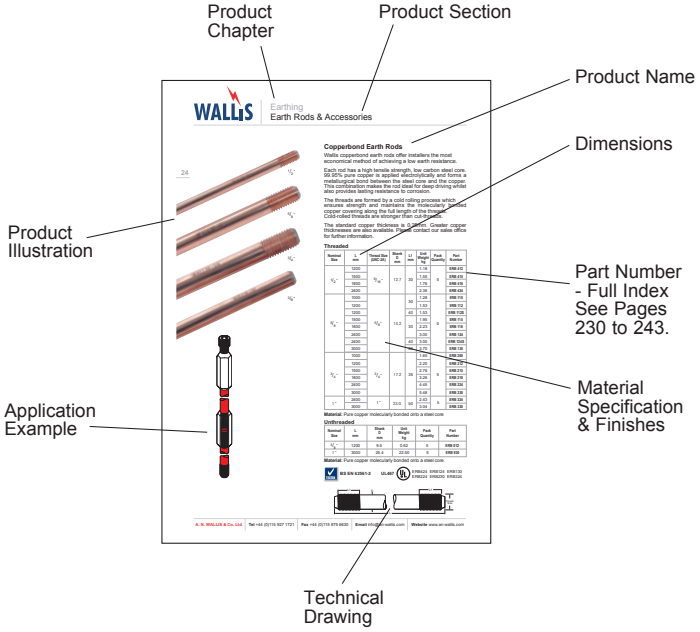
A call for a new design was also heard. Working closely with specialist designers we have produced a catalogue that is not only attractive to look at, but includes all the information you can ever need when specifying A. N. Wallis products.

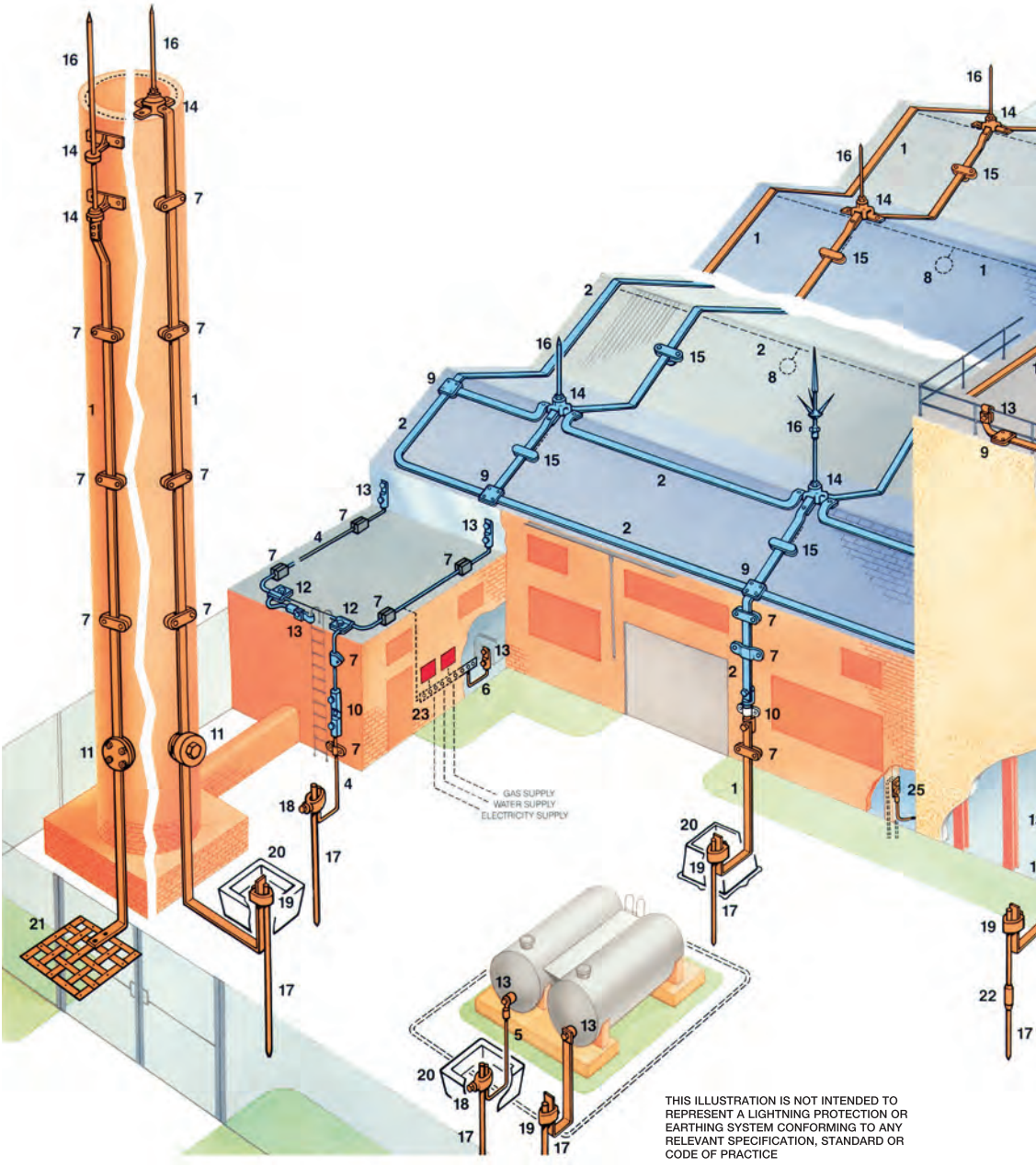
We know our customers are key to our continued success, so when you talk, we listen. We work tirelessly to ensure we provide you with only the highest quality products backed by exceptional customer service. Because of this you can be assured you are in safe hands and will receive a service that is second to none. Give A. N. Wallis a call today and see why we are the new market leader in Earthing & Lightning Protection, Exothermic Welding and Surge Protection Products.

A. N. Wallis, another decision well made.

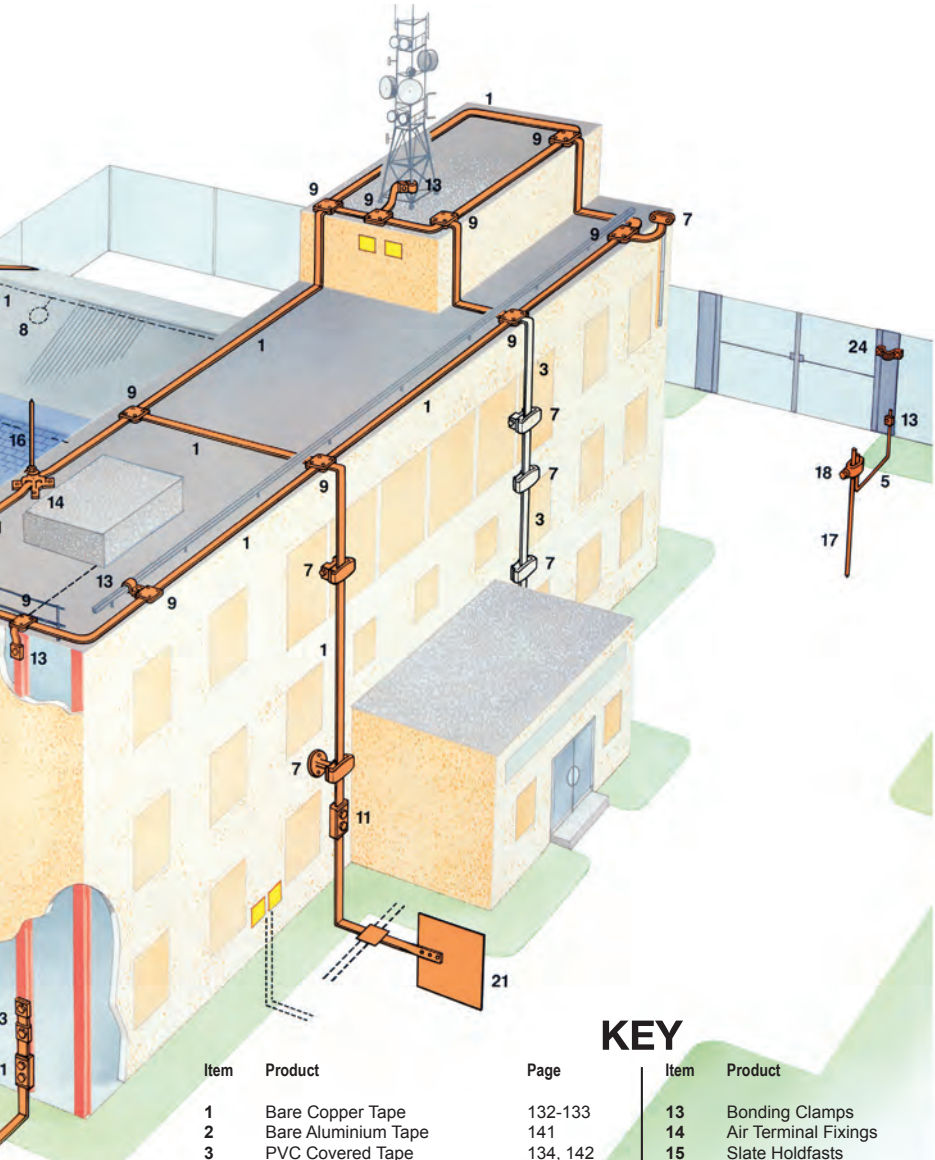
Using This Catalogue

This catalogue is designed to be as easy to use as possible. To help find the product you need, there is an alphabetical product index, a part number index and a product locator. Every product featured has its own technical and application drawings and a detailed product table. Materials specifications are also included.





THIS ILLUSTRATION IS NOT INTENDED TO REPRESENT A LIGHTNING PROTECTION OR EARTHING SYSTEM CONFORMING TO ANY RELEVANT SPECIFICATION, STANDARD OR CODE OF PRACTICE



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Introduction to Earthing & Earthing Designs

An earth electrode system, professionally designed by competent Engineers, is essential to ensure the safety of personnel and the protection of equipment from dangerous voltages in and around substations.

A. N. Wallis are able to offer earth electrode system designs and associated testing services using the most up-to-date equipment and design software 'CDEGS'. All this is carried out by competent and highly experienced Electrical Engineers and Technicians.

All design works are carried out in accordance with BS 7430:2011 – *The code of practice for protective earthing of electrical installations* and BS EN 50522:2010 – *Earthing of power installations exceeding 1kV a.c.* amongst other specifications.

All materials supplied by A. N. Wallis have been tested and certified by an independent body ensuring the highest quality materials are made available to you.

Earthing System Design Considerations

An earth electrode system should be designed to safely dissipate fault current or other unwanted electrical current to the general mass of earth. This could include power transmission and distribution, static dissipation, lightning protection as well as other associated systems.

The main considerations of an earth electrode system design should be:

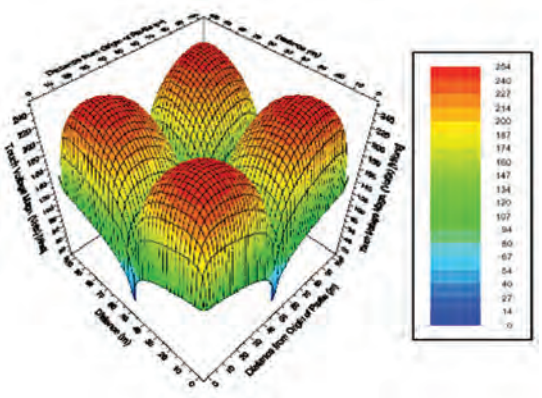
1. Is the system safe and suitable for the purpose for which it is intended?
2. Is the system rated to carry the design fault currents?

To achieve this a number of steps are required and are detailed below.

Soil Resistivity Surveys

BS 7430:2011 states that 'on-site resistivity testing should always be carried out prior to carrying out an earth system design and installation'.

The soil resistivity survey is the first step in ensuring the correct design of an earth electrode system. It is essential that accurate measurements are taken at this stage as this data is used to determine what conductors are required in the finished earthing system to give a safe and suitable design. Corrupt data taken with inadequate test equipment could lead to a vastly over- or under-engineered solution.



A. N. Wallis use high specification test equipment to carry out soil resistivity testing, gaining data from tried and tested methods. This raw data is then analysed using CDEGS software to produce a representative electrical equivalent soil model which can then be used in the earthing design process.

Earth Electrode System Design

There are many factors that go into producing a compliant earth electrode system design: fault current levels, fault duration, ground make up and interconnected sites are but a few.

All of the parameters are analysed using the CDEGS software to ensure Touch, Step and Rise of Earth Potentials are within safe levels.

Our team of competent Engineers consider all of the above and more to ensure the final design is not only safe and suitable for its purpose, but also to ensure the system can be installed using the most economic processes giving you the most cost effective solution.

RISQS AUDITED

UVDB Registered

Overall System Testing

BS 7430:2011 states that 'all work should be carried out under the control and direction of a competent person.'

A. N. Wallis are able to offer test and inspection services for both new and existing installations. All works are carried out in accordance with BS 7430:2011 by our trained and competent Engineers and Technicians.

The period between periodic inspection and tests can only be determined by the environment that the system is installed in, for example the harsher the environment the more regular the inspection.
Please feel free to contact us to discuss your particular requirements.

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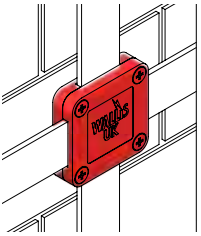
Introduction to Lightning Protection

Structural Lightning Protection

Structural Lightning Protection systems are installed to minimise the risk of damage to the external & internal parts of the structure, including the electrical and electronic equipment from a lightning strike and reducing the risk of injury to humans by safely discharging the high voltage to the earth system. The external lightning protection attracts the lightning discharge and conducts it safely to earth and the internal lightning protection, with use of transient surge protectors, minimises the damage to sensitive equipment and bonding of conductive services ensure a safe path to earth.

A complete Lightning Protection System (LPS) can only be achieved when both safety measures of Internal & External LPS are employed to the structure based on the Risk Assessment.

For full technical details A. N. Wallis offers a Consultants Handbook and Risk Assessment Management software. Contact the Sales Team for further details.



Lightning Protection Strategy

The normal strategy in achieving protection is to capture the lightning at a preferred point by the use of air terminations and conducting it via low impedance down conductors and earth electrodes to a low resistance earth of less than ten ohms. Air terminations and down conductors are spaced at regular intervals to form a mesh of conductors around the perimeter of the building and roof, known as a Faraday cage, and are joined together by specially produced clamps and fixings or welding.

Lightning Protection System Design Considerations

A LPS is designed according to geographical location, local terrain, soil conditions, size and height of building, type of material used in construction, type of material stored in the building, use of building and is based on established standards for risk assessment.

The Risk Assessment needs to be carried out prior to the design of the structural LPS to determine the Class of LPL required based on the IEC / BS EN 62305 standards or internationally accepted standards.

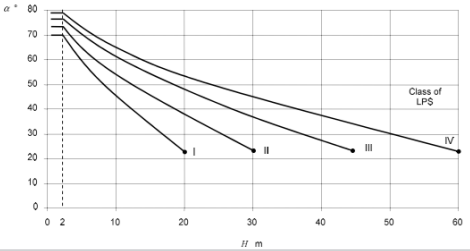
Air Termination Networks

Based on the determined Class of LPL conductor spacing's can be selected as identified below:

Class of LPS	Roof Mesh Conductors W (Width - Metres)	Rolling Sphere Radius r (Radius - Metres)	Protection Angle a (Degree)	Down Conductor Spacing (Metres)
I	5 x 5	20	Refer Chart	10
II	10 x 10	30		10
III	15 x 15	45		15
IV	20 x 20	60		20

To calculate the areas of protection the Rolling Sphere technique can be employed. The zone of protection determined by the methods requires protection through the Roof Mesh method and Protective Angle Methods.

Roof Mesh Method – Simple and direct implementation of conductor spacing's based on the Class of LPS, e.g. Class I LPS – Roof conductors are to be spaced in a grid of 5 x 5 metres throughout the flat roof plane. The Protective Angle Method is based on the relativity between the height of protection required to the prescribed angle of protection in conjecture with the height to be protected which can be obtained from the chart below. Key areas or strike points need to be determined before employing the protection measure.



Down Conductors

Down conductor spacing has to be in accordance with the Class of LPS which is determined and to be adopted based on the table. E.g. Class I LPS – Down conductors to be spaced at every 10 metres of the structure around the periphery of the structure. The spacing should be carried out as evenly as possible on the periphery starting at the corners and at the shortest distance to earth.

Sufficient separation distance ‘s’ need to be maintained when down conductors are placed in overhangs and care to be taken to avoid re-entrant loops.

Earth Terminations & Networks

The information contained in this section is primarily for LPS earthing.

For Earth Termination systems two basic types of earth electrode arrangements are applied. Type A earthing arrangement is suitable for low structures and existing structures. Type B earthing arrangement is usually followed throughout.

Each down conductor needs to be connected to an earth electrode to form the earthing with a minimum of two. The minimum length of earth rods that are required to be driven into ground is 2.4 metres. Earthing system contains of horizontal earth electrodes and vertical earth electrodes. Earth rods may need an earth inspection housing for periodic testing of earth resistance.

Resistance to Earth

To maintain a safe earth system, it is recommended that the earth rods to ground resistance values are less than 10 ohms. Earth resistance values are measured at low frequency.

A single earth rod may not achieve the required resistance figure and several may need to be fitted to achieve this; their combined resistance is proportional to the reciprocal of the individual rod resistances to earth.

This rule holds true as long as each rod is situated outside the resistance area of any other. To ensure this is the case, it is generally accepted that the minimum spacing between rods should not be less than their driven length.

The expected number of rods required to obtain a particular resistance value, e.g. ten ohms, can be roughly calculated.

To do this the soil resistivity needs to be taken into consideration. A soil resistivity test will need to be performed.

There are several methods used to obtain a lower resistance value:

More rods can be driven.

Rods can be driven deeper.

Rods of a larger diameter can be used.

Ring conductors connecting rods together underground can be used.

Where deep driving is not possible shorter rods with a larger diameter can be used; copper earth mats and earth plates can be used in place of earth rods.

A “crows foot” configuration can be used where a parallel connection is not possible.

Where high resistance soil conditions are a problem soil conditioning agents can be used to backfill rod holes. Conductive concrete can be used to backfill an earth mat. Both effectively increase an electrodes cross sectional area and therefore reduce its resistance to earth.

The international standards also specify the recommended materials used for all earthing conductors and their dimensions.

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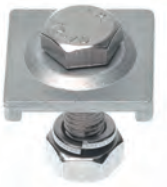
Equipotential Bonding

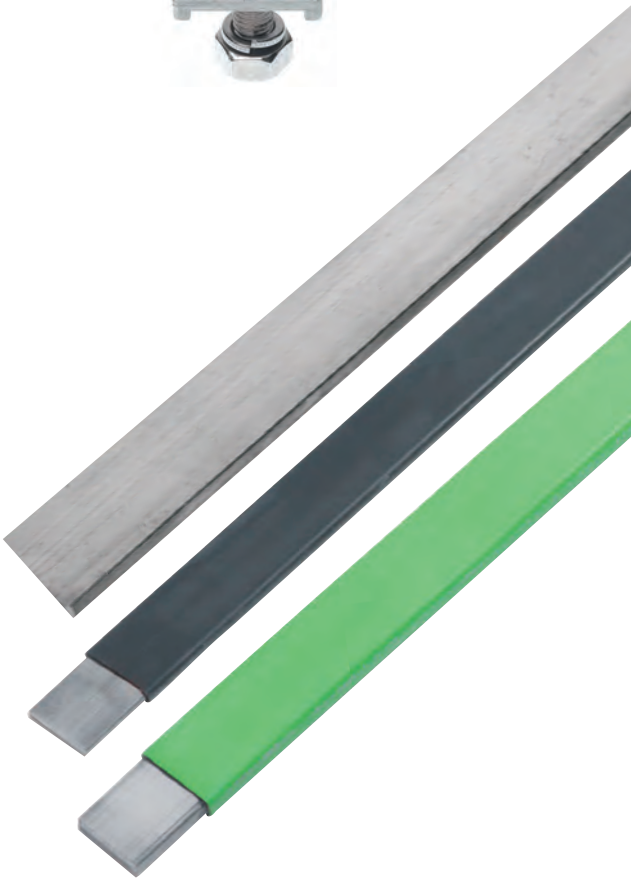
It is common practice to use the buildings natural structural steelwork and bonding it to the LPS to further improve its ability to conduct lightning and fault currents to earth; prior permission may be required.

The information contained in this section is intended as a guide and should not be used to perform designs. A. N. Wallis does not accept responsibility for errors or omissions. Detailed information on LPS design is contained in internationally recognised European and British LPS standards.



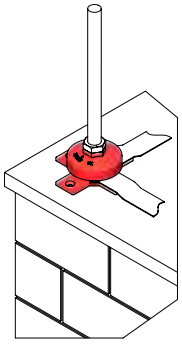
Joints

Joints should be mechanically effective, all joints other than welded ones are a potential discontinuity, and care should be taken to ensure contact surfaces are clean and that fixing clamps are tight and well protected from corrosion, which can occur if dissimilar metals are joined. Ideally there should be as few joints as possible in an LPS design.



Maintenance & Life of an LPS

It is important to properly maintain an LPS to ensure it retains its ability to conduct the same current carrying capacity as it did when it was originally installed. Earth rod resistances should be regularly checked.



Corrosion and fault currents can cause high resistance joints leading to overheating. However, if an LPS is correctly installed and maintained it should last for many years.

Introduction to Surge Protection

Surges or Transient overvoltages

Surges or Transients are short duration increases in voltage measured between two or more conductors. These potentially harmful voltages can be induced into a building from various sources, from the direct and/or secondary effects of lightning, to switching effects and equipment faults. These events can generate thousands of volts across equipment, leading to either direct failure or degradation of insulation, causing premature failure.

Standards

The information and products provided in this section follow the requirements for transient overvoltage surge protection in relation to:

BS EN / IEC 62305 – Protection against lightning: a series of four standards used to assess a structure and implement a co-ordinated approach to lightning protection.

The first two parts deal with assessing the threat of lightning and the associated risk of injury or damage, whilst the second two parts deal with reducing that risk using various techniques. Surge protection is used in this series in two main ways:

1) To provide equipotential bonding of services that cannot be directly bonded to earth.

2) To protect electrical and electronic systems within the structure from damage.

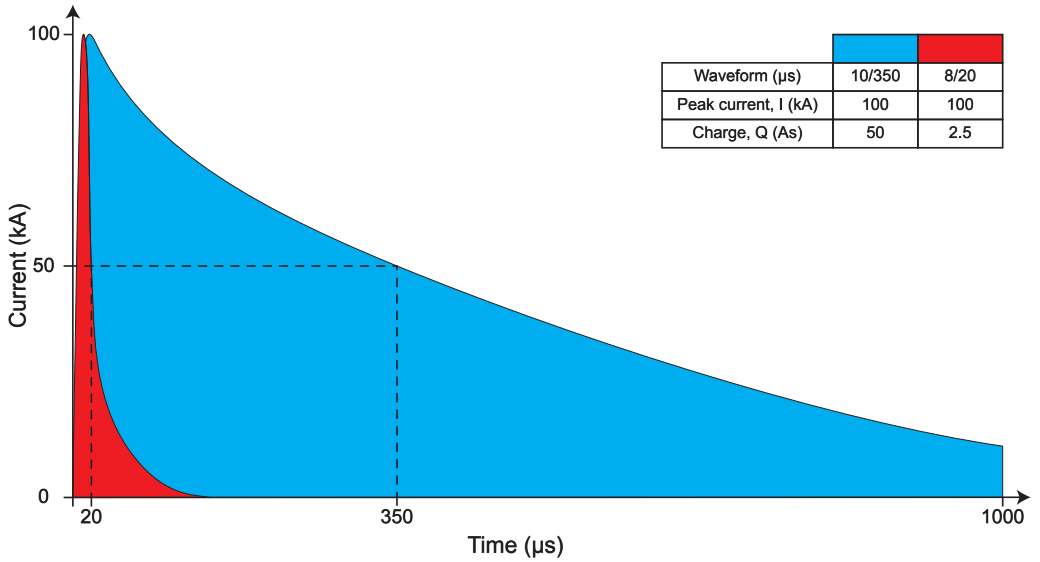
BS 7671 – Requirements for electrical installations.

Section 443 covers the conditions under which surge protection is required and a simplified risk assessment procedure for electrical and electronic equipment protection. Section 534 and annex 16 covers the installation and co-ordination of surge protection in order to effectively protect equipment.

BS 7671 is the 17th Edition IET wiring regulation and deals with the requirements for electrical installations within the UK. Whilst some of the guidance documents are not mandatory, following their recommendations will help the installation comply with statutory requirements, and demonstrate due and appropriate considerations in the design and implementation of a system.

DD CLC/TS 61643-12 - Surge protective devices connected to low-voltage power distribution systems: selection and application principles.

Although a technical specification rather than a standard, this document provides useful information on the characteristics of different surge protection technologies and the terminology used by manufacturers when classifying and testing surge protection devices.



Waveform (µs)	10/350	8/20
Peak current, I (kA)	100	100
Charge, Q (As)	50	2.5

Protection from lightning transients and switching events

In order to offer an effective surge protection system, a risk assessment can be carried out to BS EN 62305-2. This takes into account the building or buildings to be protected, their use, the surrounding area and any existing protection measures. If the level of risk is found to be unacceptable, protection measures in BS EN 62305-3 and BS EN 62305-4 can be implemented to reduce the risk for the type of structure to be protected. 62305-1 covers the general principals, key terms and important information relating to lightning protection and should be read in conjunction with the other three parts.

If a lightning protection system is installed, the assessment will always require surge protection for services entering the building as a minimum. 62305 also contains a basic current division calculation which determines the surge current rating of the protection device required at the main incoming distribution location.

If no lightning protection system is fitted (LPS), it is recommended that surge protection is installed to protect equipment from the indirect effects.

Lightning currents from a direct strike can be represented by the 10/350 waveform, reaching up to 200,000 Amps. This represents the extreme amount of energy released from such an event.

Indirect effects can be represented by the lesser 8/20 wave shape, providing less energy but still harmful enough to either degrade, disrupt or destroy equipment.

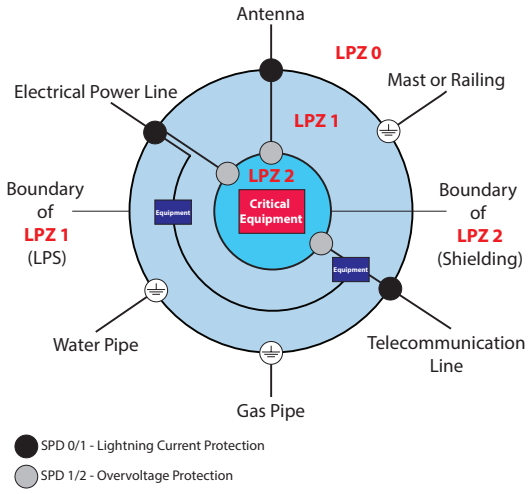
Type of protection unit or SPD

In order to protect equipment, you need to select SPD units that can deal with these effects.

A Type 1 SPD will deal with a direct strike.

A Type 2 and 3 SPD will deal with the indirect effects or locally generated surges such as switching events.

A combination of these (co-ordinated SPD's) can provide full protection to equipment within a building.



Low let-through voltage

An effective SPD should have a low let-through voltage as this is the amount of voltage the equipment being protected will be subjected to. The greater the overvoltage the greater the risk of disruption, degradation and damage to equipment connected to the electrical system. As technology moves on, components within electronic equipment continue to become smaller and therefore more sensitive to these types of influence.

Application

As a general guide, all cables that enter or leave a building should be protected as these conductive lines offer pathways within.

Most buildings will have at least a main power supply and a copper telephone line. At the very least, power protection and telephone protection should be applied at the main distribution board and main telephone line jack or main distribution point (DP).

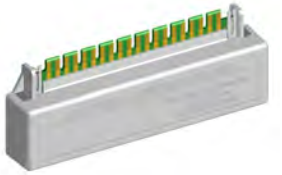
Product Selection - Power

Main Structure	SPD Location/ Service Entrance	Sub Distribution	Final Circuits
Level I/II LPS fitted	Fit Type 1 (10/350 25kA per mode, 3 phase) on main distribution board WSP415/I/TT	Fit Type 2 (8/20) on main distribution board WSP415M1/M1R	Fit Type 2 or 3 (8/20) WSPMC
Level III/IV LPS fitted	Fit Type 1 (10/350 12.5kA per mode, 3 phase) on main distribution board WSP415/III/TT	Fit Type 2 (8/20) on main distribution board WSP415M1/M1R	Fit Type 2 or 3 (8/20) WSPMC
No LPS fitted	Fit Type 2 (8/20) on main distribution board WSP415M1/M1R	Fit Type 2 (8/20) on main distribution board WSP415M1/M1R	Fit Type 2 or 3 (8/20) WSPMC

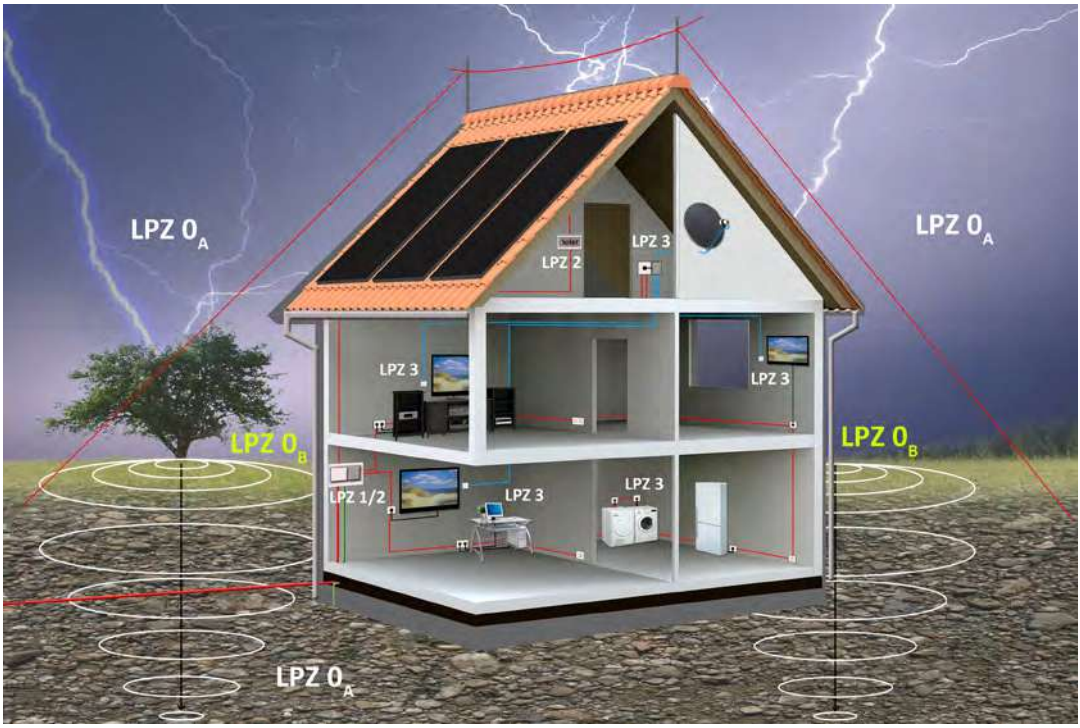
WSP415M1

Product Selection - Data and Telecoms

Typical Application	SPD Location/Service Entrance	Local Protection for Critical Equipment
Analogue telephone lines:		
BT Line Jack	WSPTLP/6BT	WSPTLP/6BT
Krone type 10 pair module	WSPTLP/10LR	WSPTLP/6BT
CCTV COAXIAL BNC	WSPCCTV/B	WSPCCTV/B
Low voltage data lines	Data Line Protection series (specific voltage required)	Data Line Protection series (voltage required)
Computer networks Cat-5	Data Line Protection series	Data Line Protection series



WSPTLP/10LR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LPZ 3
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Introduction to Cu-nnect Exothermic Welding

Exothermic Welding

Cu-nnect exothermic welding is a simple, economical method of making permanent, very high quality electrical connections. The process uses the high temperature reaction of copper oxide and aluminium, within a semi-permanent graphite mould, to form electrical connections mainly between copper to copper or copper to steel.

No outside source of power or heat is required when using the Cu-nnect system. It is also light and completely portable, making it ideal for field use. It is a straightforward method which requires very little training in order to safely obtain a quality, maintenance free connection, therefore making it both time and cost effective. Making a Cu-nnect joint is a simple procedure which requires a mould, weld powder, handle clamp and various tools and cleaning accessories as detailed below:

1. Position cleaned conductors in mould after ensuring mould is dry, by pre-heating or making a test joint.

2. Lock mould with handle clamp and place metal retaining disc in bottom of mould crucible.

3. Pour weld powder into mould and place small amount of starting powder on edge of mould for easy ignition.

4. Close mould lid securely.

5. Ignite starting powder using flint gun.

6. Reaction takes place. Wait several seconds to allow metal to solidify before opening mould.

7. Remove weld and clean mould carefully before making next connection.

The Cu-nnect electrical connection is a fusion of high conductivity, high copper content alloys which produces a molecular weld. This weld has at least twice the cross-sectional area of the conductors being joined and a current-carrying capacity equal to or greater than that of the conductors, enabling it to withstand repeated fault currents. The weld will not loosen or corrode and is an integral part of the conductor.

For any additional technical advice or information contact our Sales team.

Introduction to Product Standards

The **International Electrotechnical Commission (IEC)** is the body responsible for implementing international standards. Its technical committee comprises of representatives from various member national standards, including **The European Committee for Electrotechnical Standardisation (CENELEC)**. IEC and CENELEC generally work in parallel, with CENELEC members voting to adopt new IEC standards as CENELEC standards. The important fact with CENELEC standards is that, by rule, the member countries are bound to adopt them as a national benchmark. In the process of adopting these standards, minimum changes are permitted. In-country clauses (exceptions or changes) can only be made under very strict circumstances. When such standards are adopted at the national level, any conflicting national standard must be withdrawn.

At each level (International, European, National) a different naming prefix convention is used, for example:

IEC 62561-1:2017 (the IEC version).
EN 62561-1:2017 (CENELEC adopted version of the above).
BS EN 62561-1:2017 (British Standard adopted version of the above).

All materials and components used in both Internal and External Lightning Protection systems must be designed, manufactured and tested for their respective electrical, mechanical and environmental (chemical) standards. Manufacturers and suppliers of lightning protection components should be able to provide test reports compliant to these standards. More importantly, the classification (class and environment) should be stated together within the scope of testing. Please note, the approval is only valid for the combinations of conductor sizes and configurations tested. **A. N. Wallis has successfully completed testing on a wide range of products, the results of which are available upon request.**

The below series of BS EN 62561 standards deal with the requirements and tests for lightning protection system components (LPSC) used in the installation of lightning protection systems (LPS) designed and implemented in accordance with the IEC / BS EN 62305 series of standards.

BS EN 62561-1:2017: Lightning Protection System Components (LPSC) – Part 1: Requirements for Connection Components

The above standard specifies the requirements and tests for all metallic connection components that form part of the lightning protection system (LPS). These include connectors, bridging components, bonding components, expansion pieces and test joints. The testing classifies the products according to their capability to withstand lightning current by an electrical test:

- Class H – Heavy Duty (tested with 100 kA 10/350 µs), or
- Class N – Normal Duty (tested with 50 kA 10/350 µs)

A classification is also made according to the installation of the component:

- Embedded in Concrete
- Not Embedded in Concrete.

BS EN IEC 62561 - 2:2018: Lightning Protection System Components (LPSC) – Part 2: Requirements for Conductors and Earth Electrodes (IEC 62561-2:2018).

The above standard specifies the requirements and tests for:

- Metallic conductors (other than “building natural down conductors”) that form part of the air termination system and down conductor system
- Metallic earth electrodes that form part of the earth termination system.

It should be noted that the metallic conductor requirements also cover air termination conductors, air-terminals (rods), earth lead in rods, down conductors and earth conductors.

The tests include measurements to confirm compliance with minimum size requirements, resistivity and environmental testing. Earth electrodes are subjected to tests including bend tests, adhesion tests, and environmental tests. Coupled earth electrodes and the coupling device are also subjected to hammer compression (impact testing).

BS EN 62561 - 3:2017: Lightning Protection System Components (LPSC) – Part 3: Requirements for Isolating Spark Gaps

The above standard specifies the requirements and tests for Isolating Spark Gaps (ISG) for lightning protection systems. ISGs can be used to indirectly bond a lightning protection system to other nearby metalwork where a direct bond is not permissible due to functional reasons, for example, earth termination systems of power installations; earth termination systems of telecommunication systems; rail earth electrode of AC and DC railways; installation with cathodic protection; and stray current protection.

BS EN 62561 - 4: 2017: Lightning Protection System Components (LPSC) – Part 4: Requirements for Conductor Fasteners

The above standard specifies the requirements and tests for metallic and non-metallic conductor fasteners that are used in conjunction with, and to secure the air-termination of, down conductor and earth termination systems. This standard does not cover the fixing of conductor fasteners to the fabric/membrane/gravel roofing of structures due to the vast number and types used in modern day construction.

BS EN 62561 - 5:2017: Lightning Protection System Components (LPSC) – Part 5: Requirements for Earth Electrode Inspection Housings and Earth Electrode Seals

The above standard specifies the requirements and tests for earth pits and earth seals made of steel, plastic, and concrete among other materials. Load-bearing capacity and seal quality are the key tests covered in the standard:

- Earth Electrode Inspection Housing (Earth Pit) – Metallic and Non-metallic enclosure that houses the down conductor/earth termination connection for inspection and testing purposes; consisting of a housing and a removable lid
- Earth Electrode Seals (Earth Seals) – Water Pressure Seal used in conjunction with an earth electrode that passes through the foundation of the building, so preventing ground water from entering.

BS EN IEC 62561 - 6:2018: Lightning Protection System Components (LPSC) – Part 6: Requirements for Lightning Strike Counters (LSC)

The above standard specifies the requirements and tests for devices intended to count the number of lightning strike pulses flowing in a conductor. This conductor may be part of a lightning protection system (LPS) or connected to an SPD installation or other conductors, which are not intended to conduct a significant portion of lightning currents. Lightning Strike Counters are classified according to their application, threshold currents, maximum counting and withstand current. Mechanical, Electrical, and Corrosion tests along with UV radiation tests, IP rating tests, and Electromagnetic compatibility are addressed for LSC in this standard.

BS EN IEC 62561 - 7:2018: Lightning Protection System Components (LPSC) – Part 7: Requirements for Earthing Enhancing Compounds

The above standard specifies the requirements and tests for earth enhancing compounds producing low resistance of an earth termination system. The material of the earth-enhancing compound shall be chemically inert to subsoil and not pollute. It should provide a stable environment in terms of physical and chemical properties and exhibit low resistivity, as well as not be corrosive to the earth electrodes/ conductors being used in the earth termination system. Backfill materials are not part of this standard. Tests included in the standard are conductivity, chemical (pH, solubility in acid environments), and composition (sulfur).

BS EN 62305 - 4: 2011: Protection against lightning – Part 4: Electrical and Electronic Systems within the structures

The above standard provides information for the design, installation, inspection, maintenance and testing of electrical and electronic system protection (i.e. SPM – Surge Protection Measure) to reduce the risk of permanent failures due to Lightning Electromagnetic Impulse (LEMP) within a structure. Protection of electronic and electrical systems against LEMP, which is the overall electromagnetic effects of lightning, including conducted surges (transient overvoltages and currents) and radiated electromagnetic fields, is an integral part of this standard. Lightning current and overvoltage SPD's, bonding and shielding form a total Surge Protection Measure (SPM) to effectively protect sensitive electronic and electrical systems from both lightning and switching transients.

IEC 61643 - 11: Surge Protective Devices connected to Low-Voltage power systems - Requirements and Test Methods

The above standard describes the requirements and test procedures of surge protective devices (SPDs) to ensure protection against the effects of direct and indirect lightning strikes or other transients.

IEC 61643 - 12: Surge Protective Devices connected to Low-Voltage Power distribution systems – Selection and Application Principles

The above standard must be used in conjunction with IEC 61643 -11. It provides information on the selection of Surge Protective Devices and information on the selection and co-ordination of SPDs. It also provides the principles of selection, operation, place of installation and co-ordination of SPDs connected to 50/60 Hz a.c. systems and equipment with nominal voltages up to 1000V (r.m.s).

IEC 61643 - 21: Surge Protective Devices connected to Telecommunications and Signalling Networks – Performance Requirements and Testing Methods

The above standard describes the requirements and test procedures for Surge Protection Devices used for the protection of telecommunication and signaling networks including data networks, alarm systems, voice transmission networks, computer communication interfaces, process control system, security systems.

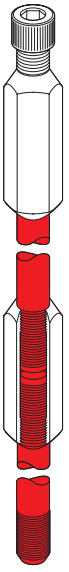
IEC 61643 - 22: Surge Protective Devices connected to Telecommunications and Signalling Networks – Selection and Application Principles

The above standard must be used in conjunction with IEC 61643 -21. It provides information on the selection and application of Surge Protective Devices used to protect telecommunications and signalling networks.

OVERVIEW OF LPS AND LPSC STANDARDS FOR DESIGNING AND MATERIAL TESTING: -

Standard	Title	Type
BS EN 62305 - 1	Protection against lightning – Part 1: General Principles	Design Standard
BS EN 62305 - 2	Protection against lightning – Part 2: Risk Management	Design Standard
BS EN 62305 - 3	Protection against lightning – Part 3: Physical Damage to Structures and Life Hazard	Design Standard
BS EN 62305 - 4	Protection against lightning – Part 4: Electrical and Electronic Systems within Structures	Design Standard
BS EN 62561 - 1	Lightning Protection System Components (LPSC) – Part 1: Requirements for Connection Components.	Material Testing Standard
BS EN IEC 62561 - 2	Lightning Protection System Components (LPSC) – Part 2: Requirements for Conductors and Earth Electrodes.	Material Testing Standard
BS EN 62561 - 3	Lightning Protection System Components (LPSC) – Part 3: Requirements for Isolating Spark Gaps.	Material Testing Standard
BS EN 62561 - 4	Lightning Protection System Components (LPSC) – Part 4: Requirements for Conductor Fasteners.	Material Testing Standard
BS EN 62561 - 5	Lightning Protection System Components (LPSC) – Part 5: Requirements for Earth Electrode Inspection Housings and Earth Electrode Seals.	Material Testing Standard
BS EN IEC 62561-6	Lightning Protection System Components (LPSC) – Part 6: Requirements for Lightning Strike Counters.	Material Testing Standard
BS EN IEC 62561-7	Lightning Protection System Components (LPSC) – Part 7: Requirements for Earthing Enhancing Compounds.	Material Testing Standard
IEC 61643 - 11	Surge Protective Devices connected to Low-Voltage Power systems.	Testing Standard
IEC 61643 - 12	Surge Protective Devices connected to Low-Voltage Power distribution systems.	Selection & Application Standard
IEC 61643 - 21	Surge Protective Devices connected to Telecommunications and Signalling Networks.	Testing Standard
IEC 61643 - 22	Surge Protective Devices connected to Telecommunications and Signalling Networks.	Selection & Application Standard

Earthing



Copperbond Earth Rods

Wallis copperbond earth rods offer installers the most economical method of achieving a low earth resistance.

Each rod has a high tensile strength, low carbon steel core. 99.95% pure copper is applied electrolytically and forms a metallurgical bond between the steel core and the copper. This combination makes the rod ideal for deep driving whilst also provides lasting resistance to corrosion.

The threads are formed by a cold rolling process which ensures strength and maintains the molecularly bonded copper covering along the full length of the threads. Cold-rolled threads are stronger than cut-threads.

The standard copper thickness is 0.25mm. Greater copper thicknesses are also available. Please contact our sales office for further information.

Threaded

Nominal Size	L mm	Thread Size (UNC-2A)	Shank D mm	L1 mm	Unit Weight kg	Pack Quantity	Part Number
1/2"	1200	9/16"	12.7	30	1.18	5	ERB 412
	1500				1.55		ERB 415
	1800				1.76		ERB 418
	2400				2.36		ERB 424
5/8"	1000	5/8"	14.2	30	1.28	5	ERB 110
	1200				1.53		ERB 112
	1200			40	1.53		ERB 112S
	1500			30	1.95		ERB 115
	1800				2.23		ERB 118
	2400				3.00		ERB 124
	2400			40	3.00		ERB 124S
	3000			30	3.70		ERB 130
3/4"	1000	3/4"	17.2	35	1.65	5	ERB 200
	1200				2.20		ERB 212
	1500				2.76		ERB 215
	1800				3.26		ERB 218
	2400				4.45		ERB 224
	3000				5.48		ERB 230
1"	2400	1"	23.0	50	2.43	5	ERB 324
	3000				3.04		ERB 330

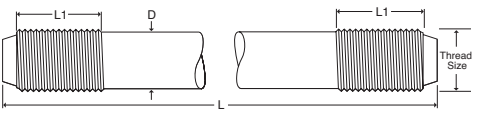
Material: Pure copper molecularly bonded onto a steel core

Unthreaded

Nominal Size	L mm	Shank D mm	Unit Weight kg	Pack Quantity	Part Number
3/8"	1200	9.5	0.62	5	ERB 012
1"	3000	25.4	22.50	5	ERB 930

Material: Pure copper molecularly bonded onto a steel core.

TESTED **BS EN 62561-2** **UL467** ERB424 ERB124 ERB130 ERB224 ERB230 ERB324



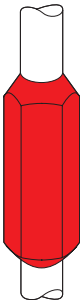
Threaded Couplings

These Wallis high-strength couplings are used for joining copperbond threaded earth rods together. They facilitate deep driving and ensure continual contact between the rods both during and after installation.

The coupling also protects the earth rod threads during installation with the threaded driving head. There is a lead-in for ease of assembly and the hexagonal design allows for grip and keeping the coupling tight when driving into the ground. All Wallis couplings are manufactured from a high copper content alloy ensuring excellent corrosion resistance.

Type	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
1/2"	68	18	0.07	25	ERBO 12
5/8"	68	20	0.12		ERBO 16
3/4"	78	25	0.14		ERBO 20
1"	100	31	0.25		ERBO 25

Material: High Copper Alloy

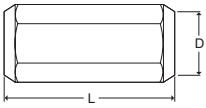


Type	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
5/8"	80	21	0.08	25	ERBO 16S

Material: Silicon Bronze.

BS EN 62561-1 Class H

Tightening torque 40 Nm



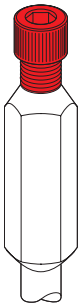
Threaded Driving Heads

These Wallis re-usable threaded driving heads are suitable for driving copperbond threaded earth rods by hand or with a power hammer. The driving head screws into the threaded coupling to allow deep driving of the earth rods.

Type	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
1/2"	50	20	0.08	25	ERBD 12
5/8"	55	22	0.08		ERBD 16
3/4"	60	25	0.13		ERBD 20
3/4"	120	22	0.30		ERBD 21*
3/4"	60	30	0.15		ERBD 25

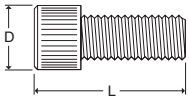
Material: Steel.

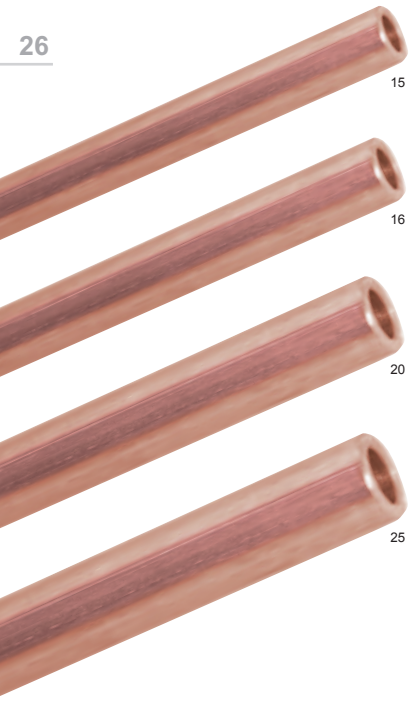
* The ERBD 21 is a driving head with a 3/4" thread and a 5/8" head.

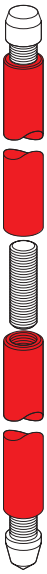


Type	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
5/8"	47	27	0.08	25	ERBD 16S

Material: Copper Coated Steel.







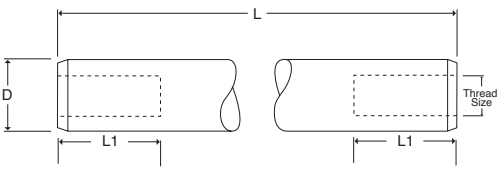
Solid Copper Earth Rods

These earth rods are designed for use where extremely high corrosion resistance and exceptionally long life are required. Solid copper earth rods are produced from solid copper bar and are internally threaded for jointing. When deep driving a solid copper earth rod the usual practice is to insert the rod into a bore hole and backfill with either Low-Resistance Earthing Compound or Bentonite, (see page 44 for further details).

Shank D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
15	1200	M10	20	1.88	5	ERC 112
16	1500	M10	20	2.66	5	ERC 115
	1800			3.20		ERC 118
	2400			4.28		ERC 124
	3000			5.36		ERC 130
20	1200	M10	20	3.34	5	ERC 212
	1500			4.18		ERC 215
	1800			5.03		ERC 218
	2400			6.71		ERC 224
	2500			7.00		ERC 225
	3000			8.40		ERC 230
25	1000	M12	25	4.37	1	ERC 310
	1200			5.25		ERC 312
	1500			6.54		ERC 315
	1800			7.86		ERC 318
	2000			8.73		ERC 320
	2400			10.50		ERC 324
	2500			10.90		ERC 325
	3000			13.10		ERC 330
	3600			15.90		ERC 336

Material: Copper to BS EN 13601.

TESTED **BS EN 62561-2**

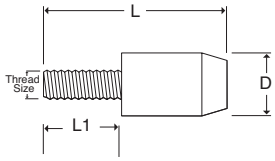


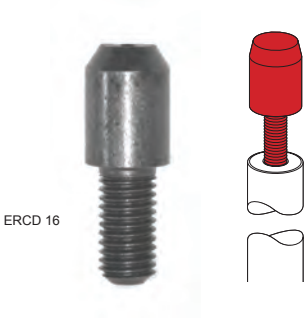
Driving Heads

The driving head protects the internal thread and the top of the solid copper earth rod from damage when being driven into the ground.

D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
16	38	M10	20	0.03	25	ERCD 16
20	41	M10	20	0.06		ERCD 20
25	45	M12	25	0.10		ERCD 25

Material: Steel.



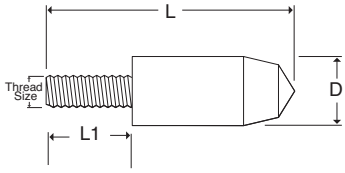

ERCD 16

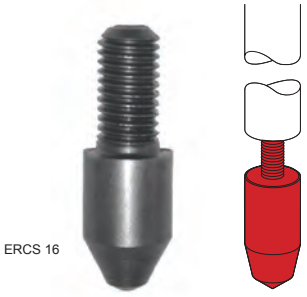
Driving Spikes

These driving spikes enable solid copper earth rods to be driven easily into the ground.

D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
16	42	M10	20	0.03	25	ERCS 16
20	51	M10	20	0.06		ERCS 20
25	60	M12	25	0.10		ERCS 25

Material: Steel.




ERCS 16

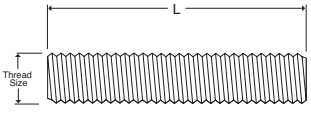
Coupling Dowels

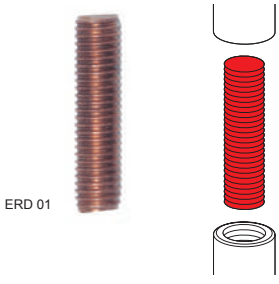
The phosphor bronze coupling dowel is used for joining solid copper earth rods together.

Thread Size	L mm	Unit Weight kg	Pack Quantity	Part Number
M10	40	0.02	25	ERD 01
M12	50	0.04		ERD 02

Material: Phosphor Bronze.

BS EN 62561-1 Class H



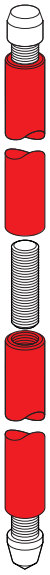

ERD 01

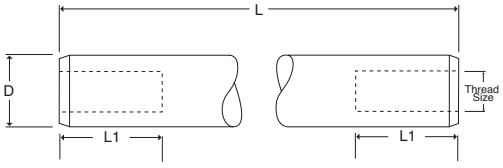
Tinned Solid Copper Earth Rods

The tinned solid copper earth rods are designed for use where extremely high corrosion resistance and exceptionally long life are required. Tinned solid copper earth rods are produced from solid copper bar and are internally threaded for jointing. When deep driving a tinned solid copper earth rod the usual practice is to insert the rod into a bore hole and backfill with either Low-Resistance Earthing Compound or Bentonite

Shank D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
15	1200	M10	20	1.88	5	ERC 112T
16	1500	M10	20	2.66	5	ERC 115T
	1800			3.20		ERC 118T
	2400			4.28		ERC 124T
	3000			5.36		ERC 130T
20	1200	M10	20	3.34	5	ERC 212T
	1500			4.18		ERC 215T
	1800			5.03		ERC 218T
	2400			6.71		ERC 224T
	2500			7.00		ERC 225T
	3000			8.40		ERC 230T
25	1000	M12	25	4.37	1	ERC 310T
	1200			5.23		ERC 312T
	1500			6.54		ERC 315T
	1800			7.86		ERC 318T
	2000			8.73		ERC 320T
	2400			10.50		ERC 324T
	2500			10.90		ERC 325T
	3000			13.10		ERC 330T
	3600			15.90		ERC 336T

Material: Copper to BS EN 13601.



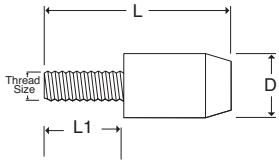


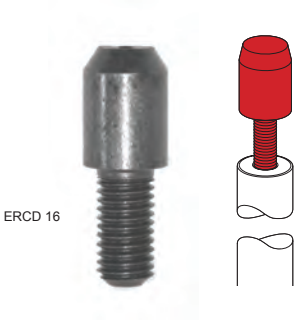
Driving Heads

The driving head protects the internal thread and the top of the tinned solid copper earth rods from damage when being driven into the ground.

D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
16	38	M10	20	0.03	25	ERCD 16
20	41	M10	20	0.06		ERCD 20
25	45	M12	25	0.10		ERCD 25

Material: Steel.



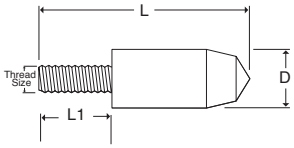

ERCD 16

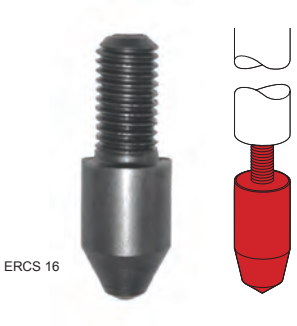
Driving Spikes

These driving spikes enable tinned solid copper earth rods to be driven easily into the ground.

D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
16	42	M10	20	0.03	25	ERCS 16
20	51	M10	20	0.06		ERCS 20
25	60	M12	25	0.10		ERCS 25

Material: Steel.




ERCS 16

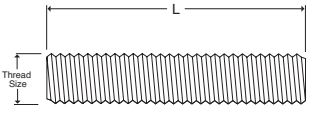
Coupling Dowels

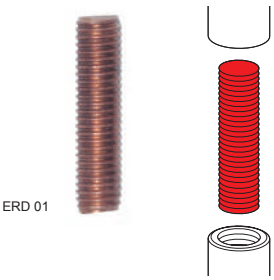
The phosphor bronze coupling dowel is used for joining tinned solid copper earth rods together.

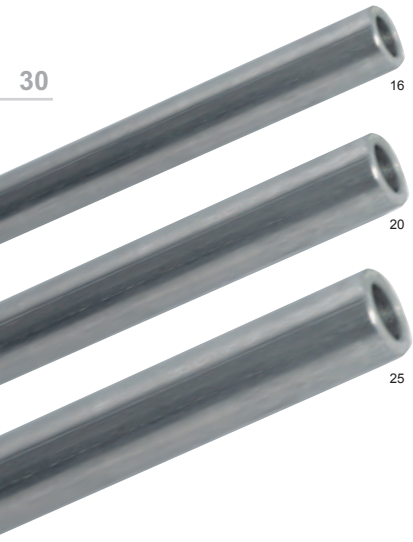
Thread Size	L mm	Unit Weight kg	Pack Quantity	Part Number
M10	40	0.02	25	ERD 01
M12	50	0.04		ERD 02

Material: Phosphor Bronze

BS EN 62561-1 Class H




ERD 01



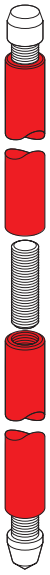
Stainless Steel Earth Rods

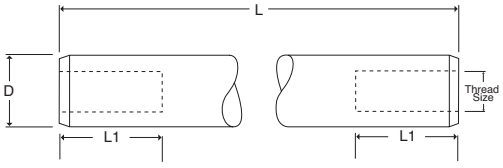
These earth rods are designed for use where problems may be caused by galvanic corrosion due to dissimilar metals being buried in close proximity. These earth rods are manufactured from Stainless Steel grade SS316 and are internally threaded for jointing, these earth rods are also highly resistant to corrosion

Shank D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
16	1200	M10	20	1.87	5	ERZ 112
	1500			2.35		ERZ 115
	1800			2.83		ERZ 118
	2400			3.74		ERZ 124
	3000			4.75		ERZ 130
20	1200	M10	20	2.95	5	ERZ 212
	1500			3.79		ERZ 215
	1800			4.46		ERZ 218
	2400			6.10		ERZ 224
	3000			7.57		ERZ 230
25	1200	M12	25	4.64	1	ERZ 312
	1500			5.81		ERZ 315
	1800			6.99		ERZ 318
	2400			9.34		ERZ 324
	3000			11.69		ERZ 330

Material: Stainless Steel to BS EN 10088.

TESTED **BS EN 62561-2**



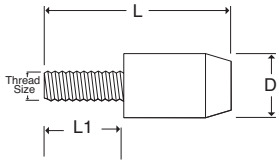


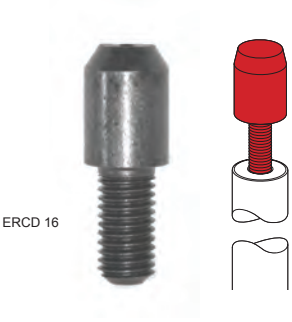
Driving Heads

The driving head protects the internal thread and the top of the stainless steel earth rod from damage when being driven into the ground.

D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
16	38	M10	20	0.03	25	ERCD 16
20	41	M10	20	0.06		ERCD 20
25	45	M12	25	0.10		ERCD 25

Material: Steel.



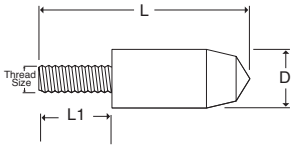

ERCD 16

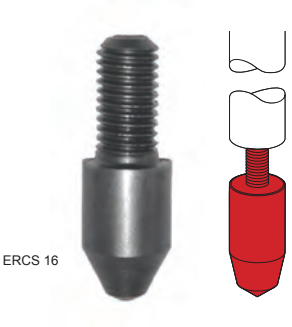
Driving Spikes

These driving spikes enable stainless steel earth rods to be driven easily into the ground.

D mm	L mm	Thread Size	L1 mm	Unit Weight kg	Pack Quantity	Part Number
16	42	M10	20	0.03	25	ERCS 16
20	51	M10	20	0.06		ERCS 20
25	60	M12	25	0.10		ERCS 25

Material: Steel.



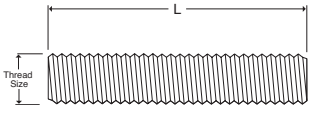

ERCS 16

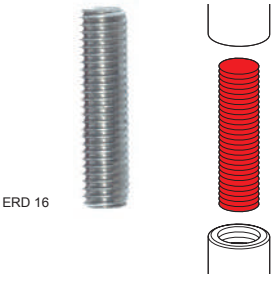
Coupling Dowels

The stainless steel coupling dowel is used for joining stainless steel earth rods together.

Thread Size	L mm	Unit Weight kg	Pack Quantity	Part Number
M10	40	0.02	25	ERD 16
M12	50	0.04		ERD 25

Material: Stainless Steel.




ERD 16

Galvanised Steel Earth Rod Set

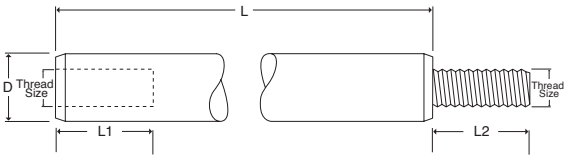
This galvanised steel earth rod has a male thread at the top and a female thread at the bottom enabling rods to be joined together.

After machining, the rod is hot-dip galvanised with a coating of zinc not less than 610 g/m2.

The rod is supplied as a standard set complete with toughened steel driving head, hardened steel driving spike and galvanised steel wire rope grip.

Nominal Size	L mm	Thread Size (BSF)	D mm	L1 mm	L2 mm	Unit Weight kg	Pack Quantity	Part Number
$^{5}/_{8}$"	1200	$^{3}/_{8}$"	16.5 - 17.0	30	25	2.10	5	**ERG 112**

Material: Mild Steel galvanised to BS EN ISO 1461.

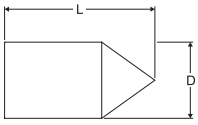


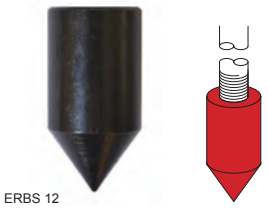
Overspike

These overspikes are compatible with Wallis copperbond earth rods (page 26) and are used when ground conditions are tough and when more assistance is required to drive the copperbond earth rod. An internal thread allows the overspike to easily connect to the earth rod.

Type	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
1/2"	50	19	0.05	25	ERBS 12
5/8"	47	24	0.07		ERBS 16
3/4"	47	24	0.07		ERBS 20

Material: Steel.





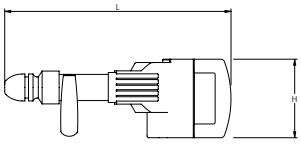
ERBS 12

Earth Rod Driver

The ID110 is the ideal tool for earth rod driving where unfavourable ground conditions exist. With a rated power input of 1,700 W and a maximum impact energy of 23 J this item will help reduce earthing system installation times.

This item comes with an SDS Max bit holder and is compatible with the A. N. Wallis Heavy Duty Stainless Steel Earth Rod Driver attachment.

Rated Power Input W	Maximum Impact Energy J	Impact Rate at Rated Speed bpm	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
1,700	23	900 - 1,700	680	236	11.40	1	ID 110



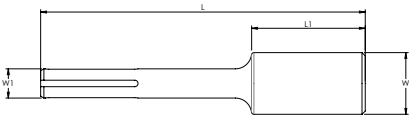
Heavy Duty (SDS Max) Stainless Steel Rod Driver Attachment

The A. N. Wallis heavy duty stainless steel earth rod driver attachment is suitable for both 5/8" and 3/4" Copperbond rods and up to 25mm solid copper / stainless steel rods.

Type	L mm	L1 mm	W mm	W1 mm	Unit Weight kg	Pack Quantity	Part Number
5/8"	205	70	38	18	0.65	1	ERD 058

Material: Stainless Steel


ERD 058



ERA 1625

ERA 2525

ERA 1631

ERA 1650

Earth Rod to Tape 'A' Clamps

These clamps are used for joining earth rods to different sizes of copper tape. The clamps have a high resistance to corrosion and are mechanically strong to ensure a lasting connection.

Earth Rod Shank Ø mm	Maximum Tape Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
12.7	26 x 15	43	36	19	0.12	50	ERA 1625
	32 x 15	42	44	18	0.13	25	ERA 1631
	39 x 15	46	52	23	0.20	25	ERA 1638
14.2	26 x 14	43	36	19	0.12	50	ERA 1625
	32 x 14	42	44	18	0.13	25	ERA 1631
	39 x 14	46	52	23	0.20	25	ERA 1638
	51 x 16	48	63	20	0.20	25	ERA 1650
15.0	26 x 13	43	36	19	0.12	50	ERA 1625
	32 x 13	42	44	18	0.13	25	ERA 1631
	39 x 13	46	52	23	0.20	25	ERA 1638
	51 x 15	48	63	20	0.20	25	ERA 1650
16.0	26 x 12	43	36	19	0.12	50	ERA 1625
	32 x 12	42	44	18	0.13	25	ERA 1631
	39 x 12	46	52	23	0.20	25	ERA 1638
	51 x 14	48	63	20	0.20	25	ERA 1650
17.2	26 x 11	43	36	19	0.12	50	ERA 1625
	32 x 11	42	44	18	0.13	25	ERA 1631
	39 x 11	46	52	23	0.20	25	ERA 1638
	51 x 13	48	63	20	0.20	25	ERA 1650
	26 x 18	54	38	22	0.17	10	ERA 2525
20.0	26 x 8	43	36	19	0.12	50	ERA 1625
	32 x 8	42	44	18	0.13	25	ERA 1631
	39 x 8	46	52	23	0.20	25	ERA 1638
	51 x 10	48	63	20	0.20	25	ERA 1650
	26 x 16	54	38	22	0.17	10	ERA 2525
25.0	26 x 11	54	38	22	0.17	10	ERA 2525

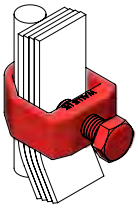
Material: Aluminium Bronze with M10 x 25mm Phosphor Bronze Set Screw.
*The ERA 1625 comes with a Stainless Steel Grade 316 Set Screw.

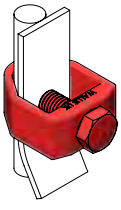
ERA 1625A

The aluminium version is mainly used for connecting aluminium tape to a puddle flange rod as part of a lightning protection system.

Earth Rod Shank Ø mm	Maximum Tape Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
16.0	26 x 12	45	37	19	0.06	25	ERA 1625A

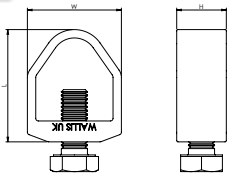
Material: Aluminium with M10 x 25mm Stainless Steel Set Screw.





TESTED **BS EN 62561-1 Class H**

Tightening Torque 20 Nm



Earth Rod to Cable ‘G’ Clamps

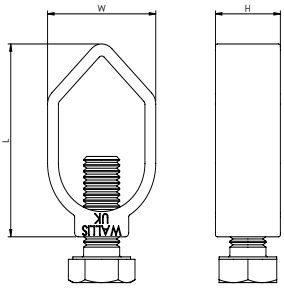
These clamps are used for joining earth rods to different sizes of stranded copper conductor. The clamps have a high resistance to corrosion and are mechanically strong to ensure a lasting connection.

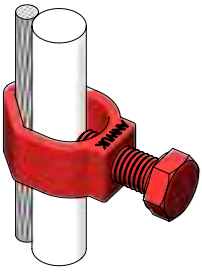
Earth Rod Shank Ø mm	Conductor Range mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
9.5	6 - 35	30	20	15	0.05	25	**ERR 1035**
12.7	6 - 35	36	28	18	0.07	25	**ERR 1635**
	35 - 70	41	26	20	0.08	50	**ERR 1670***
14.2	6 - 16	36	28	18	0.07	25	**ERR 1635**
	16 - 70	41	26	20	0.08	50	**ERR 1670***
	35 - 150	48	30	18	0.09	50	**ERR 2095***
15.0	6 - 16	36	28	18	0.07	25	**ERR 1635**
	16 - 70	41	26	20	0.08	50	**ERR 1670***
	25 - 150	48	30	18	0.09	50	**ERR 2095***
16.0	6 - 70	41	26	20	0.08	50	**ERR 1670***
	16 - 150	48	30	18	0.09	50	**ERR 2095***
17.2	6 - 95	48	30	18	0.09	50	**ERR 2095***
20.0	16 - 95	48	30	18	0.09	50	**ERR 2095***

Material: High Copper Alloy with M10 x 25mm Phosphor Bronze Set Screw
* Suitable for use with 8mm Ø solid circular copper conductor.

BS EN 62561-1 Class H

Tightening Torque 12 Nm; ERR1635 13 Nm; ERR2095 20 Nm





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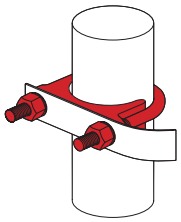
‘U’ Bolt Clamps

This versatile range of Wallis ‘U’ bolt clamps can be used to connect flat tapes and stranded cables to earth rods, reinforcing bars (rebar), hand rails etc.



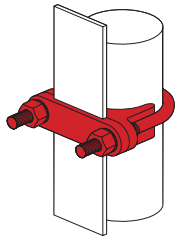
ERU 025

Single Plate Type for Horizontal Flat Tapes

Used to connect flat tapes in a horizontal position on the rod.

Maximum Rod Ø mm	Hole Centres mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
16	30	58	62	33	0.17	20	ERU 016
25	37	72	62	33	0.19	20	ERU 025
31	41	82	68	33	0.25	10	ERU 031
38	46	90	75	33	0.29	10	ERU 038
50	63	95	90	33	0.39	5	ERU 050

Material: High Copper Alloy plate with M10 threaded Copper ‘U’ Bolt.



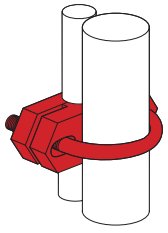
ERU 216

Double Plate Type for Vertical Flat Tapes

Used to connect flat tapes in a vertical position on the rod.

Maximum Rod Ø mm	Tape Width mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
16	25	58	62	33	0.23	20	ERU 216
25		73	60	33	0.23	10	ERU 225
31		85	68	33	0.32	10	ERU 231
38		80	75	33	0.34	10	ERU 238
50		103	90	33	0.53	5	ERU 250

Material: High Copper Alloy plates with M10 threaded Copper ‘U’ Bolt.



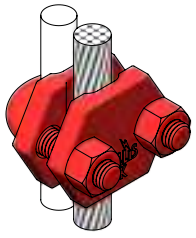
ERU 470

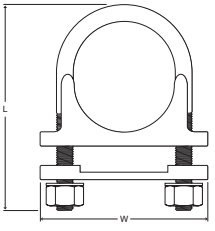
Double Plate Type for Vertical Stranded Cables

Used to connect stranded cables in a vertical and horizontal position on the rod.

Maximum Rod Ø mm	Conductor Range mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
16	16 - 150	57	52	40	0.21	20	ERU 470
	150 - 300	69	70		0.30	10	ERU 570
20	16 - 70	57	52	40	0.21	20	ERU 470
	70 - 300	69	70		0.30	10	ERU 570
25	16 - 70	75	87	55	0.52	5	ERU 670
	185 - 300	89	70		0.46	7	ERU 770

Material: High Copper Alloy plates with M10 threaded Copper ‘U’ Bolt.
The ERU470 has an M8 threaded Copper ‘U’ bolt.





BS EN 62561-1 Class H

Tightening torque 20 Nm; ERU470 13 Nm; ERU770 12 Nm

Split Connector Clamps

Split connector clamps are used to connect cable lugs onto earth rods. The clamps are designed to suit our full range of earth rods. All clamps are assembled with an M12 x 50mm set screw and fittings, except ERS010 which has an M8 x 40mm set screw and fittings. ERC24 also has a wing nut.

For use with Copperbond Earth Rods (on rod thread)

Nominal Rod Size	Thread Size (UNC-2A)	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
5/8"	5/8"	42	24	26	0.21	10	ERS 016
3/4"	3/4"	51	31	30	0.34		ERS 020

Material: High Copper Alloy.

ERS 016

For use with Copperbond Earth Rods (on rod shank)

Rod Shank Ø mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
9.5	26	16	20	0.07	10	ERS 010
14.2	42	25	25	0.26		ERC 24

Material: High Copper Alloy.

ERC 24

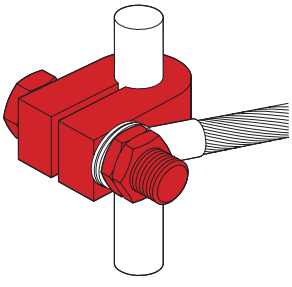
For use with Solid Copper & Stainless Steel Earth Rods (on rod shank)

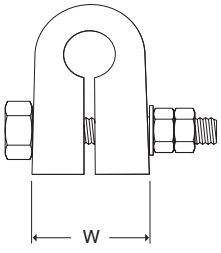
Rod Shank Ø mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
15	42	26	25	0.21	10	ERC 26
16	42	25	26	0.21		ERSS 16
20	54	29	29	0.23		ERSS 20

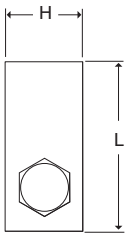
Material: High Copper Alloy.

ERSS 20

BS EN 62561-1 Class H





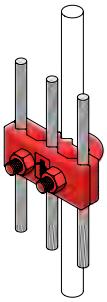


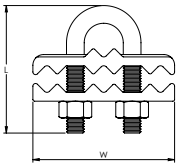
‘U’ Bolt Clamp

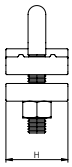
This unique specially designed ‘U’ bolt clamp is used to connect 1, 2 or 3 stranded cables to the earth rod. The “V” seat of the clamp pushes the earth rod to self-centre itself, which eliminates any movement in the fitting.
The clamp is designed for earth rods between 16-20mm diameter and will accept stranded conductors ranging from 70sqmm to 150sqmm.

Maximum Rod Ø mm	Conductor Size mm^2	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
16 - 20	70 - 150 x 3	72	80	35	0.40	10	**ERU 370**

Material: High Copper Alloy.







Universal Beam Clamp

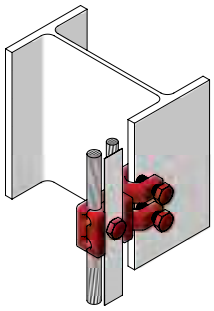
This Universal Beam Clamp is a unique product as it is designed to bond 25x3mm copper tape, 50sqmm and 70sqmm stranded cable as well as 8mm solid circular conductor to steel beams and RSJ’s of up to15mm thick.

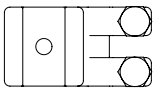
No other product on the market offers this range of alternatives when bonding to steel beams and RSJ’s.

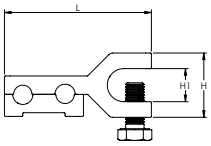
Its robust design allows multiple connections without compromise to the strength or quality

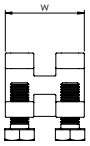
Conductor Range mm^2	Conductor Size mm	L mm	W mm	H mm	H1 mm	Unit Weight kg	Pack Quantity	Part Number
50 - 70	25 x 3	80	43	35	18	0.39	8	**UBC 001**

Material: High Copper Alloy with Stainless Steel Bolts.









Multi-Purpose Rod to Cable & Tape Clamp

The GTI254 has been specifically designed to accommodate copper tape, stranded copper and copperbonded earth rods and is primarily used on High Voltage applications.

Rather than use the standard U bolt concept, the GTI254 uses a variant that allows the earth rod to self-centre in the clamp assembly, which reduces the amount of movement in the fitting.

With the inclusion of slots in the back plate on both plates, customers have the ability to install the tape either horizontally or vertically without the need to punch the tape to accept the fixing bolts.

The concept of the GTI254 is to simplify the connection by reducing the number of components required, therefore reducing the time needed to install the equipment.

The design of this unique item has been registered with the UK IPO office under number 4 043 590.

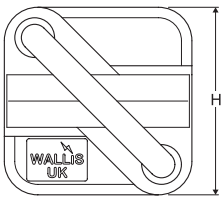
Maximum Rod Ø mm	Conductor Range mm²	Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
5/8"	6 - 185	25 x 4	72	83	66	0.55	5	GTI 254

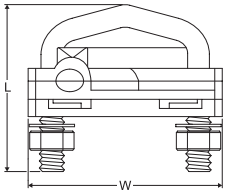
Material: High Copper Alloy plates with M10 threaded Copper 'U' Bolt.

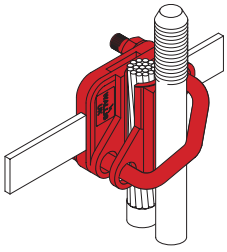
BS EN 62561-1 Class H

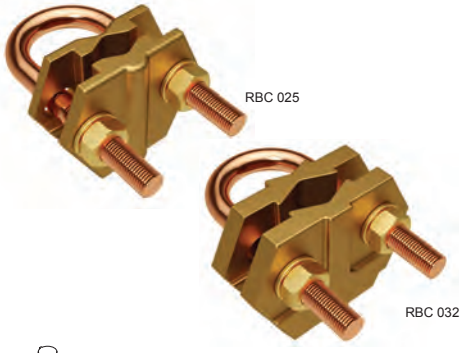
Tightening torque 20 Nm

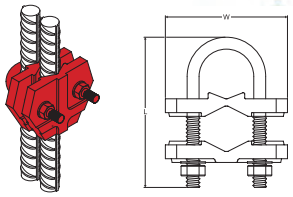
Registered Design No 4 043 590











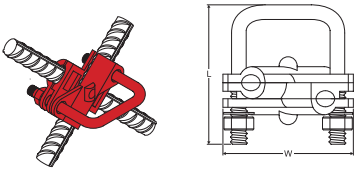
Rebar Clamps

This versatile range of Wallis Rebar clamps are used to connect rebar to rebar or rebar to stranded cable.They provide a strong mechanical connection along with excellent resistance to corrosion.

Maximum Rebar Ø mm	Rebar Range Ø mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
10	6 - 10	59	60	0.21	5	**RBC 010**
20	12 - 20	83	62	0.36	5	**RBC 020**
25	20 - 25	100	67	0.42	5	**RBC 025**
32	25 - 32	101	80	0.60	5	**RBC 032**
40	32 - 40	118	95	0.70	5	**RBC 040**

Material: High Copper Alloy plates with Copper 'U' Bolt.

BS EN 62561-1 Class H **Tightening torque 20 Nm**

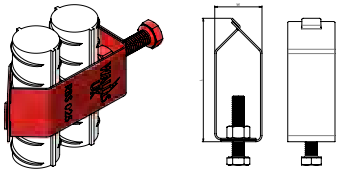


Rebar X Clamp

A heavy duty rebar clamp designed specifically to connect a vertical rebar to a horizontal rebar in a cross configuration. This product provides a strong mechanical connection along with excellent resistance to corrosion.

Maximum Rebar Ø mm	Rebar Range Ø mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
25	12 - 25	91	75	0.52	5	**RBX 025**

Material: High Copper Alloy Plates with Stainless Steel 'C' Bolt.



Stainless Steel Rebar Clamps

This versatile range of Wallis Rebar clamps are used to connect rebar to rebar or rebar to conductor.
They provide a strong mechanical connection along with excellent resistance to corrosion. These items are made from stainless steel and are simple to install.

Maximum Rebar Ø mm	Rebar Range Ø mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
12	8 - 12	50	22	0.05	10	**RBS 012**
16	16 - 16	59	22	0.05	10	**RBS 016**
20	20 - 20	68	26	0.06	10	**RBS 020**
25	25 - 25	81	31	0.07	10	**RBS 025**
32	32 - 32	98	39	0.07	10	**RBS 032**
40	40 - 40	120	48	0.08	10	**RBS 040**

Material: Stainless Steel.

Pipe Clamps

These heavy duty pipe clamps are ideal for bonding and connecting cable conductor to large diameter pipework's. They are suitable for use with copper, steel or stainless steel pipes.

Available in aluminium on request.

Pipe Diameter	Conductor Range mm^2	Unit Weight kg	Part Number
½" - 1" (13 - 25mm)	25 - 95	0.03	**PCL 025**
1 ¼" - 2" (32 - 50mm)	25 - 95	0.04	**PCL 050**
2 ½" - 3 ½" (65 - 90mm)	25 - 95	0.08	**PCL 090**
4" - 5" (100 - 125mm)	25 - 95	0.06	**PCL125**
6" (150mm)	25 - 95	0.08	**PCL 150**
8" (200mm)	25 - 95	0.10	**PCL 200**
10" (250mm)	25 - 95	0.11	**PCL 250**
12" (300mm)	25 - 95	0.15	**PCL 300**

Material: Tinned Bronze

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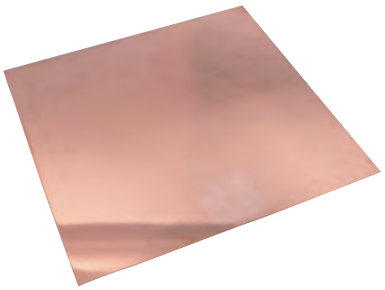


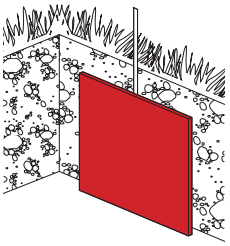
Solid Copper Earth Plates

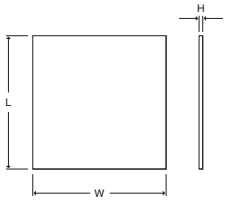
Solid copper plates provide a long lasting earthing solution in places where driving earth rods might be impractical. They are often installed in conjunction with Low-Resistance Earthing Compound or Bentonite.

L x W mm	H mm	Surface Area m^2	Unit Weight kg	Pack Quantity	Part Number
600 x 600	1.5	0.73	4.80	1	EMP 601
	3.0		9.60		EMP 603
900 x 900	1.5	1.63	10.80	1	EMP 901
	3.0		21.60		EMP 903
1000 x 500	5.0	1.02		1	EMP 10005005

Material: Copper to BS EN 1652:1998.

BS EN 62561-2





Solid Copper Lattice Mats

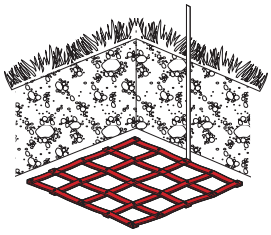
Solid copper lattice mats offer a more economical cost option to installing solid copper plates.

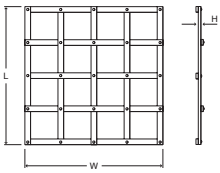
They are often used for potential grading and are a preferred option on installations such as telecommunication towers, where touch and step potential could cause problems.

L x W mm	H mm	Surface Area m^2	Grid	Unit Weight kg	Pack Quantity	Part Number
600 x 600	3.0	0.31	5 Bar	4.00	1	EML 603
900 x 900	3.0	0.65	6 Bar	7.20	1	EML 903
		0.46	6 Bar	6.10		EML 903 SPC

Material: Copper to BS EN 13601 (formerly BS 1432).

BS EN 62561-2





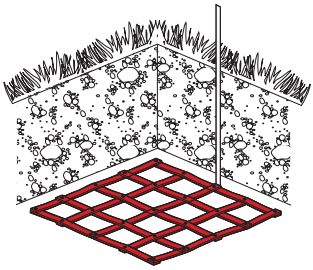
Stainless Steel Lattice Mats

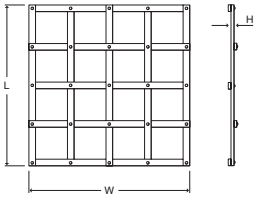
Stainless Steel Lattice Mats, manufactured from Stainless Steel 316 Grade, are used in areas where a high corrosive environment is present.

They are often used for potential grading and are a preferred option on installations such as telecommunication towers, where touch and step potential could cause problems.

L x W mm	H mm	Surface Area m^2	Grid	Unit Weight kg	Pack Quantity	Part Number
600 x 600	3.0	0.31	5 Bar	6.10	1	EML 603SS
		0.55	10 Bar	-		EML 603SS/10
900 x 900	3.0	0.65	6 Bar	7.30	1	EML 903SS
		0.89	10 Bar	-		EML 903SS/10
900 x 900	5.0	0.56	6 Bar	-	1	EML 905SS

Material: Stainless Steel to SS316 Grade and SS316 Rivets.





Low Res

Wallis ***Low Res*** provides a permanent simple solution to substantially lower the resistance of an earthing system.

It is a high performance low-resistance earthing compound which when mixed with cement and water forms a high strength electrically conductive concrete to last for the life of the system.

Low Res is supplied in a fine granular form available in 25kg bags. It is widely used in earthing and grounding applications where permanent low resistance and high compressive strength solutions are required.

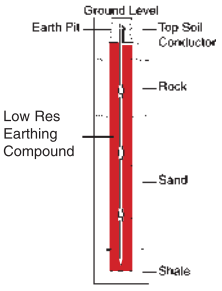
By mixing ***Low Res*** with cement at a ratio of 2:1 the resulting concrete is electrically conductive whilst offering a solid electrical connection between the earthing system and the ground.

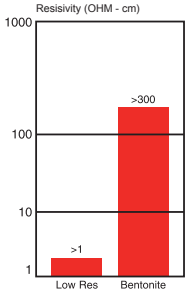
To use ***Low Res*** without concrete simply mix with water into a slurry for holes or a firm mix for trenches.

Low Res is a non leaching, maintenance free stable earthing compound ideal for use in ground conditions where conductivity is very poor such as rock or shale. ***Low Res*** provides a permanent path for excellent conduction of current instead of attempting to employ large diameter difficult to drive earth rods.

Low Res applications include static control for aircraft aprons and fuel tankers, RF and microwave screening and earthing for a wide variety of applications in Oil and Gas installations, Telecommunications industry, Defence Establishments, Rail and Underground installations, Electricity and Water Companies.

Low Res is the permanent effective and simple solution.





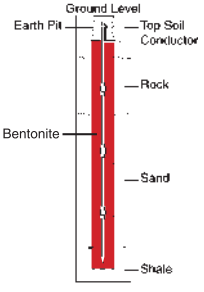
Type	Unit Weight kg	Pack Quantity	Part Number
Low Res Earthing Compound Only	25	1 Bag	EMA 25
Low Res Earthing Compound Pre Mixed with Cement	25		EMA 26

BS EN 62561-7

Bentonite

Bentonite is a moisture retaining clay used as an earth electrode back-fill to help lower soil resistivity. The clay is a sodium activated montmorillonite, which when mixed with water swells to many times its original dry volume.While there is no specific mixing ratio, we recommend gradually adding Wallis Bentonite to water in a mixing vessel, agitate to evenly disperse the Bentonite and continue mixing until there is a workable slurry that suits the site, hole or trench.

Bentonite can be supplied in granular or powder form. The granular form is easier to handle as the powder can cause dust in windy conditions. Granular is the preferred option for filling trenches as the substance can be mixed in the trench. Powder is the preferred option for pouring into bore holes to ensure the mixture is a thin enough consistency to reach the bottom of the hole.

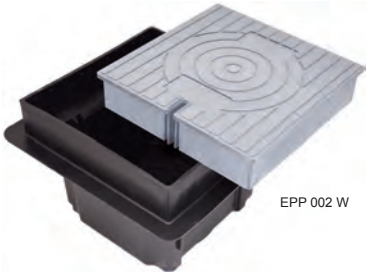


Type	Unit Weight kg	Pack Quantity	Part Number
Bentonite Granular Form	25	1 Bag	EBG 25
Bentonite Powder Form			EBG 25P

Heavy Duty Earth Inspection Housings

The Wallis 'lightweight' (3kg) but heavy duty earth housing has the best safe working load performance in the industry. It has been designed, shaped and sized to fit easily into brick paved walkways. The lip of the base makes a flush fit with standard-sized bricks, making the housing blend in without the need for a cement surround. The housing will withstand loads of up to 6,000 kgs and is suitable for most commercial and industrial applications. The lid locks into the base and can be opened with a standard flat screwdriver. The base has three built in slots for locating earth bars.

EPP 001 W

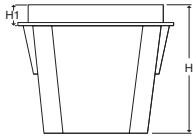


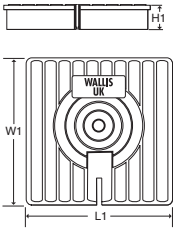
EPP 002 W

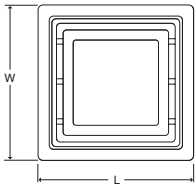
Lid Colour	L x W mm	H mm	L1 x W1 mm	H1 mm	Unit Weight kg	Pack Quantity	Part Number
Black	306 x 306	216	260 x 260	55	3.0	1	EPP 001 W
Grey							EPP 002 W
Green							EPP 100 W
Terracotta							EPP 200 W

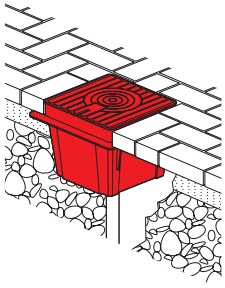
Material: Polypropylene base with GRP lid.

BS EN 62561-5



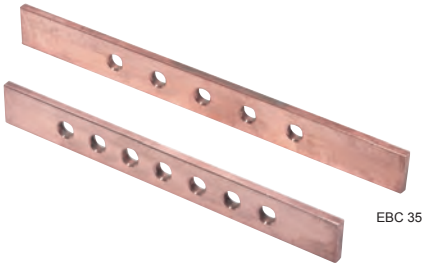






Inspection Housing Earth Bars (for Heavy Duty Earth Inspection Housings)

These earth bars fit into the slots provided in the heavy duty earth inspection housings and are used when multiple connections to the earth rod are required.



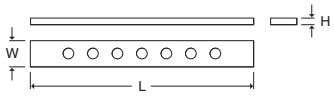
EBC 35

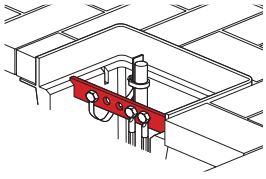
EBC 37

No. Holes	Hole Ø mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
5	11	203	25	6	0.24	1	EBC 35
7					0.22		EBC 37

Material: Copper to BS EN 13601.

BS EN 62561-1 Class H **Tightening torque 20 Nm**





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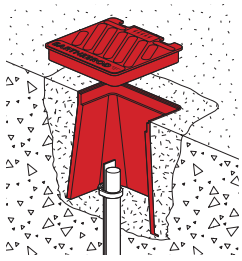
ERH 21

ERH 20



Light Duty Earth Inspection Housings

The Wallis light duty earth inspection housing has a maximum safe working load of 2,000 kilograms. It is UV stabilised against degradation by sunlight and non-brittle to prevent cold weather damage.

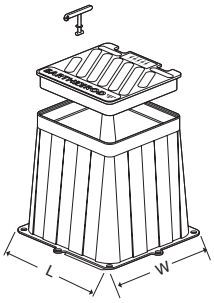
The unique, detachable easy-locking lid ensures security of equipment as the locking mechanism can only be operated by the special key provided with the housing. The base has built-in slots for locating earth bars.

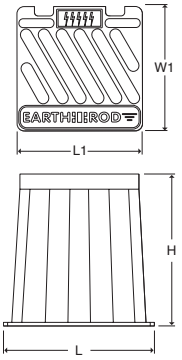
Its lightweight feature allows easy handling, storage and transportation. The termination depth is increased 100% by simply locking two units together, allowing deeper earth electrode connections to be made.

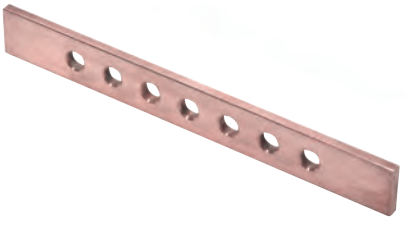
Lid Colour	L x W mm	H mm	L1 x W1 mm	Unit Weight kg	Pack Quantity	Part Number
Black	260	230	200	1.50	1	ERH 20
Grey						ERH 21

Material: Polypropylene.

TESTED **BS EN 62561-5**







EBC 27

Inspection Housing Earth Bars (for Light Duty Earth Inspection Housings)

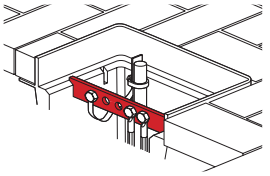
These earth bars fit into the slots provided in the light duty earth inspection housings and are used when multiple connections to the earth rod are required.

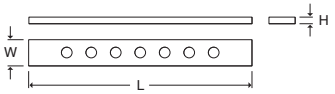
No. Holes	Hole Ø mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
5	11	250	30	6	0.42	1	EBC 25
7					0.39		EBC 27

Material: Copper to BS EN 13601.

TESTED **BS EN 62561-1 Class H**

Tightening torque 20 Nm





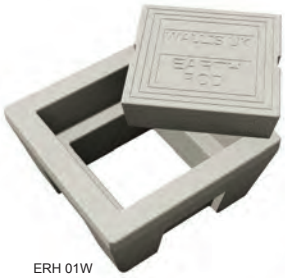
Concrete Earth Inspection Housing

The Wallis concrete inspection pits are load rated to 4,500kg and are suitable for most types of earthing and lightning protection installations.

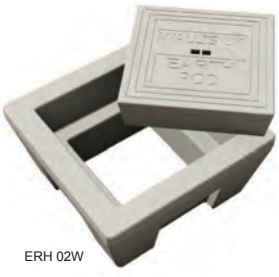
Lids are available in 2 types, one with a central lifting eye for industrial applications. The other with a unique plain lid non trip surface ideal for public and pedestrian areas, shopping arcades, supermarket forecourts, Mosques and cinemas where trip hazards are a potential problem.

The base is designed to accept a diagonal earth bar with 5 or 7 terminations (EBC05 and EBC07).

If an alternative high load inspection pit is required the Heavy Duty Inspection Pit (EPP001W) is recommended. Ideal for areas where high loads or small wheel vehicles are used, rated up to 6,000kg, lockable and available in black or grey.



ERH 01W

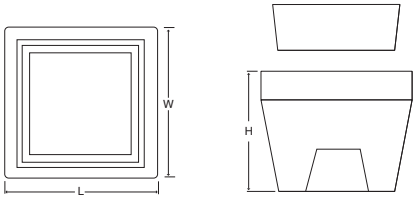


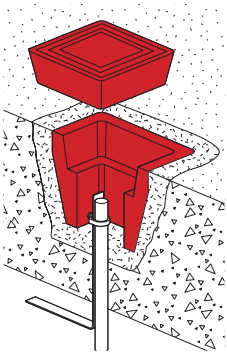
ERH 02W

Lid Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Non Trip Plain Lid	315	315	160	24	1	ERH 01W
Central Lifting Eye						ERH 02W
Central Lifting Eye	315	315	185	26		ERH 07W
Non Trip Plain Lid	450	450	450	72		ERH 450

Material: Concrete.

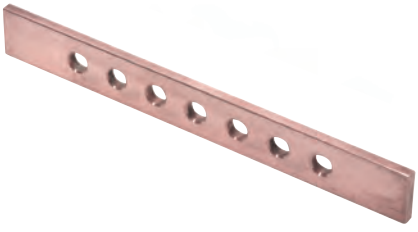
BS EN 62561-5





Inspection Housing Earth Bars (for Concrete Earth Inspection Housings)

These earth bars fit into the slots provided in the concrete inspection housings and are used when multiple connections to the earth rod are required.

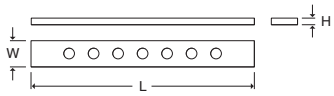


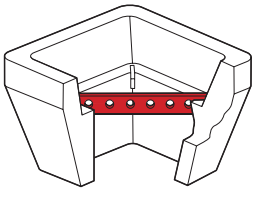
EBC 07

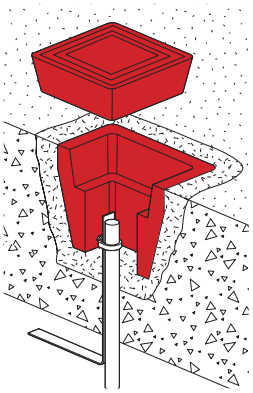
No. Holes	Hole Ø mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
5	11	285	30	6	0.49	1	EBC 05
7					0.50		EBC 07

Material: Copper to BS EN 13601.

BS EN 62561-1 Class H **Tightening torque 20 Nm**







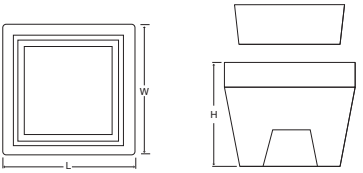
Concrete Earth Inspection Housing with Stainless Steel Plate

This Wallis concrete earth inspection housing also comes complete with a Stainless Steel tag or identification label. These Wallis concrete pits are becoming increasingly common and are used on large sites where pit location and identification is important. Wallis have supplied these concrete pits to Shell petrochemical plants in Nigeria, water authorities in UAE as well as rail authorities in the UK and are bespoke to the client's needs. We offer various numbering, various wording and various languages including Arabic.

The base is deigned to accept a diagonal earth bar with 5 or 7 terminations (EBC05 and EBC07).

Lid Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Non Trip Plain Lid	315	315	160	24	1	**ERH 03W**

Material: Concrete.

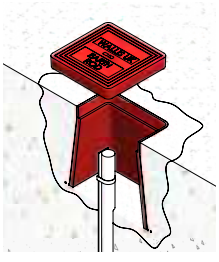


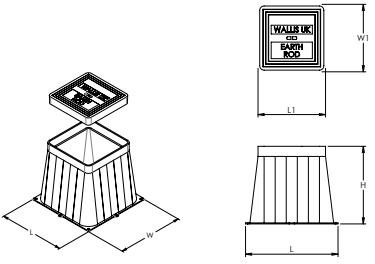
Heavy Duty Earth Inspection Housing with Concrete Lid

The Wallis 'lightweight' but heavy duty earth housing is available with a concrete lid. Clients often prefer the convenience of the lightweight pit for transportation, freight and handling along with the assurance of the colour of the concrete lid as the colour and texture of the concrete lid blends well with the surrounding cement. This hybrid pit is load rated to 4,500 kilograms and is suitable for most commercial and pedestrian applications. The base has three built-in slots for locating earth bars.

Lid Type	L x W mm	H mm	L1 x W1 mm	Unit Weight kg	Pack Quantity	Part Number
Central Lifting Eye	306	216	90 x 90	8.60	1	**ERH 10L**

Material: Polypropylene with a Concrete Lid.





Tower Earth Clamps

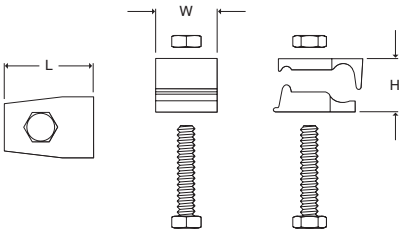
Tower earth clamps are used for bonding copper conductors onto steel surfaces.

The double-plate design provides a robust fixing in areas where cladding may be installed or where the complete clamp will be covered by concrete. The clamp is fixed by drilling a hole in the steelwork and securing with the set screw provided.

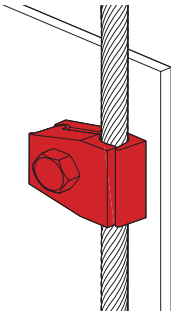
Conductor Range mm^2	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
16 - 70	45	30	17	M10 x 50mm	0.12	10	BTC 070
70 - 120	48	35	22	M12 x 60mm	0.23		BTC 120
120 - 185	55	40	28	M12 x 75mm	0.30		BTC 185
185 - 240	63	45	35	M12 x 80mm	0.40		BTC 240
240 - 300	70	53	42	M12 x 90mm	0.60		BTC 300

Material: High Copper Alloy.

BS EN 62561-1 Class H



BTC 070

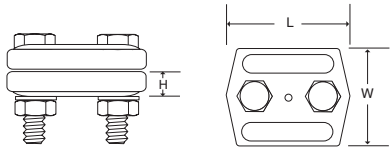


Parallel Groove Clamps

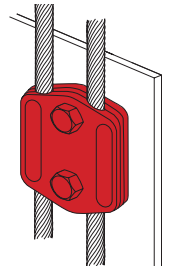
Wallis Parallel Groove Clamps, for stranded copper cable connections, are manufactured from high-strength, corrosion-resistant copper alloy and assembled with two stainless steel set screws.

Conductor Range mm^2	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
25 - 70	50	40	7	M8 x 35mm	0.38	10	PGC 070
70 - 95	54	45	8.5	M10 x 45mm	0.46		PGC 095
95 - 185	65	57	12.5	M10 x 55mm	0.55		PGC 185
185 - 240	78	71	14	M10 x 55mm	0.66		PGC 240
240 - 300	94	85	16	M10 x 60mm	0.78		PGC 300

Material: High Copper Alloy.



PGC 095



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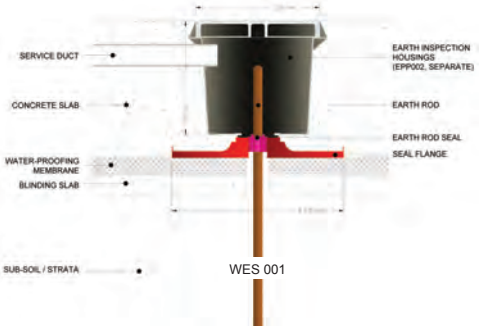
WES 001

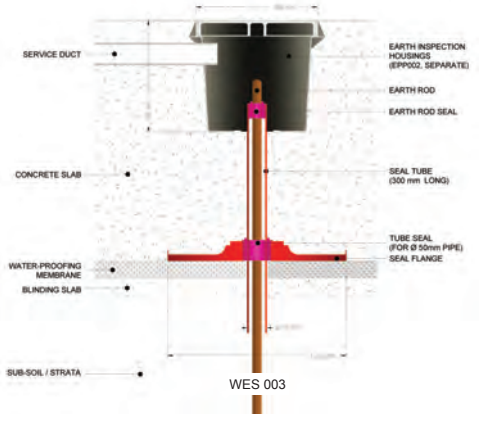
WES 002

WES 003

WES 004



WES 001



WES 003

Earth Rod Seals

The Wallis market leading range of earth rod seals are simply the best available in the industry offering 4 variations with very few components, extremely robust and simple to install.

Office blocks in modern cities are frequently adjoined therefore requiring earth rods to be located within the building footprint. In such cases earth rods are usually installed in the basement or underground car park, which requires the earth rod to pass through the buildings floor slab and water proof membrane. In such cases in order to prevent water ingression an earth rod seal is required around the earth rod. The Wallis earth rod seals are purpose designed to meet this need. They are extremely robust offering heavy duty sealing as well as being simple to install.

The Wallis earth rod seals offer superior features and benefits:

- Simple to install - Easy to align and no concerns with damaged O rings or leaks
- One seal fits all – One seal fits all diameters of earth rods and does not require complicated adaptor kits
- Extremely robust - Damage during installation is highly unlikely
- Very few components - With minimal components for each earth rod seal the risk of lost parts is effectively eliminated
- Very adaptable - Wallis earth rod seals give the designer/ installer the convenience of being able to use this product with:
  - A Wallis heavy duty plastic inspection pit
  - A Wallis concrete inspection pit
  - No inspection pit at all
  - Other seals in the industry are limited for use solely with plastic pits and have a large number of (easy to damage) small components.
- Can be used in concrete slabs of up to 3m thick (3m tube available on request)
- Complies with BS EN 62305-3 and BS EN 62561-5 (Requirements for earth electrode inspection housings and earth electrode seals)
- Sealing in all directions - The Wallis sealing component has the unique mechanical effect of sealing in all directions. It pushes out towards the body of the sealing unit and in towards the earth rod electrode giving maximum surface area contact
- No metallic parts - As the Wallis earth rod seals are supplied with no metallic parts this offers total corrosion resistance and prevents unwanted maintenance costs
- Compatible with all Wallis earth rods - The simple unique design allows the earth rod seal to be used on all rod types, solid copper, copperbonded and stainless steel as well as all rod sizes.
- Guarantee - We provide a warranty for this product for 36 months, no other product in the industry offers all of the above

Earth Rod Seals (Continued)

Type	Earth Rod Ø mm	Tube Length mm	Unit Weight kg	Pack Quantity	Part Number
Single Flange with gland nut	14.2	n/a	1.32	1	WES 001
Double Flange, both with gland nuts	15	n/a	2.61		WES 002
Single Flange with top seal and 300mm long pipe	16	300	1.58		WES 003
Single Flange with top seal and 1200mm long pipe	17.2	1200	2.27		WES 003/1200
Double Flange with gland nut and 1200mm long pipe	20	1200	2.82		WES 004/1200

*All seals suitable for use with 14.2, 15, 16, 17.2 and 20mm diameter earth rods.
*Tubes available in any length up to 3m long, please specify.

Material: Plastic

BS EN 62561-5

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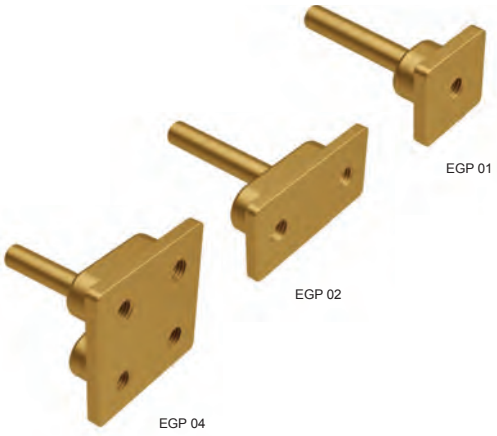


Earth Bonding Points

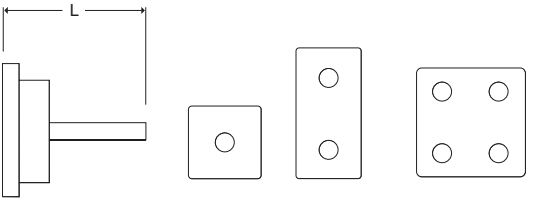
These Wallis earth bonding points are installed to provide a convenient earth system connection point in concrete structures. When cast into concrete they connect the re-bar to the earthing or lightning protection system.

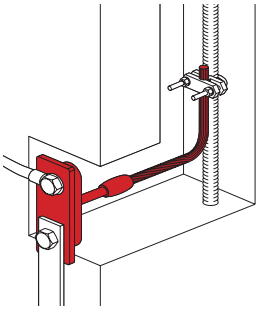
Earth Bonding Points only

No. Holes	Hole Size mm	Plate Size mm	Stem Ø mm	L mm	Unit Weight kg	Pack Quantity	Part Number
1	M10 x 18	38 x 38	10.7 (70mm²)	75	0.14	10	EGP 01
2		70 x 35			0.29		EGP 02
4		63 x 63			0.54		EGP 04
	M8 x 1.25	100 x 100		73			EGP 041

Material: High Copper Alloy.

BS EN 62561-1 Class H **Tightening torque 20 Nm**



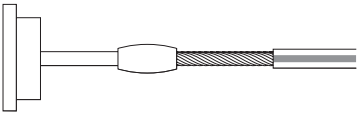


Earth Bonding Points with Pre-welded Tails

No. Holes	Type	Unit Weight kg	Pack Quantity	Part Number
1	EGP 01 with pre-welded 500mm long tail of 70mm² PVC insulated cable	0.64	1	EGP 01 500
2	EGP 02 with pre-welded 500mm long tail of 70mm² PVC insulated cable	0.77	1	EGP 02 500
	EGP 02 with pre-welded 1000mm long tail of 70mm² PVC insulated cable	1.14		EGP 02 1000
	EGP 02 with pre-welded 1500mm long tail of 70mm² PVC insulated cable	1.50		EGP 02 1500
4	EGP 04 with pre-welded 500mm long tail of 70mm² PVC insulated cable	1.02	1	EGP 04 500
	EGP 04 with pre-welded 1000mm long tail of 70mm² PVC insulated cable	1.39		EGP 04 1000
	EGP 04 with pre-welded 1500mm long tail of 70mm² PVC insulated cable	1.75		EGP 04 1500

Material: High Copper Alloy body with PVC insulated copper cable tail.

BS EN 62561-1 Class H **Tightening torque 20 Nm**



Earth Bonding Points with Double Pre-welded Tails

No. Holes	Type	Unit Weight kg	Pack Quantity	Part Number
1	EGP 01 with 2 x pre-welded 500mm long tails of 70mm² PVC insulated cable	0.93	1	**EGP 01 2**
2	EGP 02 with 2 x pre-welded 500mm long tails of 70mm² PVC insulated cable	1.08	1	**EGP 02 2**
	EGP 02 with 2 x pre-welded 1000mm long tails of 70mm² PVC insulated cable	1.81		**EGP 021 2**
	EGP 02 with 2 x pre-welded 1500mm long tails of 70mm² PVC insulated cable	2.54		**EGP 025 2**
4	EGP 04 with 2 x pre-welded 500mm long tails of 70mm² PVC insulated cable	1.33	1	**EGP 04 2**
	EGP 04 with 2 x pre-welded 1000mm long tails of 70mm² PVC insulated cable	2.06		**EGP 041 2**
	EGP 04 with 2 x pre-welded 1500mm long tails of 70mm² PVC insulated cable	2.79		**EGP 045 2**

Material: High Copper Alloy body with 2 x PVC insulated copper cable tails.

EGP 02 2

Earth Bonding Points with a Front Plate

Suitable for 25x3mm tape or 70mm2 cable.

No. Holes	Type	Unit Weight kg	Pack Quantity	Part Number
2	EGP 02 with a front plate	0.39	1	**EGP 02P**

Material: High Copper Alloy.

EGP 02P

Earth Bonding Points with a Pre-welded Tail & Front Plate

Suitable for 25x3mm tape or 70mm2 cable.

No. Holes	Type	Unit Weight kg	Pack Quantity	Part Number
1	EGP 02 500 with a front plate	0.90	1	**EGP 25P**
2	EGP 02 1000 with a front plate	1.27		**EGP 210P**
	EGP 02 1500 with a front plate	1.63		**EGP 215P**

Material: High Copper Alloy with PVC Insulated Copper Cable Tail.

EGP 25P

Earth Bonding Points with 2 x Pre-welded Tails & Front Plate

Suitable for 25x3mm tape or 70mm2 cable.

No. Holes	Type	Unit Weight kg	Pack Quantity	Part Number
	EGP 02 2 with a front plate	1.24	1	**EGP 252P**
2	EGP 021 2 with a front plate	1.97		**EGP 2102P**
	EGP 025 2 with a front plate	2.70		**EGP 2152P**

Material: High Copper Alloy with 2 x PVC Insulated Copper Cable Tails.

EGP 252P

EBC 006

Earth Bars

A. N. Wallis earth bars provide a convenient common earthing point for electrical installations. Our standard earth bars are manufactured from 50mm x 6mm hard drawn copper bar and come complete with M10 fittings and insulators. The PVC base makes our earth bars lighter and easier to handle as well as being entirely corrosion proof.

Special earth bars manufactured to customer requirements are also available.

Recommended fixing by countersunk wood screw 1 ½" x No. 12 and No. 12 wall plug.

Earth Bars

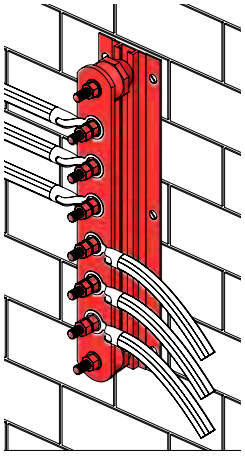
No Terminations	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2	200	90	60	1.00	1	EBC 002
3	250			1.22		EBC 003
4	300			1.45		EBC 004
6	400			2.00		EBC 006
8	500			2.30		EBC 008
9	600			2.75		EBC 009
10	650			3.20		EBC 010
12	750			4.00		EBC 012
14	850			4.90		EBC 014
16	950			5.80		EBC 016
18	1100			6.70		EBC 018
20	1250			7.60		EBC 020
22	1300			8.50		EBC 022
24	1400			9.40		EBC 024
26	1550			10.30		EBC 026
28	1650			11.20		EBC 028
30	1800			12.10		EBC 030

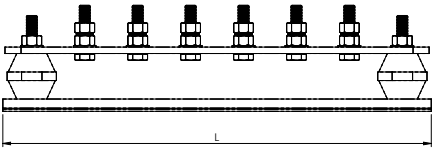
Material:
Bar: 50 x 6mm hard drawn copper bar to BS EN 13601.
Base: Plastic.
Fittings: M10 Hexagon Head Set Screws, Nuts & Washers..

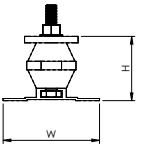
Standard: BS 7430

BS EN 62561-1 Class H

Tightening torque 20 Nm







Tinned Earth Bars

The A. N. Wallis tinned earth bars have been used on a variety of high-profile projects, this is partly due to the fact that our tinned earth bars offer excellent resistance to water corrosion, and subsequently provide enhanced conductivity. The tinning process means that copper bars are protected from oxidisation. Our tinned earth bars have a typical copper purity content in excess of 99.9%.

Special earth bars manufactured to customer requirements are also available.

Recommended fixing by countersunk wood screw 1 ½" x No. 12 and No. 12 wall plug.

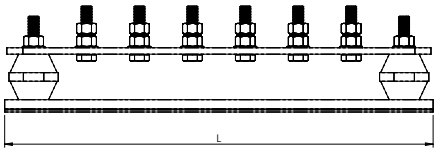
EBC 006T

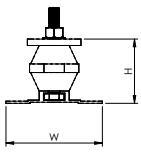
Tinned Earth Bars

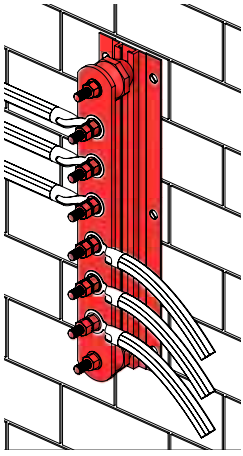
No Terminations	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2	200	90	60	1.00	1	EBC 002T
3	250			1.22		EBC 003T
4	300			1.45		EBC 004T
6	400			2.00		EBC 006T
8	500			2.30		EBC 008T
9	600			2.75		EBC 009T
10	650			3.20		EBC 010T
12	750			4.00		EBC 012T
14	850			4.90		EBC 014T
16	950			5.80		EBC 016T
18	1100			6.70		EBC 018T
20	1250			7.60		EBC 020T
22	1300			8.50		EBC 022T
24	1400			9.40		EBC 024T
26	1550			10.30		EBC 026T
28	1650			11.20		EBC 028T
30	1800			12.10		EBC 030T

Material:
Bar: 50 x 6mm tinned hard drawn copper bar to BS EN 13601
Base: Plastic.
Fittings: M10 Hexagon Head Set Screws, Nuts & Washers.

Standard: BS 7430







EBC 106

Earth Bars with Single Disconnecting Link

A. N. Wallis earth bars provide a convenient common earthing point for electrical installations. Our standard earth bars are manufactured from 50mm x 6mm hard drawn copper bar and come complete with M10 fittings and insulators. The PVC base makes our earth bars lighter and easier to handle as well as being entirely corrosion proof. All earth bars have a typical copper purity content in excess of 99.9%.

The A. N. Wallis single disconnecting link earth bars are mainly used to offer a temporary break in the connection to the earth, allowing the inspection and testing of multiple earth rods / systems while disconnected from the lightning and earth system.

Special earth bars manufactured to customer requirements are also available.

Recommended fixing by countersunk wood screw 1 ½" x No. 12 and No. 12 wall plug.

Earth Bars with Single Disconnecting Link

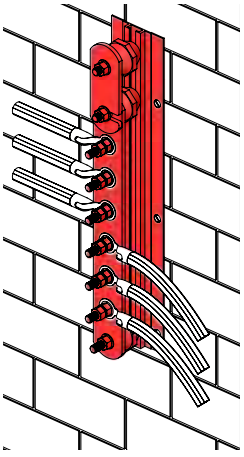
No Terminations	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2	285	90	60	1.55	1	EBC 102
3	330			1.77		EBC 103
4	375			2.00		EBC 104
6	475			2.50		EBC 106
8	575			3.00		EBC 108
9	685			3.45		EBC 109
10	725			3.90		EBC 110
12	825			4.70		EBC 112
14	925			5.60		EBC 114
16	1025			6.50		EBC 116
18	1175			7.40		EBC 118
20	1325			8.30		EBC 120
22	1375			9.20		EBC 122
24	1475			10.10		EBC 124
26	1625			11.00		EBC 126
28	1725			11.90		EBC 128
30	1875			12.80		EBC 130

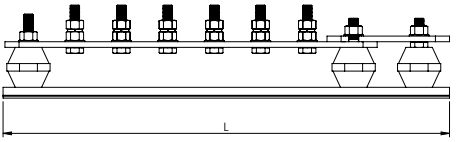
Material:
Bar: 50 x 6mm hard drawn copper bar to BS EN 13601.
Base: Plastic.
Fittings: M10 Hexagon Head Set Screws, Nuts & Washers.

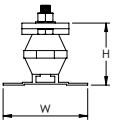
Standard: BS 7430

BS EN 62561-1 Class H

Tightening torque 20 Nm







Tinned Earth Bars with Single Disconnecting Link

The A. N. Wallis tinned earth bars have been used on a variety of high-profile projects, this is partly due to the fact that our tinned earth bars offer excellent resistance to water corrosion, and subsequently provide enhanced conductivity. The tinning process means that copper bars are protected from oxidisation. Our tinned earth bars have a typical copper purity content in excess of 99.9%.

The A. N. Wallis single disconnecting link tinned earth bars are mainly used to offer a temporary break in the connection to the earth, allowing the inspection and testing of multiple earth rods / systems while disconnected from the lightning and earth system.

Special earth bars manufactured to customer requirements are also available.

Recommended fixing by countersunk wood screw 1 ½" x No. 12 and No. 12 wall plug.

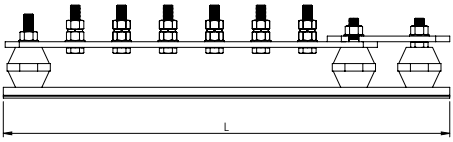
Tinned Earth Bars with Single Disconnecting Link

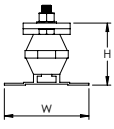
EBC 106T

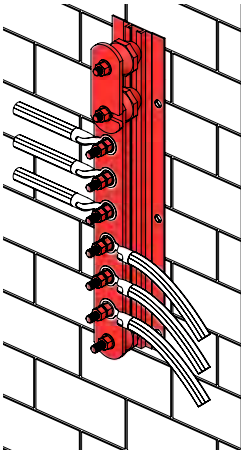
No Terminations	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2	285	90	60	1.55	1	EBC 102T
3	330			1.77		EBC 103T
4	375			2.00		EBC 104T
6	475			2.50		EBC 106T
8	575			3.00		EBC 108T
9	685			3.45		EBC 109T
10	725			3.90		EBC 110T
12	825			4.70		EBC 112T
14	925			5.60		EBC 114T
16	1025			6.50		EBC 116T
18	1175			7.40		EBC 118T
20	1325			8.30		EBC 120T
22	1375			9.20		EBC 122T
24	1475			10.10		EBC 124T
26	1625			11.00		EBC 126T
28	1725			11.90		EBC 128T
30	1875			12.80		EBC 130T

Material:
Bar: 50 x 6mm tinned hard drawn copper bar to BS EN 13601.
Base: Plastic.
Fittings: M10 Hexagon Head Set Screws, Nuts & Washers.

Standard: BS 7430







Earth Bars with Double Disconnecting Links

A. N. Wallis earth bars provide a convenient common earthing point for electrical installations. Our standard earth bars are manufactured from 50mm x 6mm hard drawn copper bar and come complete with M10 fittings and insulators. The PVC base makes our earth bars lighter and easier to handle as well as being entirely corrosion proof. All earth bars have a typical copper purity content in excess of 99.9%.

The A. N. Wallis double disconnecting link earth bars are mainly used to offer a temporary break in the connection to the earth, allowing the inspection and testing of multiple earth rods / systems while disconnected from the lightning and earth system.

Special earth bars manufactured to customer requirements are also available.

Recommended fixing by countersunk wood screw 1 ½" x No. 12 and No. 12 wall plug.

Earth Bars with Double Disconnecting Links

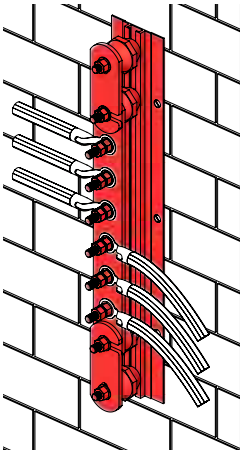
No Terminations	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2	350			2.10		EBC 202
3	400			2.32		EBC 203
4	450			2.55		EBC 204
6	550			3.10		EBC 206
8	650			3.70		EBC 208
9	725			4.10		EBC 209
10	800			4.50		EBC 210
12	900			5.30		EBC 212
14	1000	90	60	6.20	1	EBC 214
16	1100			7.10		EBC 216
18	1250			8.00		EBC 218
20	1400			8.90		EBC 220
22	1450			10.50		EBC 222
24	1550			10.70		EBC 224
26	1700			11.60		EBC 226
28	1800			12.50		EBC 228
30	1950			13.40		EBC 230

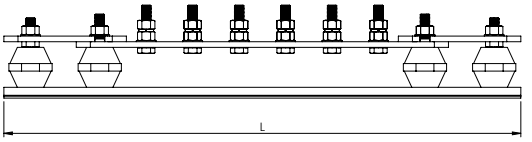
Material:
Bar: 50 x 6mm hard drawn copper bar to BS EN 13601.
Base: Plastic.
Fittings: M10 Hexagon Head Set Screws, Nuts & Washers.

Standard: BS 7430

BS EN 62561-1 Class H

Tightening torque 20 Nm





Tinned Earth Bars with Double Disconnecting Links

The A. N. Wallis tinned earth bars are used for a variety of high-profile projects, this is partly due to the fact that our tinned earth bars offer excellent resistance to water corrosion, and subsequently provide enhanced conductivity. The tinning process means that copper bars are protected from oxidisation. Our tinned earth bars have a typical copper purity content in excess of 99.9%.

The A. N. Wallis double disconnecting link tinned earth bars are mainly used to offer a temporary break in the connection to the earth, allowing the inspection and testing of multiple earth rods / systems while disconnected from the lightning and earth system.

Special earth bars manufactured to customer requirements are also available.

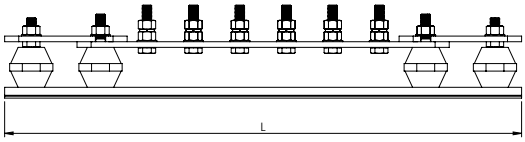
Recommended fixing by countersunk wood screw 1 ½" x No. 12 and No. 12 wall plug.

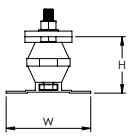
Tinned Earth Bars with Double Disconnecting Link

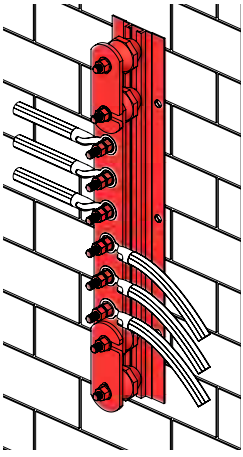
No Terminations	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2	350	90	60	2.10	1	EBC 202T
3	400			2.32		EBC 203T
4	450			2.55		EBC 204T
6	550			3.10		EBC 206T
8	650			3.70		EBC 208T
9	725			4.10		EBC 209T
10	800			4.50		EBC 210T
12	900			5.30		EBC 212T
14	1000			6.20		EBC 214T
16	1100			7.10		EBC 216T
18	1250			8.00		EBC 218T
20	1400			8.90		EBC 220T
22	1450			10.50		EBC 222T
24	1550			10.70		EBC 224T
26	1700			11.60		EBC 226T
28	1800			12.50		EBC 228T
30	1950			13.40		EBC 230T

Material:
Bar: 50 x 6mm tinned hard drawn copper bar to BS EN 13601.
Base: Plastic.
Fittings: M10 Hexagon Head Set Screws, Nuts & Washers.

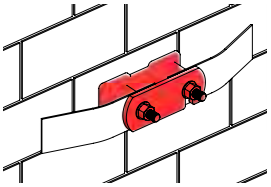
Standard: BS 7430








EBC 100



Disconnecting Link

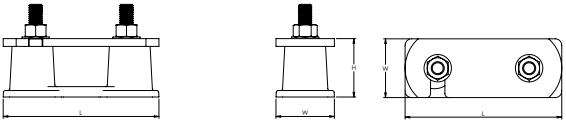
The disconnecting link provides a temporary break in the earth connection to allow inspection and testing of the earth electrode.

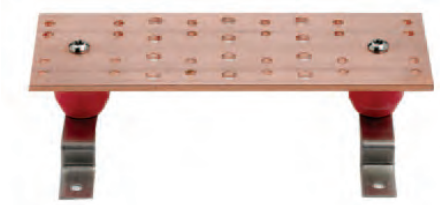
L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
120	45	45	0.60	1	**EBC 100**

Material:
Bar: 50 x 6mm hard drawn copper bar to BS EN 13601.
Base: Plastic.

BS EN 62561-1 Class H

Tightening torque 20 Nm





Double Row Telecommunication Earth Bars

The A. N. Wallis double row telecommunication earth bars provide a common grounding point within a telecommunications room and are usually located on the wall of a data room. These earth bars are available with different hole pattern spacing's, depending on your requirement and are made of high conductivity copper and can be tin-plated to help prevent against corrosion. The earth bars will also come pre-assembled with brackets and insulators for quick and easy installation.

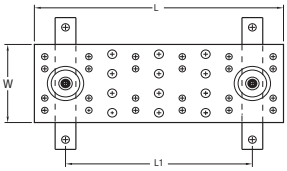
Telecommunications Main Grounding Earth Bar

This item is used as a central consolidation point for telecommunications and other low voltage systems within the room. Typically located on walls or entry rooms where the exterior ground enters the building.

The EBCT12K & EBCT20K includes:
1 - Grounding bar assembly.
6 - #6 compression lugs.
1 each - #2, 1/0, 2/0, 3/0 compression lugs.
12 each - 1/4"-20 x 3/4" (19.0mm) SS4 hex bolts, hex nuts & lock washers.
6 each - 3/8"-16 x 1" (25.4mm) SS4 hex bolts, hex nuts & lock washers.

Earth Bars

L mm	L1 mm	W mm	Unit Weight kg	Pack Quantity	Part Number
305	229	102	2.13	1	EBCT12
305	229	102	3.49		EBCT12K
508	229	102	3.22		EBCT20
508	229	102	4.58		EBCT20K



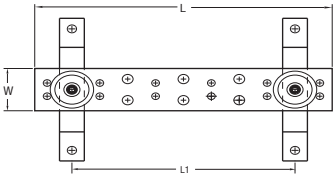
Telecommunications Grounding Earth Bar

This item provides a common grounding point within the telecommunications room.
Typically located on walls within a data room.

The EBCGBK includes:
1 - Grounding bar assembly
6 - #6 compression lugs
1 each - #2, 1/0, 2/0, 3/0 compression lugs
12 each - 1/4"-20 x 3/4" (19.0mm) SS4 hex bolts, hex nuts & lock washers
6 each - 3/8"-16 x 1" (25.4mm) SS4 hex bolts, hex nuts & lock washers

Earth Bars

L mm	L1 mm	W mm	Unit Weight kg	Pack Quantity	Part Number
305	229	51	1.32	1	EBCGB
305	229	51	2.23		EBCGBK



Special Earth Bars

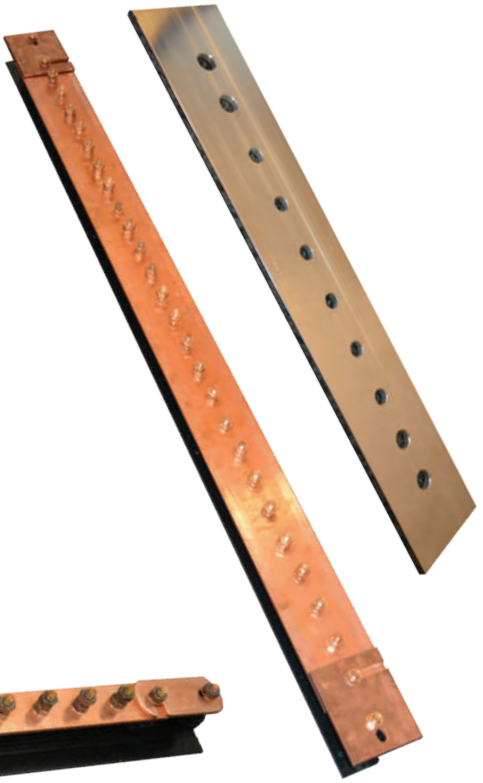
Earth Bars are a vital part of any earthing system they provide a convenient common earthing point for electrical installations. In some cases our standard range of earth bars will not suit specific requirements, which is why we offer special earth bars.

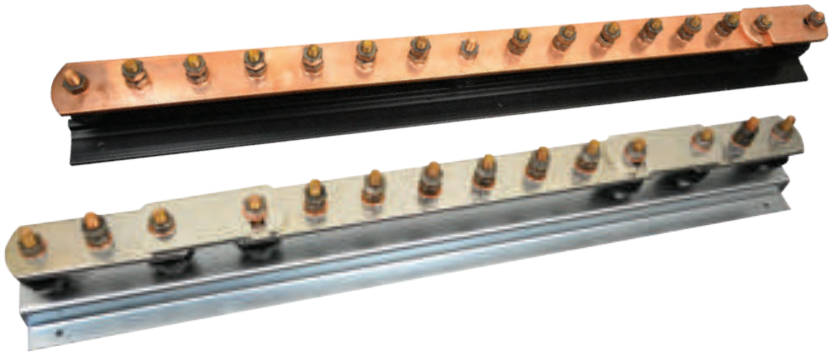
If you provide a drawing we will provide you with the earth bar you need to meet your requirements.

A. N. Wallis earth bars are manufactured to last! To order or obtain a quote for a special earth bar, please contact our Sales Team on +44 (0) 115 927 1721 or alternatively email us info@an-wallis.com.

With many years of experience A. N. Wallis has designed and manufactured special earth bars based on customer/project requirements. We have manufactured many different styles of earth bars with different sizes and shapes over the years.

This bespoke service is tailored to your project specification and earthing needs. Any size of copper bar can be used, the number of disconnecting links can be altered as well as their postion on the earth bar, fixing materials can be altered and we can supply earth bars with or without mounting bases to enable a product that is engineered to perfectly fit your exact requirements. All special earth bars can be tinned to help protect against adverse environmental conditions.





Insulators

These Wallis insulators are supplied with or without studs and locking nuts.

Type	Thread Size	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Insulator	M10	40	40	0.08	10	EBI 001
	M10	40				EBI 003
	M6	18	20			EBI 009
	M6	32	30			EBI 011
	M8	38	40			EBI 012
	M10	46	50			EBI 013
	M10	50	60			EBI 014
	M12	55	70			EBI 015

Material: Reinforced Polyester.

EBI 001

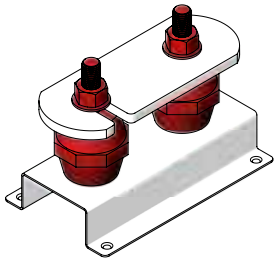
EBI 002

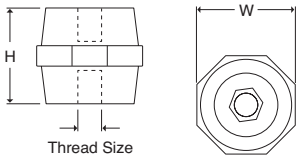
Insulator with 2 studs and 3 nuts

Type	Thread Size	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Insulator with 2 studs & 3 nuts	M10	40	40	0.16	10	EBI 002

Material: Reinforced Polyester with brass fittings.

The maximum working voltage of all A. N. Wallis insulators is 690V, these insulators can withstand a continuous temperature of 155-160°C or intermittent temperature of 220-225°C.





Earth Blocks

These Wallis blocks allow earth conductor termination, or live conductor termination with a suitable, fully insulated housing.

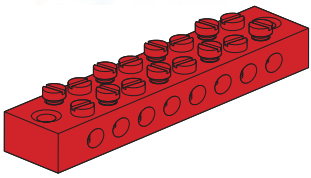
Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
4-Way Single	54	9	12	0.06	50	EBB 004/1
4-Way Double	51	18		0.09		EBB 004
8-Way Double	88	18		0.15	25	EBB 008

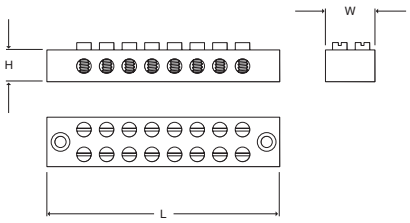
Material: Tinned Brass.

EBB 004

EBB 008

EBB 004/1





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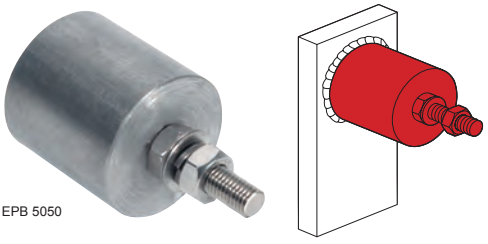
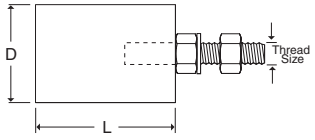
Earth Bosses

The earth boss is designed to provide an earth connection point on a steel structure. The boss is welded onto steel vessels, tanks and other structures. Wrap connections with Denso tape.



EPB 5050

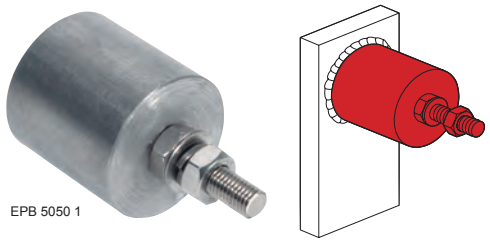


D mm	L mm	Thread Size	Unit Weight kg	Pack Quantity	Part Number
25	25	M8	0.11		EPB 2525
30	30	M8	0.18		EPB 3030
30	30	M10	0.20		EPB 3030/10
30	40	M10	0.33		EPB 3040
30	40	M12	0.36		EPB 3040/12
30	50	M10	0.50		EPB 3050
30	50	M12	0.52		EPB 3050/12
40	30	M8	0.24		EPB 4030/8
40	30	M10	0.35		EPB 4030
40	40	M10	0.43	1	EPB 4040
40	40	M12	0.45		EPB 4040/12
40	50	M10	0.65		EPB 4050
40	50	M12	0.67		EPB 4050/12
50	30	M8	0.29		EPB 5030/8
50	30	M10	0.31		EPB 5030
50	40	M10	0.53		EPB 5040
50	40	M12	0.55		EPB 5040/12
50	50	M10	0.80		EPB 5050
50	50	M12	0.80		EPB 5050/12

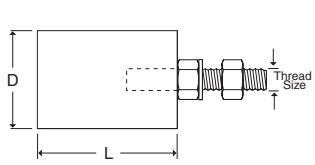
Material: Mild Steel with Stainless Steel fittings.

Stainless Steel Earth Bosses

The stainless steel earth boss is designed to provide an earth connection point on a stainless steel structure. The boss is welded onto stainless steel vessels, tanks and other stainless steel structures. Wrap connections with Denso tape.



EPB 5050 1



D mm	L mm	Thread Size	Unit Weight kg	Pack Quantity	Part Number
25	25	M8	0.11		EPB 2525 S
30	30	M8	0.18		EPB 3030 S
30	30	M10	0.20		EPB 3030 1
30	40	M10	0.33		EPB 3040 1
30	40	M12	0.36		EPB 3040 2
30	50	M10	0.50		EPB 3050 1
30	50	M12	0.52		EPB 3050 2
40	30	M8	0.24		EPB 4030 S
40	30	M10	0.35		EPB 4030 1
40	40	M10	0.43	1	EPB 4040 1
40	40	M12	0.45		EPB 4040 2
40	50	M10	0.65		EPB 4050 1
40	50	M12	0.67		EPB 4050 2
50	30	M8	0.29		EPB 5030 S
50	30	M10	0.31		EPB 5030 1
50	40	M10	0.53		EPB 5040 1
50	40	M12	0.55		EPB 5040 2
50	50	M10	0.80		EPB 5050 1
50	50	M12	0.80		EPB 5050 2

Material: Stainless Steel body & Stainless Steel fittings

Split Bolt Connectors

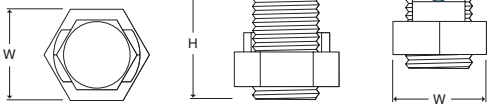
The high strength split bolt connectors will accept a wide range of stranded copper conductors. No specialist tools are required for installation.

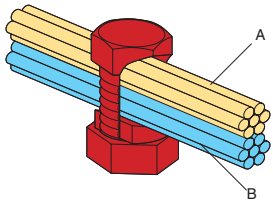
Main Conductor A mm²	Tap Conductor B mm²	H mm	W mm	Unit Weight kg	Pack Quantity	Part Number
10	1.5 - 10	20	4	0.02	200	**SBC 010**
16	2.5 - 16	23	5	0.03	150	**SBC 016**
25	2.5 - 25	28	7	0.04	100	**SBC 025**
35	2.5 - 35	29	8	0.05	80	**SBC 035**
50	2.5 - 50	35	10	0.08	50	**SBC 050**
70	2.5 - 70	39	11	0.12	35	**SBC 070**
95	2.5 - 95	45	14	0.15	20	**SBC 095**
120	10 - 120	47	15	0.18	20	**SBC 120**
150	10 - 150	51	16	0.23	10	**SBC 150**
185	50 - 185	57	18	0.35	10	**SBC 185**
240	95 - 240	64	19	0.46	10	**SBC 240**

SBC 025 SBC 120

Material: High Copper Alloy.

Standard: BS 7430



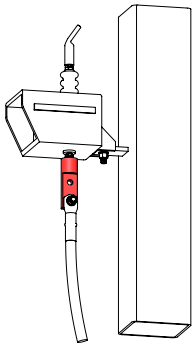


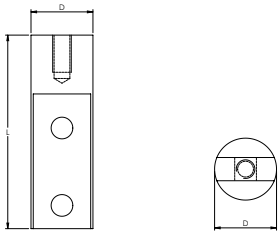
HV Surge Counter Coupling

The HV Surge counter coupling (SCC001) is used in conjunction with the Siemens Surge Counter to allow a convenient connection between the surge counter and the conductor it is being connected to.

This assembly is usually installed on High Voltage Substations as part of the High Frequency earthing arrangement. One assembly will be installed per phase at cable sealing ends and other parts of the system where HV surges to earth are to be monitored. This is to be installed generally in line with National Grid Specification TS 3.1.2.

D mm	L mm	Thread Size	Unit Weight kg	Pack Quantity	Part Number
40	125	M12	0.75	1	**SCC 001**





Flexible Copper Braid Bonds

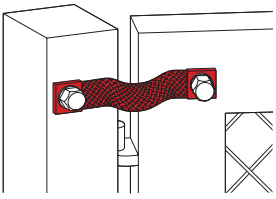
These flexible copper braid bonds are used for bonding metal gates, doors, fences etc. Other lengths and sizes are available on request.

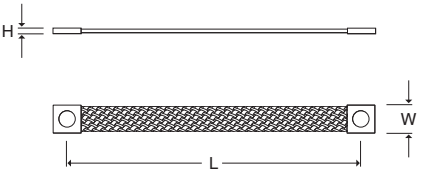
Size W x H mm	Hole Centres L mm	Hole Size mm	Unit Weight kg	Pack Quantity	Part Number
10 x 2	100	6	0.01	10	BFE 1021
	200		0.01		BFE 1022
	300		0.01		BFE 1023
12 x 2	100		0.01		BFE 121
	200		0.01		BFE 122
	300		0.02		BFE 123
19 x 2.5	100	10	0.01		BFE 191
	200		0.03		BFE 192
	300		0.05		BFE 193
25 x 3	100		0.02		BFE 2531
	200		0.05		BFE 2532
	400		0.10		BFE 2534
25 x 3.5	200	11	0.09		BFE 200
	300		0.13		BFE 300
	400		0.16		BFE 400
30 x 4.5	200	10	0.10		BFE 302
	400		0.20		BFE 304
32 x 5	200		0.14		BFE 322
	400		0.28		BFE 324

Material: Copper.

BS EN 62561-1 Class H

Tightening torque 20 Nm



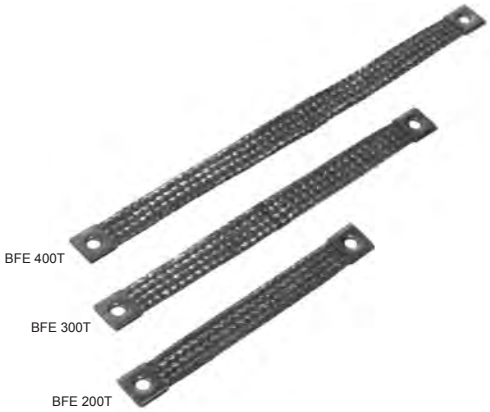


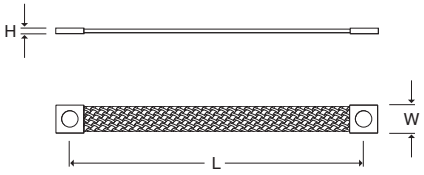
Tinned Flexible Copper Braid Bonds

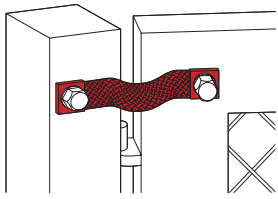
These flexible copper braid bonds are used for bonding metal gates, doors, fences etc. Other lengths and sizes are available on request.

Size W x H mm	Hole Centres L mm	Hole Size mm	Unit Weight kg	Pack Quantity	Part Number
10 x 2	100	6	0.01	10	BFE 1021T
	200		0.01		BFE 1022T
	300		0.01		BFE 1023T
12 x 2	100		0.01		BFE 121T
	200		0.01		BFE 122T
	300		0.02		BFE 123T
19 x 2.5	100	10	0.01		BFE 191T
	200		0.03		BFE 192T
	300		0.05		BFE 193T
25 x 3	100		0.02		BFE 2531T
	200		0.05		BFE 2532T
	400		0.10		BFE 2534T
25 x 3.5	200	11	0.09		BFE 200T
	300		0.13		BFE 300T
	400		0.16		BFE 400T
30 x 4.5	200	10	0.10		BFE 302T
	400		0.20		BFE 304T
32 x 5	200		0.14		BFE 322T
	400		0.28		BFE 324T

Material: Tinned Copper.





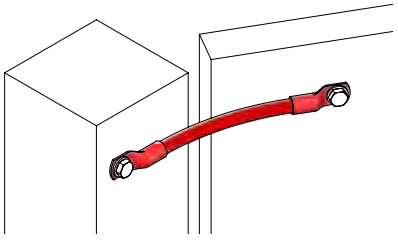


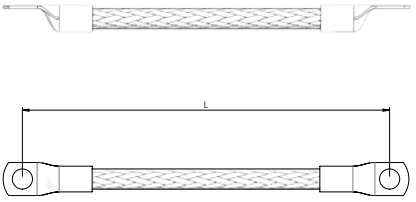
Flexible Circular Copper Braid Bonds

These flexible circular copper braid bonds are used for bonding metal gates, doors, fences etc. Other lengths and sizes are available on request.

Nominal Area mm^2	Hole Centres L mm	Hole Size mm	Unit Weight kg	Pack Quantity	Part Number
4	100	M6	0.01	10	BCE 410
	200		0.01		BCE 420
	300		0.01		BCE 430
6	100		0.01		BCE 610
	200		0.01		BCE 620
	300		0.02		BCE 630
10	100		0.01		BCE 101
	200		0.02		BCE 102
	300		0.03		BCE 103
16	100		0.01		BCE 1616
	200		0.03		BCE 1626
	300		0.05		BCE 1636
	100	M10	0.01		BCE 161
	200		0.03		BCE 162
	300		0.05		BCE 163
25	200		0.03		BCE 252
	400		0.05		BCE 254
35	200		0.07		BCE 352
	400		0.14		BCE 354
50	200		0.10		BCE 502
	400		0.20		BCE 504
70	200		0.14		BCE 702
	400		0.28		BCE 704

Material: Copper.



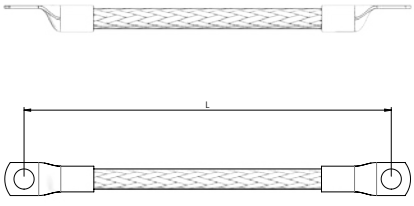


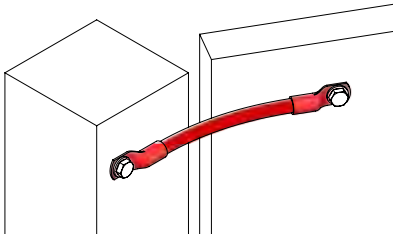
Tinned Flexible Circular Copper Braid Bonds

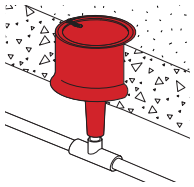
These tinned flexible copper braid bonds are used for bonding metal gates, doors, fences etc. Other lengths and sizes are available on request.

Nominal Area mm²	Hole Centres L mm	Hole Size mm	Unit Weight kg	Pack Quantity	Part Number
4	100	M6	0.01	10	BCE 410T
	200		0.01		BCE 420T
	300		0.01		BCE 430T
6	100		0.01		BCE 610T
	200		0.01		BCE 620T
	300		0.02		BCE 630T
10	100		0.01		BCE 101T
	200		0.02		BCE 102T
	300		0.03		BCE 103T
16	100		0.01		BCE 1616T
	200		0.03		BCE 1626T
	300		0.05		BCE 1636T
	100	M10	0.01		BCE 161T
	200		0.03		BCE 162T
	300		0.05		BCE 163T
25	200		0.03		BCE 252T
	400		0.05		BCE 254T
35	200		0.07		BCE 352T
	400		0.14		BCE 354T
50	200		0.10		BCE 502T
	400		0.20		BCE 504T
70	200		0.14		BCE 702T
	400		0.28		BCE 704T

Material: Tinned Copper.







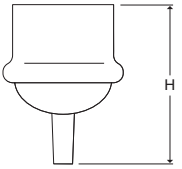
Static Earth Receptacle

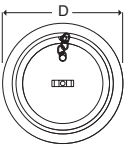
This receptacle is used in open areas where a temporary earthing point may be required, such as airfields or petrol stations. Provides a static discharge point for aircraft, tankers, vehicles and boats.

H mm	D mm	Unit Weight kg	Pack Quantity	Part Number
135	125	3.00	1	ERX 05

Material: High Copper Alloy

Standard: BS 7430





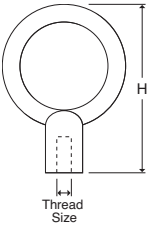
Eyebolts

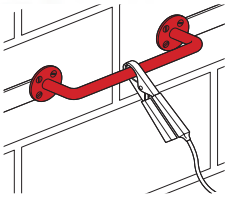
Provides a static earth point when attached to the top of a threaded copperbond earth rod.

Thread Size	H mm	Unit Weight kg	Pack Quantity	Part Number
$^{5}/_{8}$"	135	0.62	1	EYE 058
$^{3}/_{4}$"		0.55		EYE 034

Material: High Copper Alloy.

Standard: BS 7430



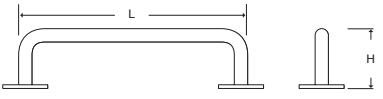


Static Earth Bar

This wall-mounted bracket provides a temporary earth point.

L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
350	100	1.52	1	ERY 10
200	250			ERY 20

Material: Phosphor Bronze.



‘C’ Crimp Connectors

These range-taking ‘C’ Crimp Connectors are specifically designed for tap and parallel connections of stranded copper cables in earthing applications.

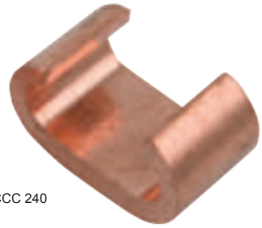
Main Conductor A mm²	Tap Conductor B mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
10	4 - 10	13	12	9	0.01	100	**CCC 010**
10 - 16	10 - 16	19	17	12	0.01	100	**CCC 016**
16	4	19	17	12	0.01	100	**CCC 016**
16 - 25	1.5 - 10	20	12	13	0.02	100	**CCC 25-10**
25	10 - 16	21	19	12	0.02	50	**CCC 25PM**
25	10 - 25	24	20	15	0.04	50	**CCC 025**
35	1.5 - 16	24	20	15	0.04	50	**CCC 025**
35	25 - 35	27	20	15	0.05	50	**CCC 035**
50	4 - 16	27	20	15	0.05	50	**CCC 035**
50	16 - 50	27	20	17	0.07	50	**CCC 050**
70	1.5 - 25	27	20	17	0.07	25	**CCC 050**
50 - 70	4 - 35	33	28	21	0.09	25	**CCC 70-35**
50 - 70	35 - 70	34	28	21	0.10	25	**CCC 070**
70 - 95	35 - 70	41	30	26	0.10	25	**CCC 075**
95	4 - 35	41	30	26	0.11	25	**CCC 95-35**
70 - 95	95	41	30	26	0.12	25	**CCC 095**
120	35 - 120	45	30	28	0.12	25	**CCC 120**
150	6 - 70	45	30	28	0.12	25	**CCC 120**
150	95 - 150	45	30	28	0.15	10	**CCC 150**
120 - 185	95 - 185	54	35	33	0.20	10	**CCC 185**
150 - 185	70 - 150	54	35	33	0.20	10	**CCC 185**
							CCC 240-35
							CCC 240-50
240	10 - 70	54	35	34	0.25	10	**CCC 240-70**
240	95 - 120	54	37	34	0.24	10	**CCC 240-120**
240	150 - 240	54	40	43	0.24	10	**CCC 240**

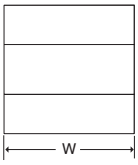
Material: Copper.

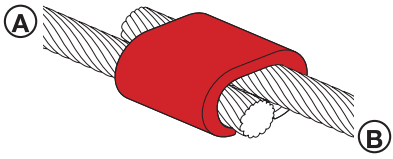
CCC 035

CCC 070

CCC 240







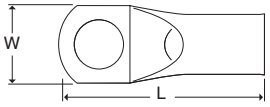

CLG 68

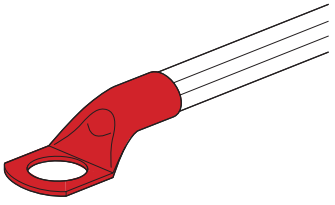

CLG 1010


CLG 258


CLG 506


CLG 9510





Compression Terminals

Wallis cable terminals are manufactured from high-conductivity seamless copper tube and feature bell mouth entry for cables up to 500mm^2 and chamfered entry for cables 500mm^2 to 1000mm^2.

All terminals are annealed, to avoid cracking and splitting when crimped, and electro-tin plated to combine maximum electrical conductivity with mechanical strength. An inspection hole is provided to facilitate the insertion of the cable conductor, these should only be used as a dry indoor cable termination when installed using a suitably calibrated crimping tool and die set.

Conductor Size mm^2	Palm Hole Size mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
6	4	21	9	0.01	100	CLG 64
	5	24	10			CLG 65
	6	24	11			CLG 66
	8	25	12			CLG 68
	10	26	12			CLG 610
10	5	26	11	0.01	100	CLG 105
	6	26	11			CLG 106
	8	29	13			CLG 108
	10	39	16			CLG 1010
	12	39	18			CLG 1012
16	6	30	11	0.01	100	CLG 166
	8	30	13			CLG 168
	10	35	15			CLG 1610
	12	42	18			CLG 1612
25	6	32	14	0.01	50	CLG 256
	8	32	14			CLG 258
	10	38	16			CLG 2510
	12	38	18			CLG 2512
35	6	35	15	0.01	50	CLG 356
	8	35	15			CLG 358
	10	40	15			CLG 3510
	12	40	18			CLG 3512
	14	43	20			CLG 3514
50	6	37	17	0.02	50	CLG 506
	8	37	17			CLG 508
	10	42	17			CLG 5010
	12	42	17			CLG 5012
	14	45	20			CLG 5014
70	6	40	21	0.04	50	CLG 706
	8	40	21			CLG 708
	10	46	21			CLG 7010
	12	46	21			CLG 7012
	14	50	21			CLG 7014
	16	50	21			CLG 7016

Table continues on P73

Compression Terminals (continued)

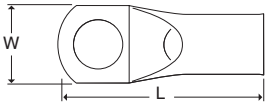
Conductor Size mm^2	Palm Hole Size mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
95	6	47	25	0.06	25	CLG 956
	8	49	25			CLG 958
	10	49	25			CLG 9510
	12	49	25			CLG 9512
	14	56	25			CLG 9514
	16	56	25			CLG 9516
120	8	50	27	0.07	25	CLG 1208
	10	56	27			CLG 12010
	12	56	27			CLG 12012
	14	56	27			CLG 12014
	16	60	27			CLG 12016
	20	66	27			CLG 12020
150	8	66	30	0.09	25	CLG 1508
	10	68	30			CLG 15010
	12	68	30			CLG 15012
	14	68	30			CLG 15014
	16	70	30			CLG 15016
	20	75	30			CLG 15020
185	10	67	33	0.10	10	CLG 18510
	12	68	33			CLG 18512
	14	68	33			CLG 18514
	16	70	33			CLG 18516
	20	75	33			CLG 18520
240	10	88	38	0.14	10	CLG 24010
	12	88	38			CLG 24012
	14	88	38			CLG 24014
	16	88	38			CLG 24016
	20	88	38			CLG 24020
300	10	97	41	0.17	10	CLG 30010
	12	97	41			CLG 30012
	14	97	41			CLG 30014
	16	97	41			CLG 30016
	20	97	41			CLG 30020
400	12	108	47	0.20	10	CLG 40012
	14	108	47			CLG 40014
	16	108	47			CLG 40016
	20	108	47			CLG 40020
500	16	117	53	0.50	5	CLG 50016
	18	117	53			CLG 50018
	20	117	53			CLG 50020
630	16	127	63	0.80	5	CLG 63016
	18	127	63			CLG 63018
	20	127	63			CLG 63020
800	16	164	70	1.00	5	CLG 80016
	18	164	70			CLG 80018
	20	164	70			CLG 80020
1000	18	164	77	1.30	5	CLG 100018
	20	164	77			CLG 100020

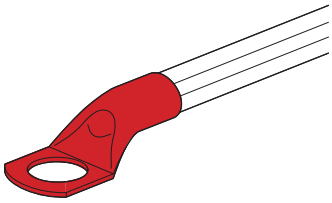
CLG 1208

CLG 15012

CLG 24014

CLG 30016





Material: Tin Plated Copper.

A. N. WALLIS & Co. Ltd | **Tel** +44 (0)115 927 1721 | **Fax** +44 (0)115 875 6630 | **Email** info@an-wallis.com | **Website** www.an-wallis.com

Lightning Protection

Taper Pointed Air Rods

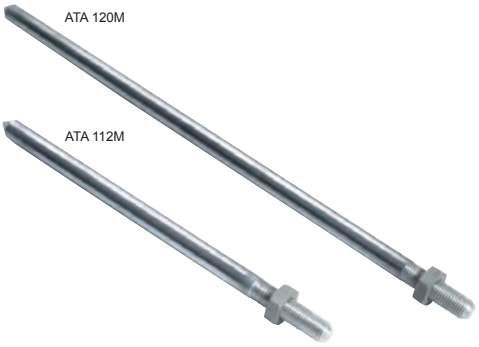
Air rods form an important part of the air termination network of a lightning protection system. All of our air rods are supplied with a locknut enabling the rod to be locked tight against the conductor. Please see pages 77 - 79 for further information on our range of saddles, brackets and couplings.

Copper Air Rods

Thread Size	L mm	L1 mm	Unit Weight kg	Pack Quantity	Part Number
M16	300	41	0.53	5	ATC 112M
	500		0.85		ATC 120M
	600		1.00		ATC 124M
	1000		1.70		ATC 139M
	1500		2.59		ATC 160M
	2000		3.47		ATC 179M
	3000		5.10		ATC 192M
M20	300	41	0.80	5	ATC 212M
	500		1.34		ATC 220M
	1000		2.68		ATC 239M
	1500		4.02		ATC 260M
	2000		5.36		ATC 279M
	3000		8.04		ATC 292M

Material: Copper.

BS EN 62561-2

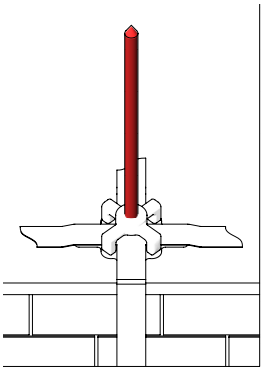


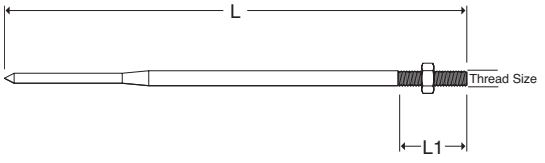
Aluminium Air Rods

Thread Size	L mm	L1 mm	Unit Weight kg	Pack Quantity	Part Number
M16	300	41	0.18	5	ATA 112M
	500		0.29		ATA 120M
	1000		0.57		ATA 139M
	1500		0.98		ATA 160M
	2000		1.09		ATA 179M

Material: Aluminium.

BS EN 62561-2





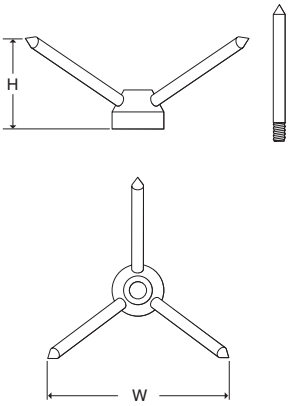
Multi-Point

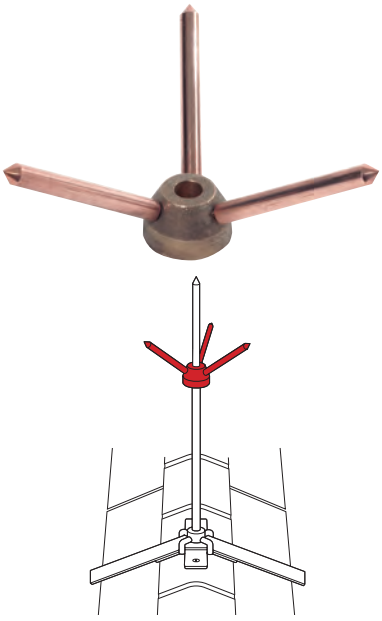
Used in conjunction with the taper pointed copper air rods.

Air Rod Ø mm	H mm	W mm	Unit Weight kg	Pack Quantity	Part Number
16 & 20	156	72	0.32	5	MPC 16

Material: High Copper Alloy base with Copper Spikes.

BS EN 62561-2





Light Duty Air Rod Saddles

Light duty saddles are used to support air rods on flat roof surfaces.

For use with Copper Air Rods

Thread Size	Conductor Size mm	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M16	25 x 3	101	37	0.22	5	ASGL 16M
M20				0.43		ASGL 20M

Material: High Copper Alloy.

ASGL 16M

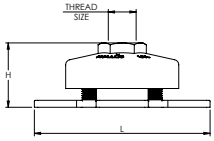
For use with Aluminium Air Rods

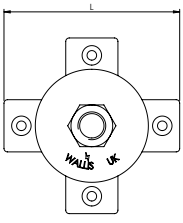
Thread Size	Conductor Size mm	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M16	25 x 3	101	37	0.15	5	ASAL 16M

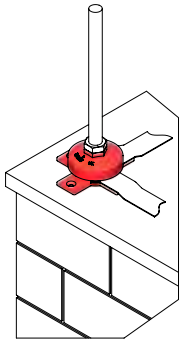
Material: Aluminium.

BS EN 62561-1 Class H

Tightening torque 8 Nm







ASGR 16M

Air Rod Ridge Saddles

Ridge saddles are used to support air rods on roof ridges.

For use with Copper Air Rods

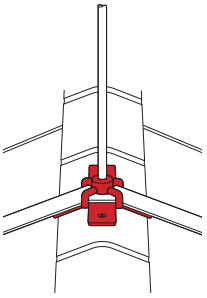
Thread Size	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M16	137	34	0.70	5	**ASGR 16M**

Material: High Copper Alloy

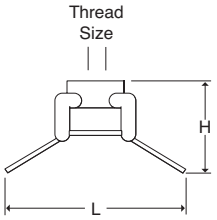
For use with Aluminium Air Rods

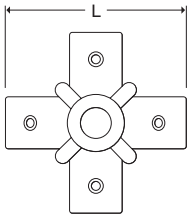
Thread Size	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M16	137	34	0.70	5	**ASAR 16M**

Material: Aluminium



BS EN 62561-1 Class H





ASGF 16M

Flat Air Rod Saddles

Flat saddles are used to support air rods on flat roof surfaces.

For use with Copper Air Rods

Thread Size	Conductor Size mm	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M16	25 x 3	137	40	0.60	5	**ASGF 16M**
M16	31 x 6	120	37			**ASGF 316M**

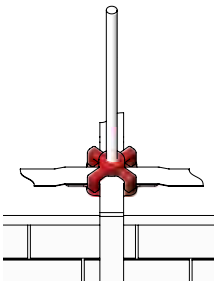
Material: High Copper Alloy

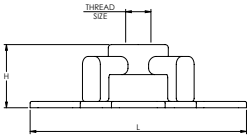
For use with Aluminium Air Rods

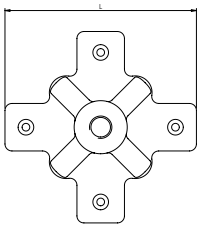
Thread Size	Conductor Size mm	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M16	25 x 3	137	40	0.20	5	**ASAF 16M**

Material: Aluminium

BS EN 62561-1 Class H







Side Mounting Air Rod Brackets

These brackets provide a 75mm projection from the building face and are used where it is not possible to fit a saddle onto the building roof. The brackets are used in conjunction with the rod to tape coupling used to secure the flat tape to the air rod.

The side mounting air rod brackets are purchased as a set.

For use with Copper Air Rods

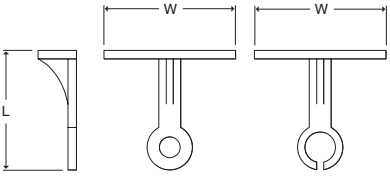
Air Rod Ø mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
16	97	120	0.75	5	**AMBG 16**
20			0.43		**AMBG 20**

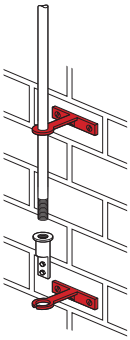
Material: High Copper Alloy.

For use with Aluminium Air Rods

Air Rod Ø mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
16	97	120	0.12	5	**AMBA 16**

Material: Aluminium.





Rod to Tape Couplings

Enables the flat tape to be connected to the air rod.
Used in conjunction with the side mounting air rod brackets.

For use with Copper Air Rods

Thread Size	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
M16	80	40	0.22	5	**AOG 16M**
M20					**AOG 20M**

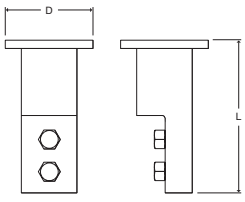
Material: High Copper Alloy.

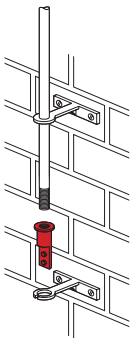
For use with Aluminium Air Rods

Thread Size	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
M16	80	40	0.10	5	**AOA 16M**

Material: Aluminium.

BS EN 62561-1 Class H





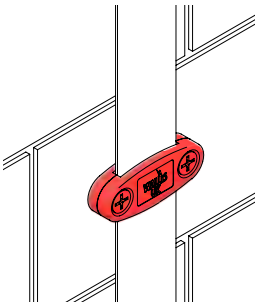
Metallic DC Clips

Metallic DC clips secure the flat tape conductor to the building surface. Fix using countersunk woodscrews 1 ½" x No. 10 and No. 10 wall plug.

For use with Bare Copper Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
20 x 3	50	21	10	0.06	50	DCG 203
25 x 3	51		10	0.05	50	DCB 253
25 x 4	51		11	0.05	50	DCG 254
25 x 6	51		12	0.05	50	DCG 256
30 x 2	56		9	0.05	25	DCG 302
30 x 5	56		12	0.06	25	DCG 305
31 x 3	60		10	0.07	25	DCG 313
31 x 4	56		11	0.07	25	DCG 314
31.5 x 4	56		11	0.06	25	DCG 3154
31 x 6	56		12	0.06	25	DCG 316
38 x 3	69		10	0.06	25	DCG 383
38 x 5	64		12	0.09	25	DCG 385
38 x 6	69		12	0.08	25	DCG 386
40 x 3	70		10	0.07	50	DCG 403
40 x 4	69		11	0.07	25	DCG 404
40 x 5	69		12	0.07	50	DCG 405
40 x 6	69		12	0.08	25	DCG 406
50 x 3	76		10	0.06	25	DCG 503
50 x 4	76		11	0.09	50	DCG 504
50 x 6	76		12	0.06	25	DCB 506
50 x 8	76		14	0.08	25	DCG 508
60 x 5	90		11	0.10	25	DCG 605
63 x 10	102	25	16	0.13	25	DCG 6310
70 x 5	110		13	0.14	25	DCG 705
75 x 6	110		14	0.14	25	DCG 756
80 x 5	110		11	0.14	25	DCG 805
80 x 6	110		14	0.14	25	DCG 806

Material: High Copper Alloy.



For use with PVC Covered Copper Tapes

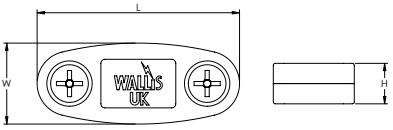
Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	56	21	12	0.06	50	DGP 253
25 x 6	56		15	0.07	25	DGP 256
50 x 6	90	25	16	0.13	25	DGP 506

Material: High Copper Alloy.

For use with Lead Covered Copper Tape

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
31 x 7	60	20	14	0.08	25	DCG 317

Material: High Copper Alloy.



BS EN 62561-4

Tightening torque 6 Nm

Metallic DC Clips (continued)

For use with Bare Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	52	21	10	0.02	50	**DCA 253**
25 x 6	50		13	0.03	25	**DCA 256**
50 x 6	76		12	0.03		**DCA 506**
60 x 6	90		17	0.05		**DCA 606**

Material: Aluminium.

DCA 253

For use with PVC Covered Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	55	20	20	0.03	25	**DAP 253**
50 x 6	85		23	0.04		**DAP 506**

Material: Aluminium.

BS EN 62561-4

Tightening torque 6 Nm

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Non-Metallic DC Clips

This one-piece clip, with integral hinged lid, means no lost or dropped lids. The clips are UV stabilised to prevent degradation from sunlight and are non-brittle to protect against cold weather. Fix using countersunk woodscrew 1½" x No. 10 and No. 10 wall plug.

For use with Bare Copper or Bare Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Colour	Unit Weight kg	Pack Quantity	Part Number
20 x 3	55	18	16	Brown	0.01	50	NM 203 B
20 x 3	50	18	16	Grey	0.01		NM 203 G*
20 x 4	55	28	27	Black	0.01		NM 204 BL*
25 x 3	50	18	16	Brown	0.01		NM 253 B
25 x 3	50	18	16	Grey	0.01		NM 253 G
25 x 3	50	18	16	Stone	0.01		NM 253 S
30 x 2	50	18	16	Brown	0.01		NM 302 B
30 x 2	50	18	16	Grey	0.01		NM 302 G*
30 x 5	74	30	27	Black	0.02		NM 305 BL*
40 x 4	85	31	27	Brown	0.03		NM 404 B*
40 x 4	85	31	27	Black	0.03		NM 404 BL*
40 x 6	85	31	27	Brown	0.02		NM 406 B*
40 x 6	85	31	27	Black	0.02		NM 406 BL*
40 x 6	60	18	16	Grey	0.01		NM 406 G*
40 x 6	85	31	27	Green	0.02		NM 406 GR*
50 x 4	85	31	27	Black	0.03		NM 504 BL*
50 x 6	80	25	26	Brown	0.01		NM 506 B*
50 x 6	85	31	27	Black	0.02		NM 506 BL*
50 x 6	85	31	27	Grey	0.02		NM 506 G*
50 x 10	85	31	27	Black	0.03		NM 5010 BL*
50 x 10	85	31	27	Grey	0.03		NM 5010 G*
60 x 6	97	32	31	Black	0.03		NM 606 BL*
80 x 6	116	32	31	Black	0.03		NM 8006 BL*

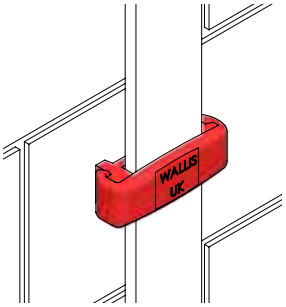
Material: Polypropylene.

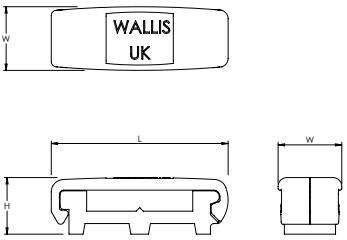
* Denotes a two-piece clip

For use with PVC Covered Copper & Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	50	18	16	Brown	0.01	50	NP 253 B
				Black			NP 253 BL
				Grey			NP 253 G
				Green			NP 253 GR
				Stone			NP 253 S
				Terracotta			NP 253 T
				White			NP 253 W

Material: Polypropylene.





Standing Seam Roof Fixing

The Wallis standing seam roof fixing is used on multi-profiled seam roofing structures.

The unique design allows for different connection components to be attached to accommodate the flat tape conductor that forms part of the lightning protection system.

These clips are compatible for roofing seams with a thickness of up to 18mm and will not compromise the integrity of the roof. They are manufactured from SS304 Grade Stainless Steel and are black powder coated.

KJG 253

Standing Seam Roof Fixing Clamp

Maximum Seam Roof mm	L mm	L1 mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
18	44	18	22	50	0.07	50	**KZC 001**

Material: Stainless Steel to SS304 Grade.

Standing Seam Roof Fixing Clamp with Square Tape Clamp

Conductor	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Copper	50	50	63	0.21	50	**KJG 253**

Material: Stainless Steel to SS304 Grade Fixing Clip with a High Copper Alloy Tape Clamp.

KDCB 253

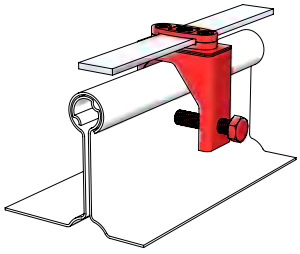
Standing Seam Roof Fixing Clamp with Metallic DC Clamp

Conductor	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Copper	51	22	60	0.12	50	**KDCB 253**

Material: Stainless Steel to SS304 Grade Clamp with a High Copper Alloy DC Clip.

Standing Seam Roof Fixing Clamp with Non-Metallic DC Clamp

Conductor	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Copper	50	22	66	0.07	50	**KNM 253 B**
Copper						**KNP 253 B**
Copper						**KNP 253 BL**
Copper						**KNP 253 GR**
Copper						**KNP 253 G**
Copper						**KNP 253 S**
Copper						**KNP 253 W**
Aluminium						**KNM 253 G**

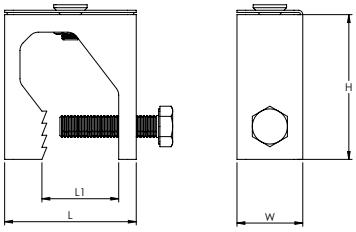


Material: Stainless Steel to SS304 Grade Clamp with a Polypropylene Clip.

Standing Seam Roof Fixing with Aluminium DC Clamp

Conductor	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Aluminium	51	22	64	0.11	50	**KDCA 253**

Material: Stainless Steel to SS304 Grade Clamp with an Aluminium DC Clip.



Standing Seam Roof Fixing with Aluminium Square Clamp

Conductor	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
Aluminium	50	50	63	0.08	50	**KJA 253**

Material: Stainless Steel to SS304 Grade Clamp with an Aluminium Tape Clamp.

KZA 001 KZS 001

Low Impact Standing Seam Roof Fixings

The Wallis 'Low Impact' standing seam roof fixings are used for fixing lightning conductors onto various standing seam roofing structures.

This unique 'low impact' clamping action is ideal for use on modern day roofing surfaces with thin coatings where damage to the coating must be avoided. The Wallis design utilises a natural clamping action that fits securely around the profile and avoids the use of screws that may damage the roofing coating.

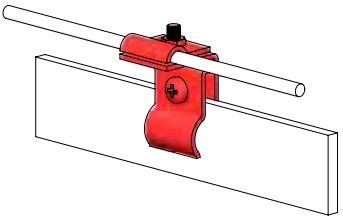
The Wallis Low Impact Standing Seam Roof Fixings are available in Stainless Steel or Aluminium.

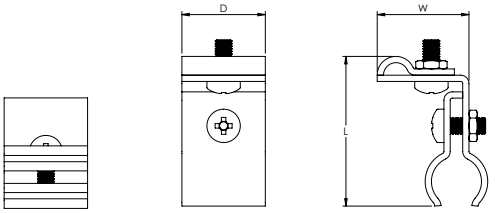
L mm	W mm	D mm	Unit Weight kg	Pack Quantity	Part Number
66	50	40	0.86	10	**KZA 001**

Material: Aluminium.

L mm	W mm	D mm	Unit Weight kg	Pack Quantity	Part Number
66	50	40	1.24	10	**KZS 001**

Material: Stainless Steel.





Tape Clips

Wallis tape clips hold the flat tape conductor flush to the building surface.

Fix using countersunk woodscrew 1 ½" x No. 10 and No. 10 wall plug.

For use with Bare Copper Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
20 x 3	68	20	7	0.03	50	**MTB 203**
25 x 3	70		7	0.03		**MTB 253**
50 x 6	73		8	0.05		**MTB 506**

Material: Copper.

For use with PVC Covered Copper Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	70	20	7	0.03	50	**MPB 253**

Material: Copper.

For use with Bare Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
20 x 3	68	20	7	0.01	50	**MTA 203**
25 x 3	70					**MTA 253**
25 x 6	73		8			**MTA 256**

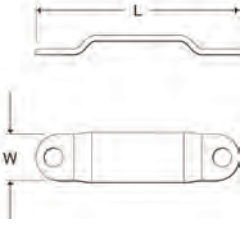
Material: Aluminium.

For use with PVC Covered Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	70	20	7	0.01	50	**MAP 253**

Material: Aluminium.

BS EN 62561-4

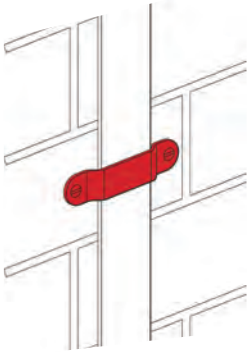


MTB 253

MPB 253

MTA 253

MAP 253



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HSAL 253 BL


HSAL 253 G


HSAL 253 B


HSAL 253 S


HSAL 253 W

Slate Holdfasts

Wallis slate holdfasts provide a method for fixing the tape above the roof tiles without any drilling.

The aluminium tail slides underneath the tile and is fixed to the wooden beam with a nail, the non-metallic DC clip then protrudes from under the tile and offers a fixing for the tape.

For use with Bare Copper & Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	300	50	16	Brown	0.04	50	HSAL 253 BM
				Grey			HSAL 253 GM

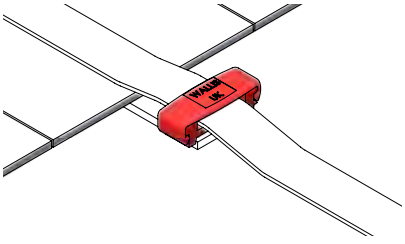
Material: Polypropylene clip with Aluminium tail.

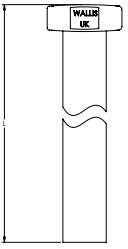
For use with PVC Covered Copper & Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	300	50	16	Brown	0.04	50	HSAL 253 B
				Black			HSAL 253 BL
				Grey			HSAL 253 G
				Stone			HSAL 253 S
				White			HSAL 253 W

Material: Polypropylene clip with Aluminium tail.

TESTED **BS EN 62561-4**





Weldable DC Clips

Comprises of a weldable base assembled with a non-metallic DC clip. For use on PVC roofing membranes. See page 89 for details of Universal Welding Solvent.

For use with Bare Tape

Conductor Size mm	D mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	63	23	Grey	0.03	50	WDC 080
			Brown			WDC 100

Material: PVC base with Polypropylene clip.

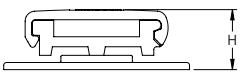
For use with PVC Covered Tapes

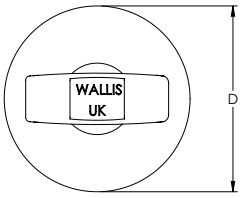
Conductor Size mm	D mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	63	23	Black	0.03	50	WDC 120
			Grey			WDC 140
			White			WDC 180

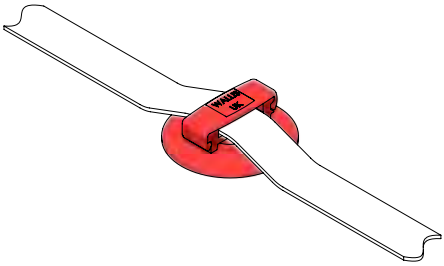
Material: PVC base with Polypropylene clip.

WDC 120

WDC 180







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ADC 060


ADC 080


ADC 120


ADC 180


ADC 160

Adhesive DC Clips

Comprises an adhesive base assembled with a non-metallic DC clip. These clips are suitable for use worldwide as they can withstand a wide range of temperatures and humidity's and are ideal for use on impermeable surfaces such as glass, marble, single ply roof, rubber, painted metal and other similar surfaces. It is not recommended for use on porous surfaces such as concrete, wood or brick.
See page 89 for details of Surface Primer.

For use with Bare Copper & Aluminium Tapes

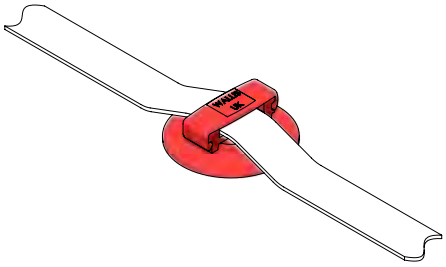
Conductor Size mm	D mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	63	23	Brown	0.03	50	ADC 060
			Grey			ADC 080

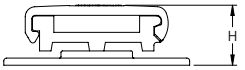
Material: Polycarbonate base with Polypropylene clip.

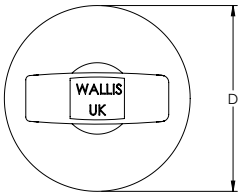
For use with PVC Covered Copper & Aluminium Tapes

Conductor Size mm	D mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	63	23	Brown	0.03	50	ADC 100
			Black			ADC 120
			Grey			ADC 140
			Stone			ADC 160
			White			ADC 180

Material: Polycarbonate base with Polypropylene clip.







Universal Welding Solvent, Cleaning Solution & Surface Primer

Type	Unit Weight kg	Pack Quantity	Part Number
Universal Welding Solvent 500ml spray applicator for use with weldable DC clips Sufficient for application of approx. 200 clips	0.57	1	UWS 001
Cleaning Solution (Acetone) 500ml spray applicator for cleaning lacquered roofing membranes	0.62		CSA 001
Surface Primer 250ml spray applicator for use with adhesive DC clips Sufficient for application of approx. 500 clips	0.24		PRIMER

CoSHH datasheets are available on request

PRIMER

UWS 001

CSA 001

Bitumen Felt DC Clips

For use on bitumen felt roofing only.

For use with Bare Copper & Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	100	100	23	Brown	0.06	50	BDC 060
				Grey			BDC 080

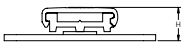
Material: Bitumen Felt base with Polypropylene clip.

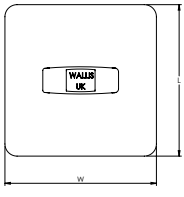
BDC 060

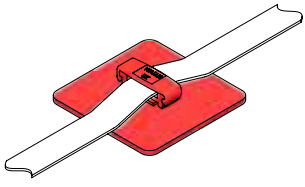
For use with PVC Covered Copper & Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
25 x 3	100	100	23	Brown	0.06	50	BDC 100
				Black			BDC 120
				Grey			BDC 140
				Stone			BDC 160
				White			BDC 180
				Green			BDC 200

Material: Bitumen Felt base with Polypropylene clip.







HGG 253

Glazing Bar Holdfasts

Originally designed to be used on glazing units but can be installed wherever conductor has to be fixed onto a narrow flange. The holdfast is assembled with a fixing screw for use with a metallic or non-metallic DC clip.

For use with Copper Tapes

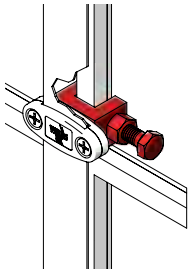
L mm	L1 mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
30	14	22	20	0.12	10	**HGG 253**

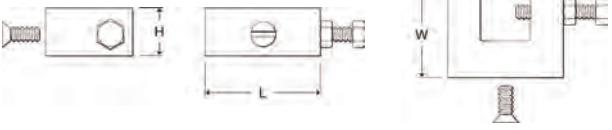
Material: High Copper Alloy.

For use with Aluminium Tapes

L mm	L1 mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
30	14	22	20	0.04	10	**HGA 253**

Material: Aluminium.





HBP

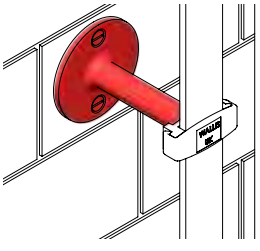
Back Plate Holdfasts

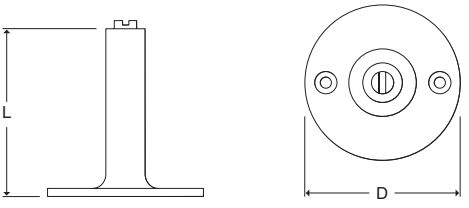
Designed to be used where it is necessary to hold the conductor away from the building surface. The holdfast is assembled with a fixing screw for use with a metallic or non-metallic DC clip.

For use with Copper Tapes

L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
74	63	0.33	5	**HBP**

Material: High Copper Alloy.





Square Tape Clamps

These Wallis four-way connectors are suitable for making cross, straight through or tee joints in flat tape. The base has a countersunk hole in the middle for securing the clamp to the building surface and the lid is fixed by means of four screws.

Fix using countersunk woodscrew 1 ½" x No. 10 and No. 10 wall plug.

JG 253

JG 302


JA 253

For use with Bare Copper Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	50	50	13	0.15	25	**JG 253**
25 x 4	50	50	15	0.16	25	**JG 254**
25 x 6	50	50	20	0.25	25	**JG 256**
30 x 2	56	56	12	0.18	25	**JG 302**
30 x 5	56	56	17	0.20	25	**JG 305**
31 x 3	60	60	14	0.22	25	**JG 313**
31 x 6	56	56	19			**JG 316**
38 x 3						**JG 383**
38 x 6	71	71	22	0.59	25	**JG 386**
40 x 3	66	66	13	0.26		**JG 403**
40 x 4	66	66	15	0.25	20	**JG 404**
40 x 5	66	66	18	0.28	20	**JG 405**
50 x 3	80	80	16	0.50	10	**JG 503**
50 x 4						**JG 504**
50 x 6	80	80	22	0.52	10	**JG 506**
50 x 8	80	80	27	0.68		**JG 508**

Material: High Copper Alloy.

For use with Lead Covered Copper Tape

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	70	70	25	0.86	25	**JPB 253 L**

Material: Phosphor Bronze.

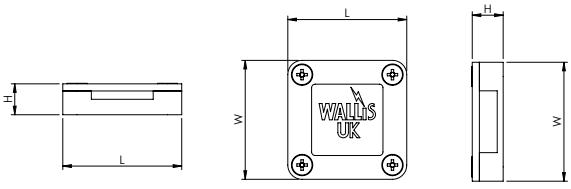
For use with Bare Aluminium Tape

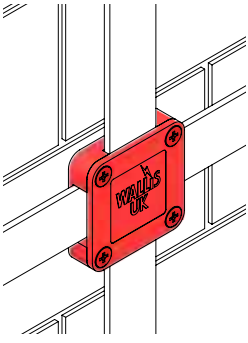
Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	50	50	13	0.07	25	**JA 253**
40 x 6	67	67	18	0.10	10	**JA 406**
50 x 6	77	77	20	0.15	10	**JA 506**

Material: Aluminium.

BS EN 62561-1 Class H

Tightening torque 6 Nm





JGO 253 W

JGO 506

JPBO 253 L

JAO 253

Oblong Junction Clamps

Designed to join a range of tape sizes in a straight through position. In many applications the clamp enables tapes to be overlapped and secured by the two set screws.

For use with Bare Copper Tapes

Maximum Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
26 x 8	60	51	24	0.27	10	JGO 253 W
						JGO 256 W
33 x 11	70	45	30	0.39	5	JGO 316
51 x 10	90	63	26	0.58	10	JGO 506

Material: High Copper Alloy.

For use with Lead Covered Copper Tape

Maximum Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
26 x 8	90	45	24	0.34	10	JPBO 253 L

Material: Phosphor Bronze.

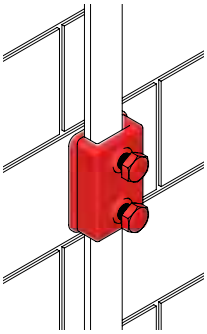
For use with Bare Aluminium Tape

Maximum Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
26 x 8	68	40	23	0.11	10	JAO 253

Material: Aluminium.

BS EN 62561-1 Class H

Tightening torque 12 Nm



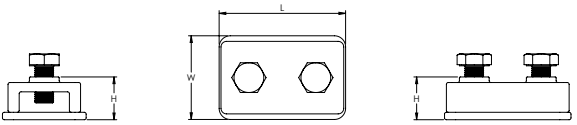


Plate Type Test Clamps

This Wallis clamp is used to form a disconnecting joint between the down conductor and earthing system.

There are two wall fixing holes on the bottom plate. Fix using countersunk woodscrews 1½" x No. 10 and No. 10 wall plugs.

JPA 253

JPG 253

For use with Copper Tapes

Maximum Conductor Size mm	D mm	H mm	Unit Weight kg	Pack Quantity	Part Number
26 x 15	70	38	0.40	5	**JPG 253**

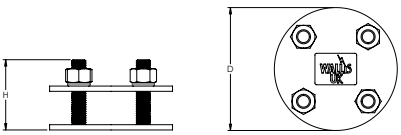
Material: High Copper Alloy.

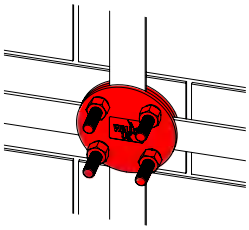
For use with Aluminium Tapes

Maximum Conductor Size mm	D mm	H mm	Unit Weight kg	Pack Quantity	Part Number
26 x 15	70	38	0.10	5	**JPA 253**

Material: Aluminium.

BS EN 62561-1 Class H





Screw Down Test Clamp

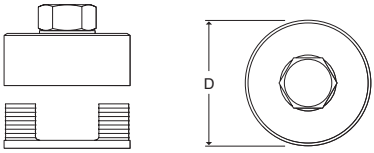
The screw down test clamp allows easy access to copper conductors where frequent inspection and testing may be necessary.

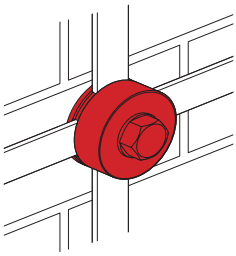
For use with Copper Tapes

Maximum Conductor Size mm	D mm	Unit Weight kg	Pack Quantity	Part Number
26 x 8	61	0.72	5	**JSG 253**

Material: High Copper Alloy.

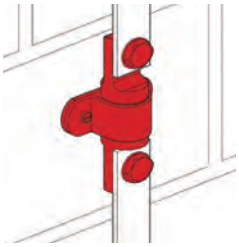
BS EN 62561-1 Class H





BIM 253

BSS 253



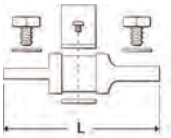
Bimetallic Connectors

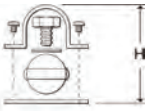
These connectors are used to join aluminium and copper tapes together. They are a neat and practical jointing method without the need for tinning, riveting or wrapping the joint.

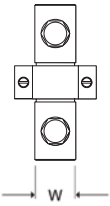
Fix using countersunk woodscrew 1 ½" x No. 10 wall plug.

Conductor Size mm	Material Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	Aluminium & Copper	85	28	27	0.20	10	BIM 253
	Aluminium & Copper	80	37	17	0.20		BIM 253 FB
	Stainless Steel	75	32	11	0.16		BSS 253
50 x 6	Aluminium & Copper	143	50	20	0.63		BIM 506

BS EN 62561-1 Class H **Tightening torque 20 Nm**

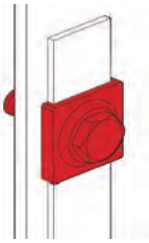






BBG 253 SS

BBA 253



'B' Bonds

These Wallis 'B' bonds are used for bonding aluminium and copper tapes to flat metal surfaces.

For use with Copper Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	35	35	10	0.03	10	BBG 253 SS

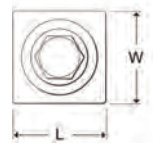
Material: High Copper Alloy with M10 x 35mm Stainless Steel Set Screw.

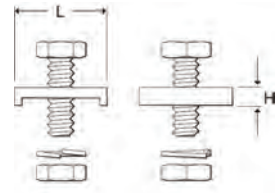
For use with Aluminium Tapes

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
25 x 3	35	35	10	0.01	10	BBA 253

Material: Aluminium with M10 x 35mm Stainless Steel Set Screw.

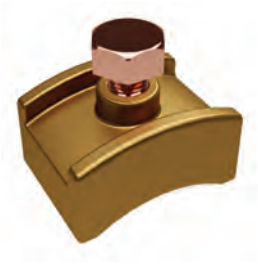
BS EN 62561-1 Class H **Tightening torque 20 Nm**





Watermain Pipe Bond

Designed to bond large diameter metallic pipes into the earthing and lightning protection systems.

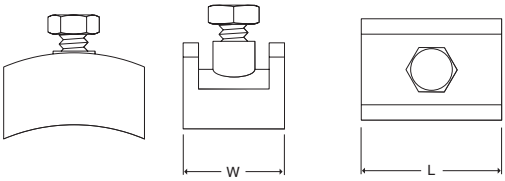


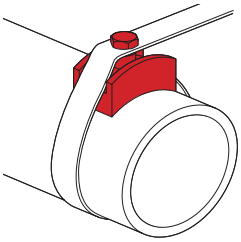
For use with Bare Copper Tapes

Maximum Conductor Width mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
26	45	36	0.21	10	**BWG 253**

Material: High Copper Alloy with M10 x 35mm Phosphor Bronze Set Screw.

BS EN 62561-1 Class H





Rainwater Pipe Bond

This pipe bond can be used on any application where tape can be wrapped around circular objects such as pipes or rails.

For use with Bare Copper Tapes

Maximum Conductor Width mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
26	32	32	16	0.20	10	**BRG 253**

Material: High Copper Alloy with M10 x 40mm Stainless Steel Set Screw.

BRG 253

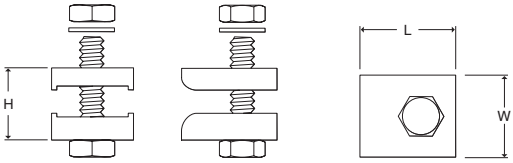
For use with Bare Aluminium Tapes

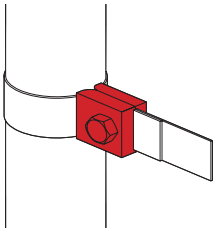
Maximum Conductor Width mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
26	32	32	16	0.10	10	**BRA 253**

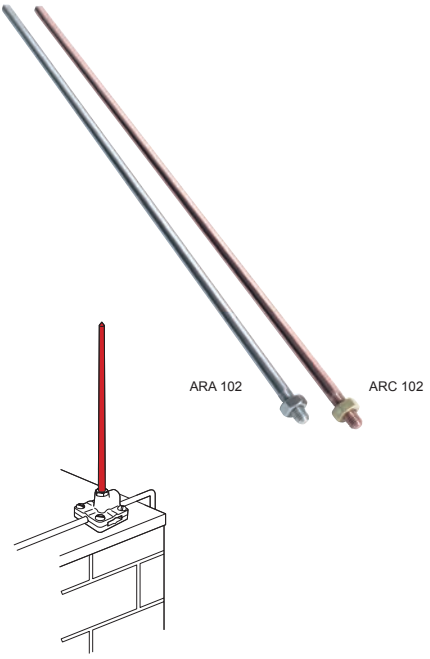
Material: Aluminium with M10 x 40mm Stainless Steel Set Screw

BRA 253

BS EN 62561-1 Class H







Air Rods

These air rods are used as part of the lightning protection system. They are manufactured from 10mm diameter rod and are supplied with a locknut.

Copper Air Rods

Thread Size	L mm	Unit Weight kg	Pack Quantity	Part Number
M10	500	0.35	5	ARC 102
	1000	0.70		ARC 105

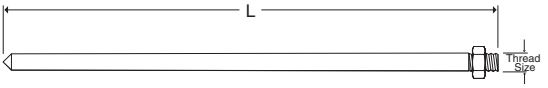
Material: Copper.

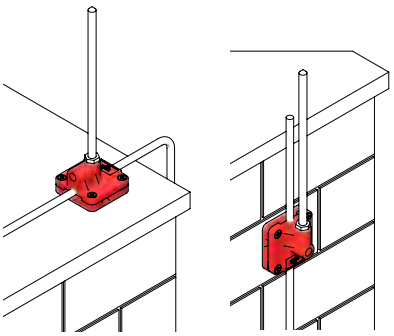
Aluminium Air Rods

Thread Size	L mm	Unit Weight kg	Pack Quantity	Part Number
M10	500	0.11	5	ARA 102
	1000	0.22		ARA 105

Material: Aluminium.

BS EN 62561-2





Multi-Purpose Air Rod Saddles

These saddles can be installed horizontally on roofs or vertically on walls or parapets and are used in conjunction with the air rods shown above. The saddles are suitable for use with 8mm diameter solid circular conductor as well as 25 x 3mm flat tape.

For use with Copper Air Rods

Thread Size	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M10	54	54	38	0.30	5	UAG 253

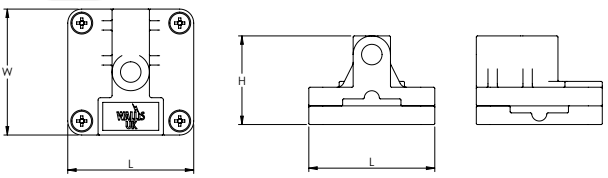
Material: High Copper Alloy.

For use with Aluminium Air Rods

Thread Size	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
M10	54	54	38	0.10	5	UAA 253

Material: Aluminium.

BS EN 62561-1 Class H



Slate Holdfasts

Wallis slate holdfasts provide a method of fixing solid circular conductor above roof tiles without any drilling.

The aluminium tail slides underneath the tile and is fixed to the wooden beam with a nail, the push-in roof clip then protrudes from under the tile and offers a fixing for the conductor.

For use with Bare Solid Circular Conductors

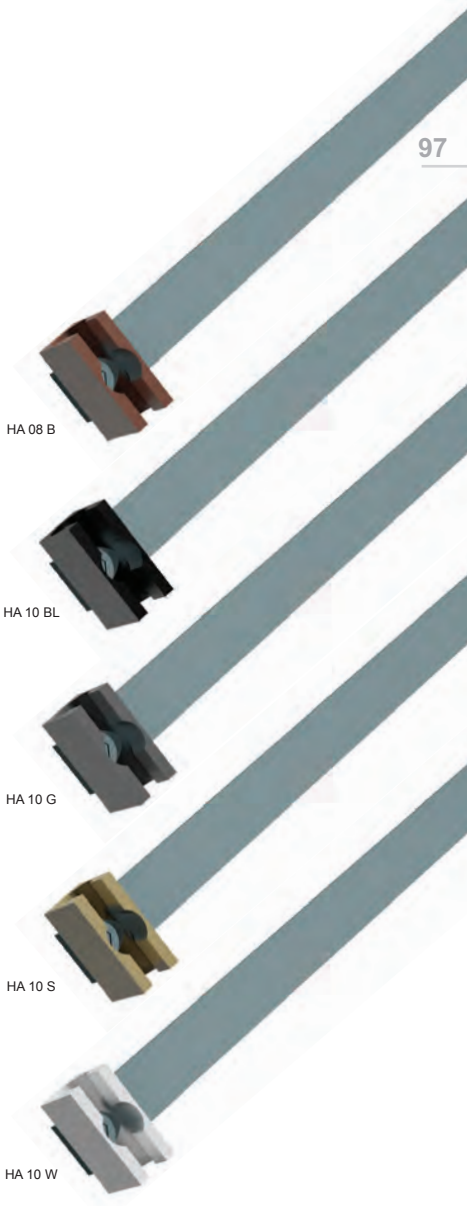
Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
8	320	18	14	Brown	0.04	50	HA 08 B
				Grey			HA 08 G

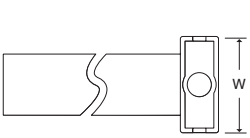
Material: Polypropylene clip with Aluminium tail.

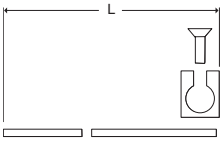
For use with PVC Covered Solid Circular Conductors

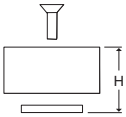
Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
8	320	18	14	Brown	0.04	50	HA 10 B
				Black			HA 10 BL
				Grey			HA 10 G
				Stone			HA 10 S
				White			HA 10 W

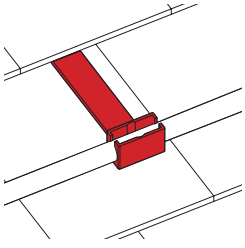
Material: Polypropylene clip with Aluminium tail.





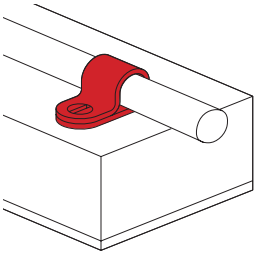






PCC 001

PCA 001



One Hole Conductor Clips

One hole conductor clips provide an easy method of fixing copper and aluminium conductors to surfaces.

Fix using round head woodscrew 1 ½" x No. 10 and No. 10 wall plug.

For use with Solid Circular Copper Conductors

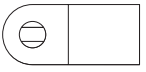
Conductor Size & Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8mm Bare	31	12	12	0.01	50	PCC 001
8mm PVC	41	20	15			PCC 002

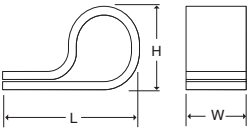
Material: Copper.

For use with Solid Circular Aluminium Conductors

Conductor Size & Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8mm Bare	31	12	12	0.01	50	PCA 001
8mm PVC	41	20	15			PCA 002

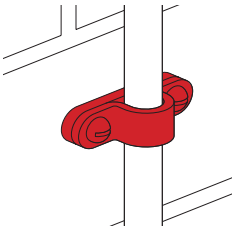
Material: Aluminium.





DCG 810

DCA 810



Metallic Conductor Clips

Metallic conductor clips secure the solid circular conductor to the building surface. The larger sizes can also be used to support the 10mm air rods shown on page 96.

Fix using countersunk woodscrew 1 ½" x No. 10 and No. 10 wall plug.

For use with Solid Circular Copper Conductors

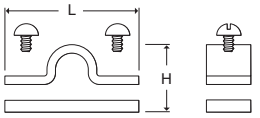
Conductor Size & Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8mm Bare	48	17	20	0.06	25	DCG 810
8mm PVC						DCG 815

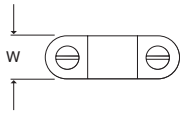
Material: High Copper Alloy.

For use with Solid Circular Aluminium Conductors

Conductor Size & Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8mm Bare	48	17	20	0.03	25	DCA 810
8mm PVC						DCA 815

Material: Aluminium.





Adhesive 8mm Circular Conductor Clips

Comprises of an adhesive base assembled with a push-in roof clip. For use on surfaces other than PVC roofing.
See page 89 for details of Surface Primer.

For use with Bare Solid Circular Conductors

Conductor Size mm	D mm	H mm	Colour Clip	Unit Weight kg	Pack Quantity	Part Number
8	63	26	Grey	0.01	50	**ADC 280**

Material: Polycarbonate base with Polypropylene clip.

For use with PVC Covered Solid Circular Conductors

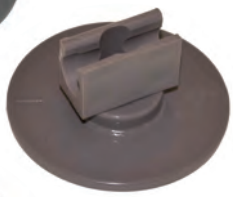
Conductor Size mm	D mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
8	63	26	Brown	0.01	50	**ADC 260**
			Black			**ADC 200**
			Grey			**ADC 240**
			Stone			**ADC 220**
			White			**ADC 250**

Material: Polycarbonate base with Polypropylene clip.

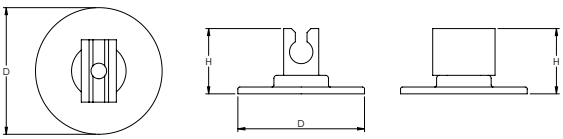

ADC 260

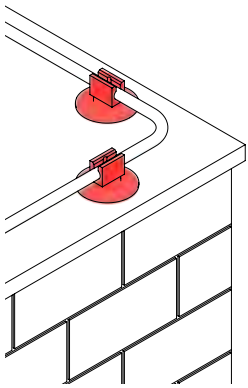

ADC 200


ADC 240


ADC 220

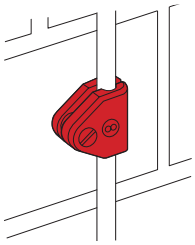

ADC 250





CP 08 BL CM 08 B

CP 08 S



Non-Metallic Down Conductor Clips

A one-piece fold over clip designed for easy installation of solid circular conductor. The clips are UV stabilised to prevent degradation from sunlight and are non-brittle to protect against cold weather.

For use with Bare Solid Circular Conductors

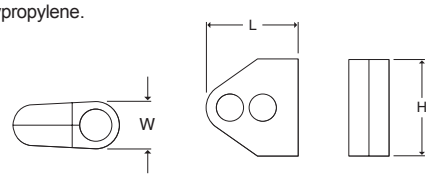
Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
8	34	23	33	Brown	0.01	100	CM 08 B
				Grey			CM 08 G

Material: Polypropylene.

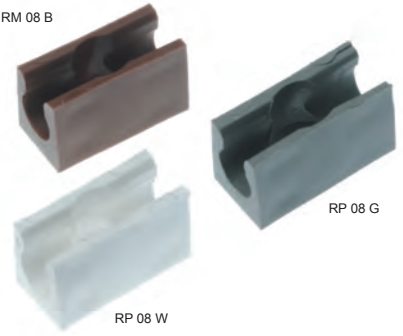
For use with PVC Covered Solid Circular Conductors

Conductor Size mm	L mm	W mm	H mm	Colour	Unit Weight kg	Pack Quantity	Part Number
8	34	23	33	Brown	0.01	100	CP 08 B
				Black			CP 08 BL
				Grey			CP 08 G
				Stone			CP 08 S
				White			CP 08 W

Material: Polypropylene.

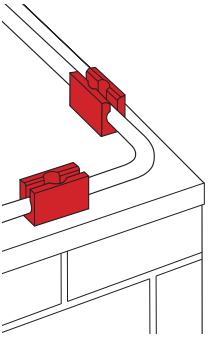


RM 08 B



RP 08 G

RP 08 W



Push-in Roof Conductor Clips

A one-piece single screw fixing clip designed for easy installation of solid circular conductors. The clips are UV stabilised to prevent degradation from sunlight and are non-brittle to protect against cold weather.

For use with Bare Solid Circular Conductors

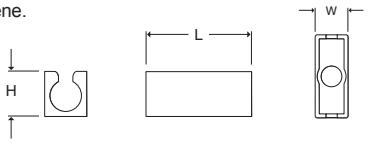
Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
8	29	18	14	Brown	0.01	100	RM 08 B
				Grey			RM 08 G

Material: Polypropylene.

For use with PVC Covered Solid Circular Conductors

Conductor Size mm	L mm	W mm	H mm	Clip Colour	Unit Weight kg	Pack Quantity	Part Number
8	29	18	14	Brown	0.01	100	RP 08 B
				Black			RP 08 BL
				Grey			RP 08 G
				Stone			RP 08 S
				White			RP 08 W

Material: Polypropylene.



‘MV’ Clamps

These Wallis four-way connectors are suitable for crossing over, making straight joints and tee connections with solid circular conductor.

MVG 08

MVA 08

For use with Bare Solid Circular Copper Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	40	40	18	0.05	10	**MVG 08**

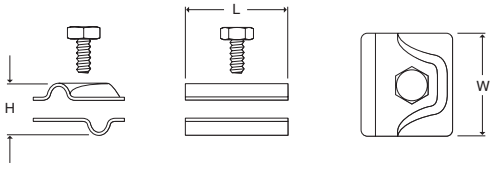
Material: Copper.

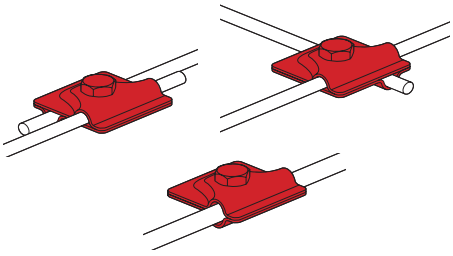
For use with Bare Solid Circular Aluminium Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	40	40	18	0.01	10	**MVA 08**

Material: Aluminium.

BS EN 62561-1 Class H





‘T’ Connector Clamps

This purpose-designed ‘T’ connector clamp is ideal for connecting the roof network to the down conductors of an 8mm solid circular lightning protection system.

TCG 08

TCA 08

For use with Bare Solid Circular Copper Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	45	45	19	0.26	10	**TCG 08**

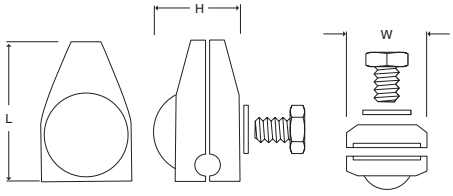
Material: High Copper Alloy.

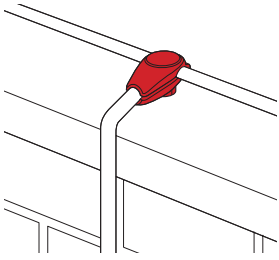
For use with Bare Solid Circular Aluminium Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	44	25	20	0.06	10	**TCA 08**

Material: Stainless Steel.

BS EN 62561-1 Class H





JYA 08

Interface Test Clamps

The Wallis interface clamp, sometimes referred to as the 'coffin clamp', is very adaptable and can be utilised to connect conductors in a variety of different sizes and in a variety of configurations. It can be used for connecting flat tape to 8mm or 10mm solid circular conductor, or flat tape to 50mm^2 and 70mm^2 cable. This is ideal where the lightning protection system has been designed in 8mm copper conductor but the connection to the earth rod is made using 25 x 3mm copper tape. These interface test clamps will also serve for making through joints and tee connections in 8mm solid circular conductor, flat tape or cable.

For use with Bare Copper Conductors

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8 & 25 x 3	70	34	15	0.25	25	JYG 08
10 & 25 x 3	70	36	18	0.25	25	JYG 10

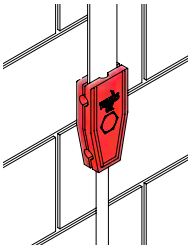
Material: High Copper Alloy.

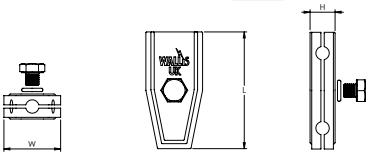
For use with Bare Aluminium Conductors

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8 & 25 x 3	70	34	15	0.09	25	JYA 08
10 & 25 x 3	70	36	18	0.09	25	JYA 10

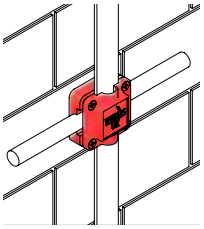
Material: Aluminium

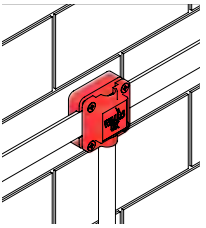
BS EN 62561-1 Class H **Tightening torque 13 Nm**





JOM 050





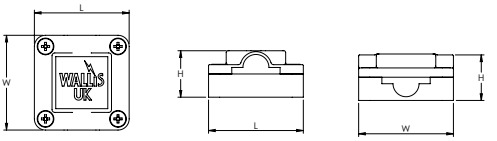
Solid Circular to Tape Connectors

This Wallis four-way connector is suitable for crossing over flat tape and solid circular conductor. It will also serve for making straight through joints and tee connections.

For use with Bare Copper Conductors

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
50, 8 & 25 x 3	51	51	25	0.27	25	JOM 050
	51	51	31	0.30		JOM 070
	51	51	34	0.31		JOM 095
	51	51	37	0.32		JOM 120
						JOM 240
						JOM 300

Material: High Copper Alloy.



Metalwork Bonding Clamps

These clamps are designed for bonding 8mm solid circular conductors onto metal surfaces.

For use with Bare Solid Circular Copper Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	82	40	25	0.14	10	**MBG 08**

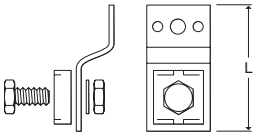
Material: Copper.

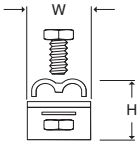
For use with Bare Solid Circular Aluminium Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	82	40	25	0.09	10	**MBA 08**

Material: Aluminium.

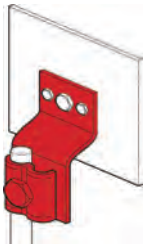
BS EN 62561-1 Class H





MBG 08

MBA 08



Bimetallic Connectors

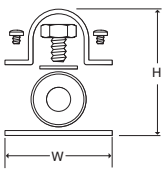
These connectors are used to join 8mm aluminium and copper solid circular conductors together. They are a neat and practical jointing method without the need for tinning, riveting or wrapping the joint.

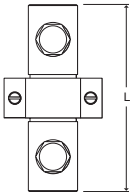
Conductor Size mm	Material Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	Aluminium & Copper	78	28	28	0.25	10	**BIM 08**
	Stainless Steel	71	22	19	0.09		**BSS 08**

We also offer connectors suitable for joining 8mm aluminium solid circular conductor to 25 x 3mm copper tape.

Conductor Size mm	Material Type	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8 to 25 x 3	Aluminium & Copper	78	28	29	0.20	10	**BIM 25308**
	Stainless Steel	73	32	15	0.13	50	**BSS 25308**

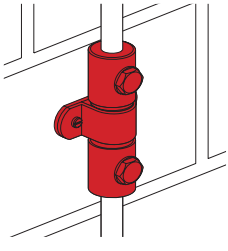
BS EN 62561-1 Class H





BIM 08

BSS 08




BRG 08

Rainwater Pipe Bonds

This pipe bond can be used on any application where the perforated tape can be wrapped around circular objects such as pipes or rails etc.

For use with Bare Solid Circular Copper Conductor

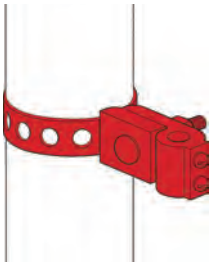
Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	55	32	17	0.37	5	BRG 08

Material: High Copper Alloy with Perforated Copper Tail.

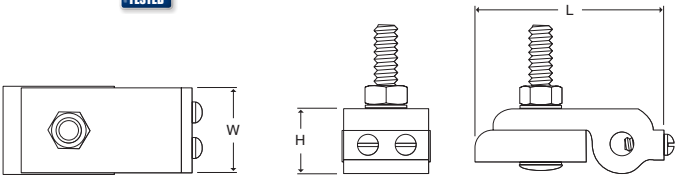
For use with Bare Solid Circular Aluminium Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	51	31	16	0.09	5	BRA 08

Material: Aluminium with Perforated Steel Tail.



BS EN 62561-1 Class H




BBG 08


BBA 08

Circular 'B' Bonds

This Wallis bond is used for bonding 8mm solid circular conductors to flat metal surfaces.

For use with Bare Solid Circular Copper Conductor

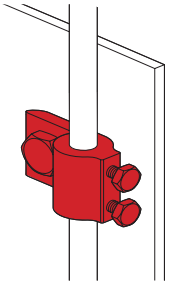
Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	52	33	18	0.14	10	BBG 08

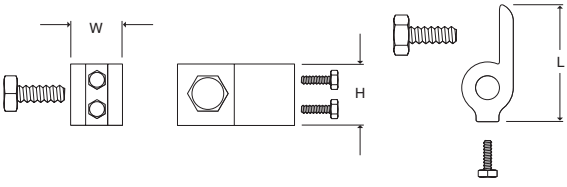
Material: High Copper Alloy.

For use with Bare Solid Circular Aluminium Conductor

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	52	33	18	0.09	10	BBA 08

Material: Aluminium.





Tower Earth Clamps

These single-plate tower earth clamps are used for bonding copper and aluminium conductors onto steel surfaces. The clamp is fixed by drilling a hole in the steelwork and securing with the set screw provided.

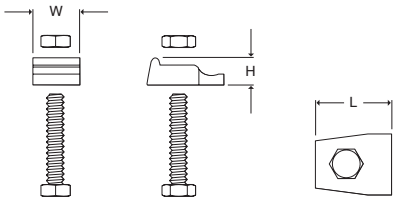
BTC 008

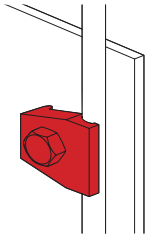
For use with Bare Solid Circular Copper Conductor

Conductor Size mm	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
8	34	23	33	M10 x 50mm	0.09	10	**BTC 008**

Material: High Copper Alloy,

BS EN 62561-1 Class H





Multi-Purpose 'B' Bonds

These Wallis Multi-Purpose 'B' Bonds can be used for bonding both 25 x 3mm flat tape and 8mm diameter solid circular conductor to flat metal surfaces.

BBG 25308

BBA 25308

For use with Bare Copper Conductors

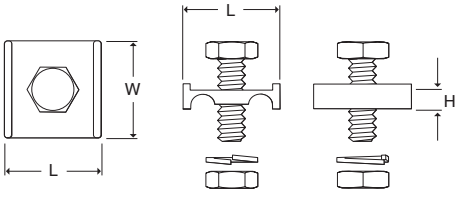
Conductor Size mm	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
8 & 25 x 3	34	34	13	M8 x 25mm	0.09	25	**BBG 25308**

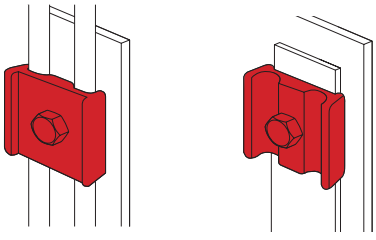
Material: High Copper Alloy.

For use with Bare Aluminium Conductors

Conductor Size mm	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
8 & 25 x 3	34	34	13	M8 x 25mm	0.04	25	**BBA 25308**

Material: Aluminium





HPY 008

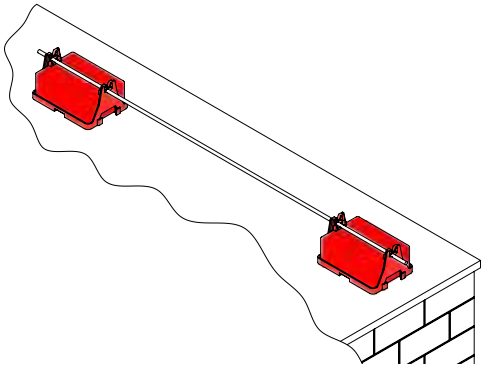
Pyramid Holdfast

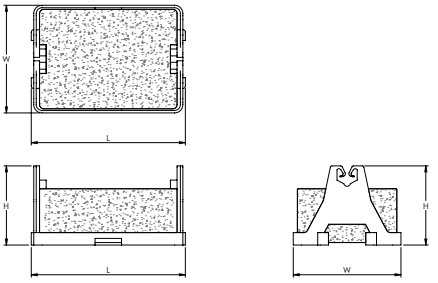
The Pyramid Holdfast is designed to support 8mm diameter bare solid circular conductors on flat roofs.
Manufactured from black weather-resistant plastic with a frost proof concrete insert. The lip around the base enables the holdfast to be installed onto bitumen type roofs.

For use with Bare Solid Circular Conductors

Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
8	120	95	72	0.98	10	**HPY 008**

Material: Plastic base with a Concrete Insert.





GCS 050

ACS 050

Circular Conductor Shoes

Used to bond 8mm bare solid circular conductors to metal surfaces.

For use with Bare Solid Circular Copper Conductor

Conductor Size mm	Palm Hole Ø mm	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
8	12	61	23	25	M6 x 12mm	0.10	25	**GCS 050**

Material: High Copper Alloy.

For use with Bare Solid Circular Aluminium Conductor

Conductor Size mm	Palm Hole Ø mm	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
8	12	61	23	25	M6 x 12mm	0.04	25	**ACS 050**

Material: Aluminium.

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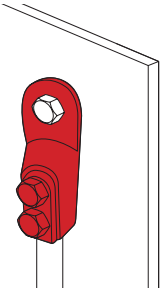
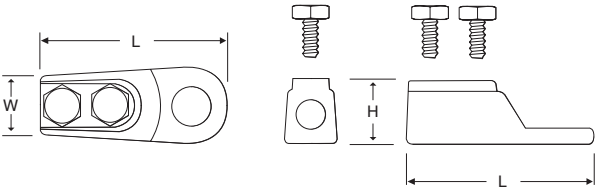




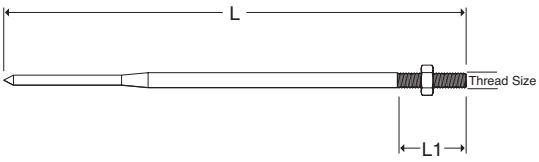
Taper Pointed Air Rods

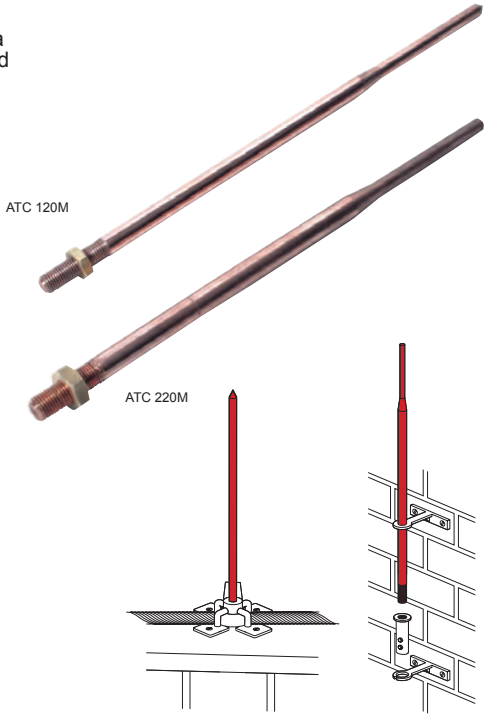
Air rods form an important part of the air termination network of a lightning protection system. All of our copper air rods are supplied with a brass locknut enabling the rod to be locked tight against the conductor. Please see pages 79 - 81 for further information on our range of saddles, brackets and couplings.

Thread Size	L mm	L1 mm	Unit Weight kg	Pack Quantity	Part Number
M16	300	41	0.53	5	ATC 112M
	500		0.85		ATC 120M
	600		1.00		ATC 124M
	1000		1.70		ATC 139M
	1500		2.59		ATC 160M
	2000		3.47		ATC 179M
	3000		5.10		ATC 192M

Material: Copper.

TESTED **BS EN 62561-2**





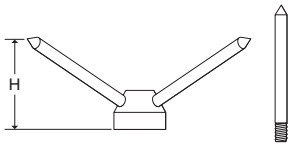
Multi-Point

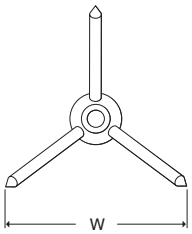
Used in conjunction with the taper pointed copper air rods.

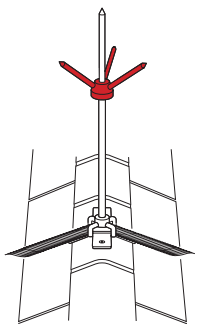
Air Rod Ø mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
16	156	72	0.32	5	MPC 16

Material: High Copper Alloy Base with Copper Spikes.

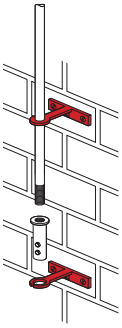
TESTED **BS EN 62561-2**







AMBG 16



Side Mounting Air Rod Brackets

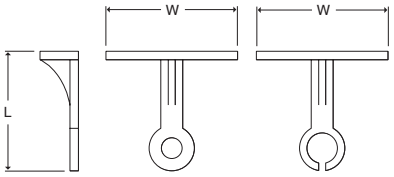
These brackets provide a 75mm projection from the building face and are used where it is not possible to fit a saddle onto the building roof. The brackets are used in conjunction with the rod to cable coupling which is used to secure the cable to the air rod.

The side mounting air rod brackets are purchased as a set.

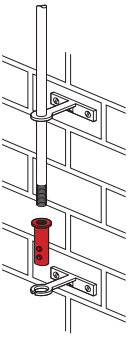
For use with Copper Air Rods

Rod Ø mm	L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
16	97	120	0.75	5	**AMBG 16**

Material: High Copper Alloy.



AOG 070



Rod to Cable Couplings

Enables the stranded cable to be connected to the air rod. Used in conjunction with the side mounting air rod brackets.

Conductor Size mm²	Thread Size	L mm	D mm	Unit Weight kg	Pack Quantity	Part Number
50	M16	80	40	0.25	5	**AOG 050**
70						**AOG 070**

Material: High Copper Alloy.

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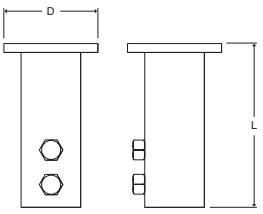
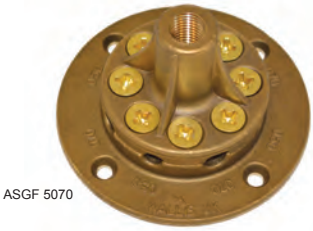


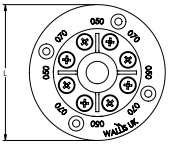
Air Rod Cable Saddles

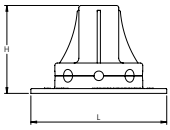
These saddles are used to support the copper taper pointed air rods on flat roof surfaces.

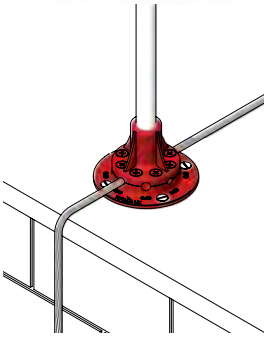
Conductor Size mm²	Thread Size	L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
50 - 70	M16	70	65	0.90	5	ASGF 5070
95 - 120	M20	125	-	0.90		ASGF 5070/20

Material: High Copper Alloy.


ASGF 5070







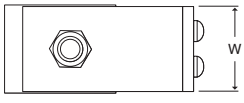
Rainwater Pipe Bonds

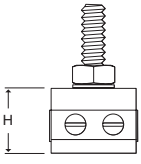
This pipe bond can be used on any application where the perforated tape can be wrapped around circular objects such as pipes or rails etc.

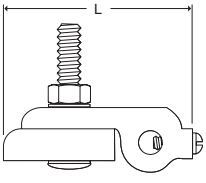
For use with Bare Stranded Conductor

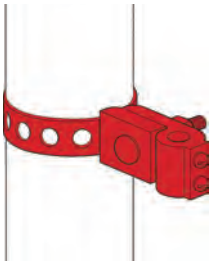
Conductor Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
70	56	31	18	0.33	5	BRG 070

Material: High Copper Alloy with Perforated Copper Tail









Cable Shoes

Used to bond stranded copper conductors to metal surfaces.

Conductor Size mm²	Palm Hole Ø mm	L mm	W mm	H mm	Set Screws	Unit Weight kg	Pack Quantity	Part Number
50	12	61	23	25	M6 x 12mm	0.10	25	GCS 050
70			25	27		0.12		GCS 070
95			27	29		0.14		GCS 095

Material: High Copper Alloy.

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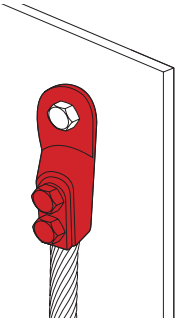
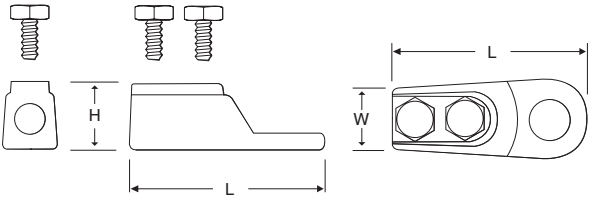


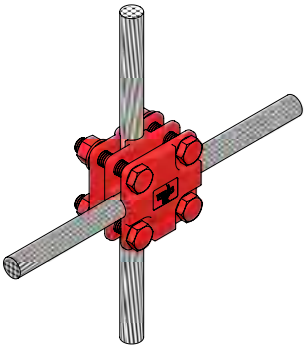


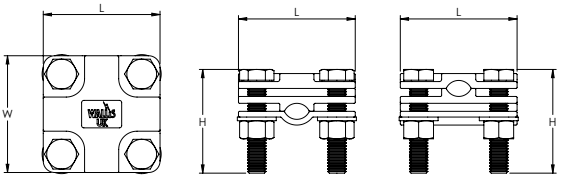
Cable to Cable Junction Clamp

These Wallis four-way connectors are suitable for making cross, straight through or tee joints for stranded copper.

Conductor Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
35 - 120	55	55	50	0.51	5	JGX 120
35 - 240	65	65	55	0.68		JGX 240

Material: High Copper Alloy with Stainless Steel Fittings.





One Hole Cable Clips

Wallis one hole cable clips provide an easy method of fixing stranded copper conductors to surfaces.

For use with Bare Stranded Copper Conductors

Conductor Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
6	10	10	5	0.01	50	PCC 006
10	10	10	5	0.01		PCC 010
16	15	10	5	0.01		PCC 016
25	15	10	8	0.01		PCC 025
35	18	10	8	0.01		PCC 035
50	18	10	10	0.01		PCC 050
70	22	10	10	0.01		PCC 070
95	22	10	13	0.01		PCC 095
120	25	15	15	0.01		PCC 120
150	25	15	15	0.02		PCC 150
185	30	15	20	0.02		PCC 185
240	30	20	20	0.02		PCC 240
300	35	20	25	0.02		PCC 300

Material: Copper.

PCC 010

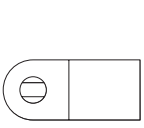
PCC 050

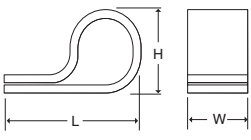
For use with PVC Insulated Stranded Copper Conductors

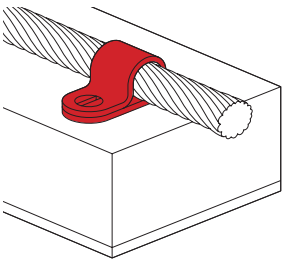
Conductor Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
6	10	10	5	0.01	50	PCP 006
10	10	10	7	0.01		PCP 010
16	15	10	7	0.01		PCP 016
25	15	10	10	0.01		PCP 025
35	18	10	10	0.01		PCP 035
50	18	10	15	0.01		PCP 050
70	22	10	15	0.01		PCP 070
95	22	10	15	0.01		PCP 095
120	25	15	20	0.01		PCP 120
150	25	15	20	0.02		PCP 150
185	30	15	25	0.02		PCP 185
240	30	20	25	0.02		PCP 240
300	35	20	30	0.02		PCP 300

Material: Copper.

PCP 300



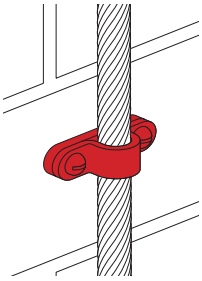


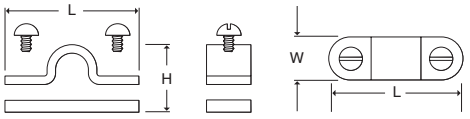


DCG 006

DCG 025

DCG 150





Metallic Cable Clips

Metallic cable clips secure the stranded copper conductor to the building surface.

Fix using countersunk woodscrew 1 ½" x No. 10 and No. 10 wall plug.

For use with Bare Stranded Copper Conductors

Conductor Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
6	46	17	12	0.04	50	DCG 006
10	46	17	12	0.04	50	DCG 010
16	46	17	17	0.05	50	DCG 016
25	46	17	17	0.06	50	DCG 025
35	60	20	22	0.07	50	DCG 035
50	60	20	22	0.07	50	DCG 050
70	60	20	22	0.08	25	DCG 070
95	60	20	22	0.08	25	DCG 095
120	60	20	23	0.09	25	DCG 120
150	60	20	28	0.09	25	DCG 150
185	60	20	26	0.09	25	DCG 185
240	60	20	29	0.10	25	DCG 240
300	60	20	31	0.10	25	DCG 300
400						DCG 400

Material: High Copper Alloy.

For use with PVC Insulated Stranded Copper Conductors

Conductor Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
6	46	17	14	0.04	50	DGP 006
10	46	17	14	0.04	50	DGP 010
16	46	17	19	0.05	50	DGP 016
25	46	17	19	0.06	50	DGP 025
35	60	20	24	0.07	50	DGP 035
50	60	20	24	0.07	50	DGP 050
70	60	20	24	0.08	25	DGP 070
95	60	20	24	0.08	25	DGP 095
120	60	20	25	0.09	25	DGP 120
150	60	20	30	0.09	25	DGP 150
185	60	20	28	0.09	25	DGP 185
240	60	20	31	0.10	25	DGP 240
300	60	20	33	0.10	25	DGP 300

Material: High Copper Alloy.

For use with Lead Sheathed Copper Conductors

Conductor Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
240						DCL 240
400						DCL 400

Material: High Copper Alloy.

Square Cable Clamps

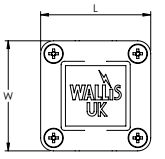
These Wallis four-way connectors are suitable for making cross, straight through or tee joints in stranded copper conductor.

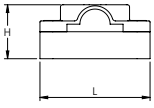
Cable Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
50	51	51	25	0.27	25	JOM 050
70	51	51	31	0.30		JOM 070
95	51	51	34	0.31		JOM 095
120	51	51	38	0.32		JOM 120
240						JOM 240
300						JOM 300

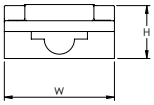
JOM 050

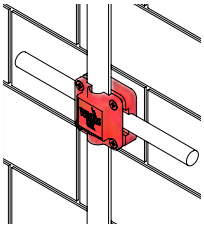
Material: High Copper Alloy.

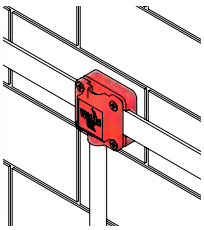
BS EN 62561-1 Class H











Universal Cable Connectors

This connector is suitable for joining cables in a test point as part of the lightning protection system.

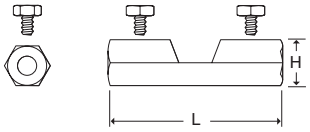
The base has a countersunk hole in the middle for securing the connector to the building surface. Fix using countersunk woodscrew 1 ½ " x No. 10 and No. 10 wall plug.

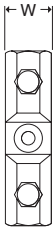
Conductor Size mm²	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
50	71	21	19	0.19	25	UC 050
70				0.17		UC 070
95				0.15		UC 095

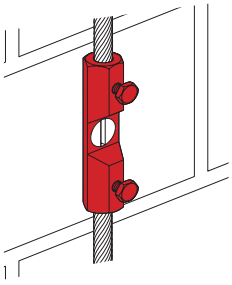

UC 070

Material: Naval Brass.

BS EN 62561-1 Class H **Tightening torque 13 Nm**







BTC 070

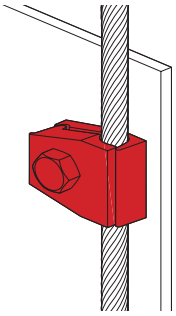
Tower Earth Clamps

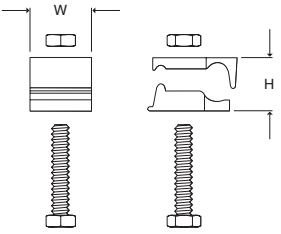
These double-plate tower earth clamps are used for bonding stranded copper conductors onto steel surfaces. The clamp is fixed by drilling a hole in the steelwork and securing with the set screw provided.

Conductor Range mm²	L mm	W mm	H mm	Set Screw	Unit Weight kg	Pack Quantity	Part Number
16 - 70	45	30	17	M10 x 50mm	0.12	10	BTC 070
70 - 120	48	35	22	M12 x 60mm	0.23		BTC 120
120 - 185	55	40	28	M12 x 75mm	0.30		BTC 185
185 - 240	63	45	35	M12 x 80mm	0.40		BTC 240
240 - 300	70	53	42	M12 x 90mm	0.60		BTC 300

Material: High Copper Alloy.

BS EN 62561-1 Class H





JOM 050

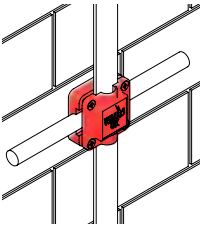
Cable to Tape Connectors

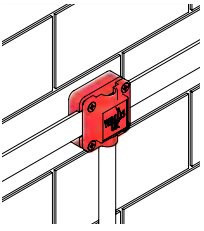
This Wallis four-way connector is suitable for crossing over flat copper tape and bare stranded copper cable. It will also serve for making straight through joints and tee connections.

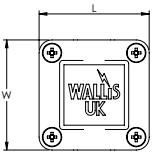
Cable Size mm²	Tape Size mm	L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
50	25 x 3	51	51	25	0.27	25	JOM 050
70		51	51	31	0.30		JOM 070
95		51	51	34	0.31		JOM 095
120		51	51	37	0.34		JOM 120
240							JOM 240
300	50 x 6						JOM 300

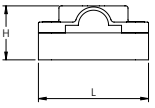
Material: High Copper Alloy.

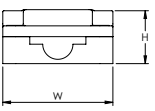
BS EN 62561-1 Class H **Tightening torque 6 Nm**











Strike Pads

The Wallis strike pads are used where it is not possible to install a conductor on the roof or side of a building. A typical application would be on the roof of a car park where the conductor is laid underneath the tarmac and the strike pads fitted on top. These strike pads are supplied with a 40mm dowel and nut.

SC 01

SA 01

For use with Copper Conductor

D mm	H mm	Unit Weight kg	Pack Quantity	Part Number
122	40	0.60	5	**SC 01**

Material: High Copper Alloy.

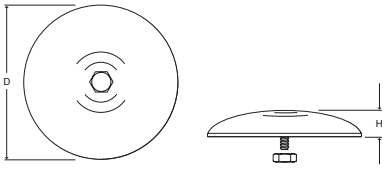
For use with Aluminium Conductor

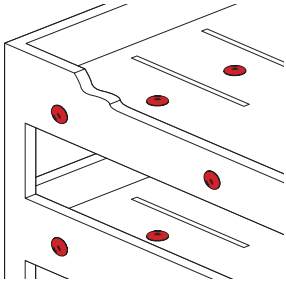
D mm	H mm	Unit Weight kg	Pack Quantity	Part Number
122	40	0.20	5	**SA 01**

Material: Aluminium.

BS EN 62561-1 Class H

Tightening torque 20 Nm





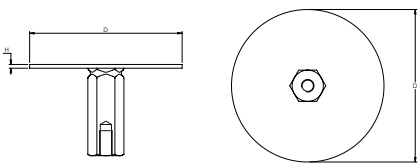
Stainless Steel Strike Pads

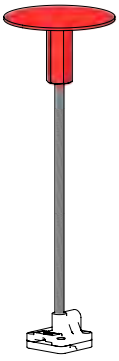
These Wallis stainless steel strike pads are commonly used in areas where a better aesthetical finish is preferred. The stainless steel strike pads offer a brushed look and with a flat head these can be used on exposed balconies, public access areas and complex roof façades.

For use with Copper/Aluminium Conductors

D mm	H mm	Unit Weight kg	Pack Quantity	Part Number
122	3	0.30	5	**SPS 001**

Material: SS316 Stainless Steel.





Stainless Steel Strike Pad Set

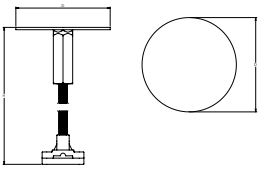
This Wallis stainless steel strike pad is a pre-assembled set of a stainless steel strike pad (SPS001), multi-purpose base (UAG253), extended dowel, for deep finish areas (ERD300), and lock nuts. The stainless steel strike pad is used in areas where the air termination network is installed within the makeup level with varying depths of finish areas. The stainless steel strike pads offer a brushed look and with a flat head they can be used on exposed balconies, public access areas and complex roof façades.

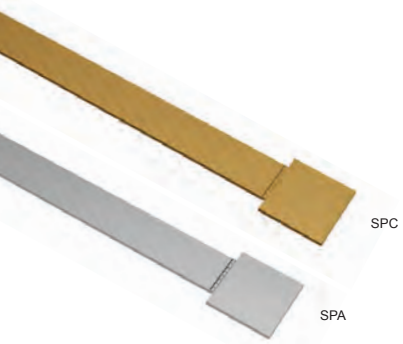
The Strike Pad can be manufactured to any desired colour so long as the correct RAL number is supplied to us.

For use with Copper & Aluminium conductors

D mm	H mm	Unit Weight kg	Pack Quantity	Part Number
122	310	0.80	1	**SPS001 SET**

Material: Stainless Steel.





Interceptor Plates

These Wallis interceptor plates fit under the roof tile and are connected into the lightning protection system. The square plate protrudes from the tile and provides the interception point.

For use with Copper Conductor

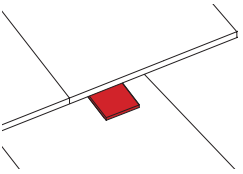
L mm	L1 mm	W mm	Unit Weight kg	Pack Quantity	Part Number
500	50	50	0.40	5	**SPC**

Material: High Copper Alloy.

For use with Aluminium Conductor

L mm	L1 mm	W mm	Unit Weight kg	Pack Quantity	Part Number
500	50	50	0.11	5	**SPA**

Material: Aluminium.



Oxide Inhibiting Compound

We recommend the use of an oxide inhibitor whenever aluminium fittings are installed on a lightning protection system.

Penetrox electrical joint compound is a natural-petroleum based grease that seals out oxygen and moisture on aluminium to aluminium and aluminium to copper connections. It is not recommended for use with rubber or polyethylene materials

Description	Unit Weight kg	Pack Quantity	Part Number
8oz plastic squeeze bottle	0.26	1	**IC 08**

CoSHH datasheet available on request.

Puddle Flanges

The puddle flange is used where the down conductor must pass through a roof or waterproof membrane. The flats of the flange are made waterproof by fixing with glue, concrete or specialist roofing materials. See page 34 for our range of clamps suitable for use with puddle flanges.

For use with Copper Conductor

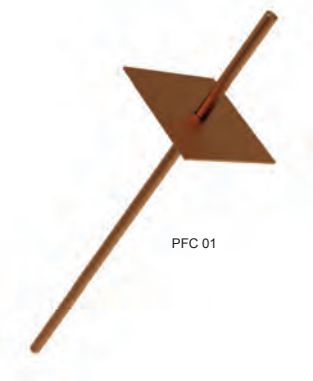
L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
600	150 x 150	1.68	1	**PFC 01**

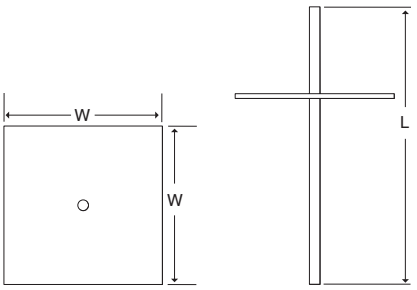
Material: Copper.

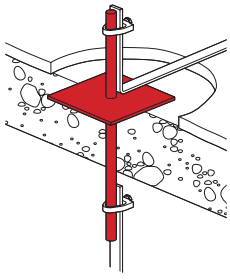
For use with Aluminium Conductor

L mm	W mm	Unit Weight kg	Pack Quantity	Part Number
600	150 x 150	0.54	1	**PFA 01**

Material: Aluminium.


PFC 01





Wallis Sealing Tape

A waterproof tape for wrapping joints to provide protection against corrosion.

Description	Unit Weight kg	Pack Quantity	Part Number
50mm wide x 10m length roll	0.70	1	DT 510

Silfos

Silfos is an alloy of silver, phosphorous and copper. It is used to braze copper to copper in air without the use of flux.

Description	Unit Weight kg	Pack Quantity	Part Number
50mm x 0.12 x 8m length roll	0.50	1	SILFOS

CoSHH datasheet available on request.

Bitumen Felt Roll

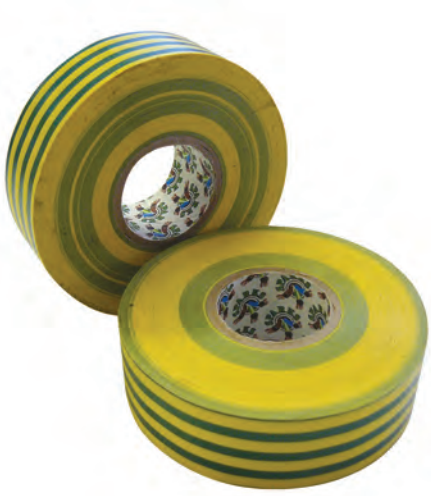
Supplied in rolls for use on asphalt roofs.

Description	Unit Weight kg	Pack Quantity	Part Number
100mm wide x 10m length roll	2.64	1	**BFR 01**

Green & Yellow PVC Insulating Tape

General-purpose insulating tape for electrical applications.

Description	Unit Weight kg	Pack Quantity	Part Number
25mm wide x 33m length roll	0.14	1	**GYT 2533**



Tinmans Solder

Tinmans commercial grade solder supplied by the kilogram (4 sticks).

Description	Unit Weight kg	Pack Quantity	Part Number
Tinmans Solder (4 sticks)	1.00	1	**FX 10**

Material: 60% Tin, 40% Lead.

Flux

A well-established and reliable multi-purpose flux paste. It is designed for engineering and sheet metal work, and is equally as effective for soldering of copper products.
Use with Tinmans Solder.

Description	Unit Weight kg	Pack Quantity	Part Number
Fluxite soldering paste 100g tin	0.10	1	**FX 02**

Plain Channel

These channels offer total flexibility in design and construction of assemblies for framing applications.

Unslotted Channel

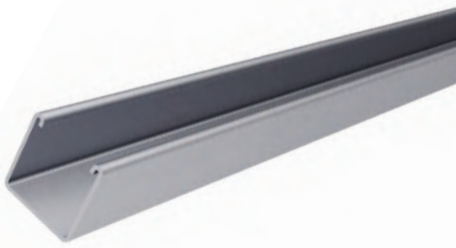
L mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
3000	41	41	8.70	1	UNISTRUT/US

Material: Galvanised Steel.

Slotted Channel

L mm	L1 mm	W mm	H mm	Unit Weight kg	Pack Quantity	Part Number
3000	50	41	41	8.20	1	UNISTRUT

Material: Galvanised Steel.



Wallis G-Beam Clamp

This product is used to provide a solid fixing to steel constructions without the need for welding or drilling.

L mm	H mm	Unit Weight kg	Pack Quantity	Part Number
44	52	0.14	50	GEE 003

Material: Iron Body with Steel Fittings.

Heavy Duty Earthing Clamp with 5 Metre Cable

This heavy duty stainless steel earthing clamp is primarily used for earthing 205 litre drums, IBC's, production vessels and road tankers etc. The clamp consists of twin tungsten carbide teeth, which allows for effective penetration of paint and contamination.

This product is supplied complete with chemically resistant Cen-Stat 5m spiral Cable and 10mm ring terminal.

Jaw Opening mm	Cable Length M (max.)	Unit Weight kg	Pack Quantity	Part Number
35	5.0	1.09	1	**VESX 10**

Material: Stainless Steel.

Static Discharge Reel with Heavy Duty Earthing Clamp

This heavy duty stainless steel earthing clamp is primarily used for earthing 205 litre drums, IBC's, production vessels and road tankers. The clamp consists of twin tungsten carbide teeth, which allows for effective penetration of paint and contamination.

This product is supplied complete with a 15.2 metre retracting cable reel.

Jaw Opening mm	Cable Length M (max.)	Unit Weight kg	Pack Quantity	Part Number
35	15.2	6.00	1	**SDR 040**

Material: Stainless Steel.

Medium Duty Earthing Clamp with 3 Metre Cable

This medium duty stainless steel earthing clamp is primarily used for earthing buckets, small drums, containers and plant equipment. The clamp consists of twin tungsten carbide teeth, which allows for effective penetration of paint and contamination.

This product is supplied complete with chemically resistant Cen-Stat 3m spiral cable and 10mm ring terminal.

Jaw Opening mm	Cable Length M (max.)	Unit Weight kg	Pack Quantity	Part Number
15	3.0	0.56	1	**VESX 45**

Material: Stainless Steel.

Static Discharge Reel with Medium Duty Earthing Clamp

This medium duty stainless steel earthing clamp is primarily used for earthing buckets, small drums, containers and plant equipment. The clamp consists of twin tungsten carbide teeth, which allows for effective penetration of paint and contamination.

This product is supplied complete with a 6.1 metre retracting cable reel.

Jaw Opening mm	Cable Length M (max.)	Unit Weight kg	Pack Quantity	Part Number
15	6.1	3.00	1	**SDR 030**

Material: Stainless Steel.

Static Discharge Reel with Medium Duty Earthing Clamp

This medium duty stainless steel earthing clamp is primarily used for earthing buckets, small drums, containers and plant equipment. The clamp consists of twin tungsten carbide teeth, which allows for effective penetration of paint and contamination.

This product is supplied complete with a 9.2 metre retracting cable reel.

Jaw Opening mm	Cable Length M (max.)	Unit Weight kg	Pack Quantity	Part Number
15	9.2	2.25	1	**VESX 45/R30**

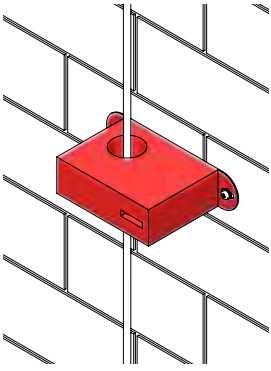
Material: Stainless Steel.

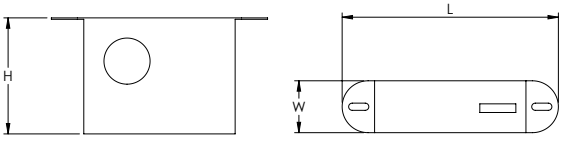
Wallis Lightning & Surge Event Counter

The Wallis Lightning & Surge Event Counter is used to register the number of direct lightning strikes and surge events. This product comes with many features and benefits.

- Long service life due to the fact that no battery is needed.
- Sensitive response with trigger current at 500A.
- Can register very high lightning strikes up to 150kA 8/20.
- 32mm through hole, easy to install and use, a simple insertion of the down conductor is required.
- IP67 for outdoor installation.
- Mechanical count, 6 digit display.

Counting Current (rise time ≥8μs)	> 500A
Sequence of Impulse	> 1s
Display Model	Electromechanical digital display
Indicator	0~999999
Current Sample Mode	Inductive Probe (Built-in)
Working Mode	No battery needed
Operation Temperature (°C)	-20~+60
Dimension of Window (mm)	32
Dimension of Counter (mm)	150 x 80.5 x 36
Enclosure Material	Steel
Degree of Protection	IP67
Part Number	WSPLSC





Free-Standing Air Terminals

A range of free-standing lightning interception terminals for the protection of roof-mounted equipment on surfaces where no penetration of the roof structure for anchoring is allowed.

A multi-component, stackable system with screw retention to achieve protection heights of up to 12m.

The Free-Standing Air Terminal system is designed to withstand wind speeds of up to 190kmh (118mph). The table on page 128 details the required components for installation in different wind speed zones. We recommend that all concrete bases are installed using the Protective Roof Pads (Wallis part number PRP 001).

Terminal Height m	Components m	Unit Weight kg	Pack Quantity	Part Number
3.0	Two-piece: 1.5 + 1.5	5.00		ATF 030
3.5	Two-piece: 2.0 + 1.5	5.50		ATF 035
4.0	Two-piece: 2.5 + 1.5	7.00		ATF 040
4.5	Two-piece: 3.5 + 1.0	9.20		ATF 045
5.0	Two-piece: 3.5 + 1.5	10.00		ATF 050
5.5	Two-piece: 4.0 + 1.5	10.60		ATF 055
6.0	Three-piece: 2.0 + 2.0 + 2.0	18.00		ATF 060
6.5	Three-piece: 2.5 + 2.0 + 2.0	21.20	1	ATF 065
7.0	Three-piece: 3.0 + 2.0 + 2.0	23.50		ATF 070
7.5	Three-piece: 3.5 + 2.0 + 2.0	26.00		ATF 075
8.0	Three-piece: 4.0 + 2.0 + 2.0	28.70		ATF 080
9.0	Three-piece: 4.0 + 2.5 + 2.5	30.50		ATF 090
10.0	Three-piece: 5.0 + 2.5 + 2.5	35.50		ATF 010
11.0	Three-piece: 5.0 + 3.5 + 2.5	37.80		ATF 011
12.0	Three-piece: 6.0 + 3.5 + 2.5	42.90		ATF 012

Material: Stainless Steel with Aluminium tip.

Free-Standing Air Terminal Supports

A range of supports to suit the free-standing air terminals shown on page 126. See table on page 128 for recommended component configuration.

Square Plate Support

For use with air terminals up to 4m. Used in conjunction with square concrete bases.

Terminal Height m	Terminal Barrel Ø mm	Required Mounting Space mm	Number of Concrete Supports	Unit Weight kg	Pack Quantity	Part Number
Up to 4.0m	42	650 x 650	4 or 8	7.00	1	**ATS 001**

Material: Stainless Steel.


ATS 001

Tripod Supports

For use with air terminals between 4.5m and 10m. Used in conjunction with round concrete bases.

Terminal Height m	Terminal Barrel Ø mm	Required Mounting Space mm	Number of Concrete Supports	Unit Weight kg	Pack Quantity	Part Number
4.5 - 5.5	42	1350 x 1350	3	8.00	1	**ATT 001**
6.0 - 8.0	60	1850 x 1850	6	25.00		**ATT 002**
9.0 - 10.0	60	1850 x 1850	10	40.00		**ATT 003**

Material: Stainless Steel.


ATT 001

Quad Support

For use with air terminals between 11m and 12m. This item comes with 36 concrete bases (32 x 16kgs + 4 x 12kgs).

Terminal Height m	Terminal Barrel Ø mm	Required Mounting Space mm	Number of Concrete Supports	Unit Weight kg	Pack Quantity	Part Number
11.0 - 12.0	60	3400 x 3400	36	697.00*	1	**ATQ 001**

Material: Stainless Steel.

*The unit weight is including the concrete supports.
The weight of the base frame is 137KGS


ATQ 001

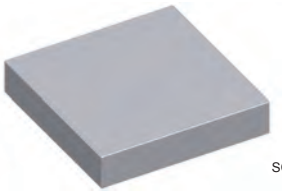
Wall Mounting Bracket

For use with air terminals up to 12m.

Terminal Height m	Terminal Barrel Ø mm	Required Mounting Space mm	Wall Distance mm	Unit Weight kg	Pack Quantity	Part Number
Up to 12.0m	60	300 x 300	200	8.55	1	**ATW 002**

Material: Stainless Steel.


ATW 002



SCB 012

RCB 012

PRP 001

Concrete Bases

Square

Used in conjunction with the Square Plate Support.

Base Weight kg	Size mm	Height mm	Pack Quantity	Part Number
12	300 x 300	60	1	SCB 012
16		80		SCB 016

Material: Concrete.

Round

Used in conjunction with the Tripod and Quad Supports. Integral M16 Thread.

Base Weight kg	Ø mm	Height mm	Pack Quantity	Part Number
12	380	75	1	RCB 012
16	380	93		RCB 016
20	380	105		RCB 020
25	420	105		RCB 025

Material: Concrete.

Protective Roof Pad

Suit all sizes of round and square concrete bases. Protects waterproof roofing membrane from damage.

Size mm	Pack Quantity	Part Number
Ø 445 / 300 x 300	1	PRP 001

Material: Rubber.

Free-Standing Air Terminal System

Terminal Height m	Terminal Part Number	Wind Speeds							
		Up to 130 kmh (81 mph)		Up to 150 kmh (93 mph)		Up to 170 kmh (106mph)		Up to 190 kmh (118 mph)	
		Support	Concrete Bases	Support	Concrete Bases	Support	Concrete Bases	Support	Concrete Bases
3.0	ATF 030	ATS 001	SCB 012 x 4	ATS 001	SCB 012 x 4	ATS 001	SCB 012 x 4	ATS 001	SCB 012 x 4
3.5	ATF 035	ATS 001	SCB 012 x 4	ATS 001	SCB 012 x 4	ATS 001	SCB 016 x 4	ATS 001	SCB 016 x 4
4.0	ATF 040	ATS 001	SCB 012 x 4	ATS 001	SCB 016 x 4	ATS 001	SCB 012 x 8	ATS 001	SCB 016 x 8
4.5	ATF 045	ATT 001	RCB 016 x 3	ATT 001	RCB 020 x 3	ATT 001	RCB 025 x 3	ATT 002	RCB 012 x 6
5.0	ATF 050	ATT 001	RCB 016 x 3	ATT 001	RCB 020 x 3	ATT 001	RCB 025 x 3	ATT 002	RCB 012 x 6
5.5	ATF 055	ATT 001	RCB 020 x 3	ATT 001	RCB 025 x 3	ATT 002	RCB 012 x 6	ATT 002	RCB 012 x 6
6.0	ATF 060	ATT 002	RCB 012 x 6	ATT 002	RCB 012 x 6	ATT 002	RCB 012 x 6	ATT 002	RCB 016 x 6
6.5	ATF 065	ATT 002	RCB 012 x 6	ATT 002	RCB 012 x 6	ATT 002	RCB 016 x 6	ATT 002	RCB 025 x 6
7.0	ATF 070	ATT 002	RCB 012 x 6	ATT 002	RCB 016 x 6	ATT 002	RCB 020 x 6	*	*
7.5	ATF 075	ATT 002	RCB 016 x 6	ATT 002	RCB 020 x 6	ATT 002	RCB 025 x 6	*	*
8.0	ATF 080	ATT 002	RCB 020 x 6	ATT 002	RCB 025 x 6	ATT 003	RCB 025 x 10	*	*
9.0	ATF 090	ATT 003	RCB 025 x 10	ATT 003	RCB 025 x 10	ATT 003	RCB 025 x 10	*	*
10.0	ATF 010	ATT 003	RCB 025 x 10	ATT 003	RCB 025 x 10	*	*	*	*
11.0	ATF 011	ATQ 001	-	ATQ 001	-	*	*	*	*
12.0	ATF 012	ATQ 001	-	ATQ 001	-	*	*	*	*

*** Please contact our sales office for information and advice.**

Conductors

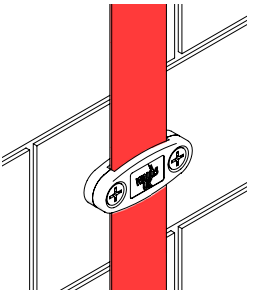
Introduction

The conductor is a vital component of any earthing and lightning protection system.

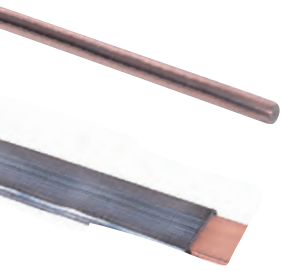
Wallis offers an extensive range of different types of conductors manufactured in both copper and aluminium which conform to the main British, European and world earthing and lightning protection standards.

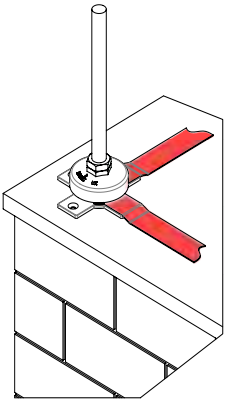
There are several important criteria to consider when selecting a conductor.

The conductor must be resilient to the environmental conditions in which it is installed. In particular it should be capable of withstanding mechanical damage and corrosion. It should also be compatible with the material of other connected components.



Secondly, the conductor should have sufficient cross-sectional area to be capable of carrying, without sustaining damage or deterioration, any currents that may reasonably be expected.





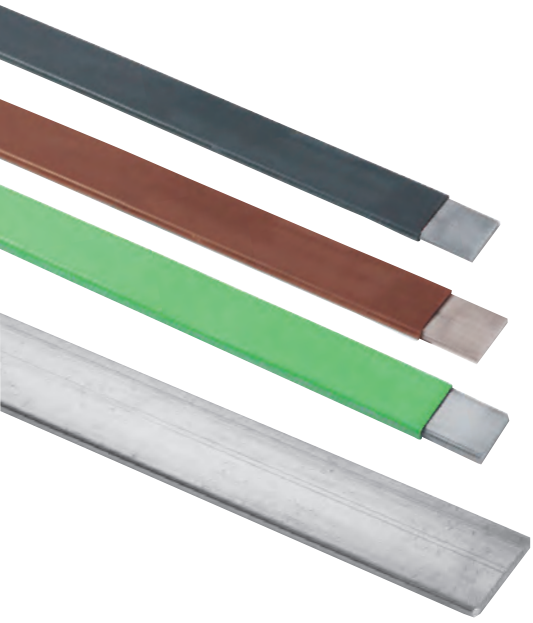
Copper Conductor Ratings

Fault current capacities, for one and three second durations, for a wide selection of standard sizes of copper tapes are shown in the table below. These conductor ratings are based upon the recommendations of BS 7430 with an initial conductor temperature of 30°C and a maximum temperature of 250°C.

Conductor Size mm	C.S.A. mm^2	kA for 1 second	kA for 3 seconds
12.5 x 1.5	18.75	3.3	**1.9**
12.5 x 3	37.5	6.6	**3.8**
20 x 1.5	30	5.3	**3.0**
20 x 3	60	10.6	**6.1**
25 x 1.5	37.5	6.6	**3.8**
25 x 3	75	13.2	**7.6**
25 x 4	100	17.6	**10.2**
25 x 6	150	26.4	**15.2**
30 x 2	60	10.6	**6.1**
30 x 3	90	15.8	**9.1**
30 x 4	120	21.1	**12.2**
30 x 5	150	26.4	**15.2**
31 x 3	93	16.4	**9.5**
31.5 x 4	126	22.2	**12.8**
31 x 6	186	32.7	**18.9**
38 x 3	114	20.1	**11.6**
38 x 5	190	33.4	**19.3**
38 x 6	228	40.1	**23.2**
40 x 3	120	21.1	**12.2**
40 x 4	160	28.2	**16.3**
40 x 5	200	35.2	**20.3**
40 x 6	240	42.2	**24.4**
40 x 6.3	252	44.4	**25.6**
50 x 3	150	26.4	**15.2**
50 x 4	200	35.2	**20.3**
50 x 5	250	44.0	**25.4**
50 x 6	300	52.8	**30.5**
50 x 6.3	315	55.4	**32.0**
50 x 8	400	70.4	**40.6**

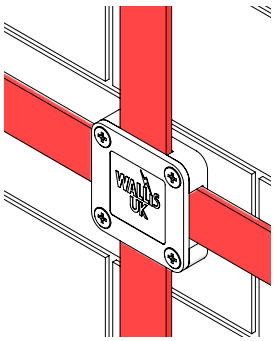
PVC Covered Conductors

Wallis offers a range of UV-stabilised PVC covered tapes and solid circular conductors in a range of different colours. These colours have been chosen to match the most common structural materials and will reduce the visual impact of a lightning protection conductor.



BLACK	18B29*	
BROWN	06C39*	
CREAM	RAL 9001	
GREEN	BS 6746C	
GREY	00A07*	
LIGHT IVORY	RAL 1015	
SAND	RAL 1002	
STONE	08B23*	
TERRACOTTA	RAL 2004	
WHITE	10B15*	

*** PVC colours to BS 5252**



TC 506
TC 406
TC 303
TC 256
TC 253
TC 203

Bare Copper Tapes

Wallis high conductivity bare copper tape is used on both lightning protection and earthing applications. It is annealed for ease of use and has radiused edges.

All our standard bare copper tapes are marked 'Wallis U.K. - BS EN 13601'. Other naming requirements can be requested. Additional costs might be incurred.

Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
12.5 x 1.5	18.75	0.17	100	**TC 121**
12.5 x 3	37.5	0.33	100	**TC 123**
20 x 1.5	30	0.27	100	**TC 201**
20 x 3	60	0.54	100	**TC 203**
20 x 4	80	0.71	70	**TC 204**
20 x 5	100	0.89	60	**TC 205**
25 x 1.5	37.5	0.33	100	**TC 251**
25 x 2	50	0.45	50	**TC 252**
25 x 2.5	62.5	0.56	90	**TC 2525**
25 x 3	75	0.67	25 & 50	**TC 253**
25 x 4	100	0.89	50	**TC 254**
25 x 5	125	1.12	40	**TC 255**
25 x 6	150	1.34	40	**TC 256**
30 x 2	60	0.54	50	**TC 302**
30 x 3	90	0.80	50	**TC 303**
30 x 3.5	105	0.94	50	**TC 3035**
30 x 4	120	1.07	40	**TC 304**
30 x 5	150	1.34	40	**TC 305**
30 x 10	300	2.68	20	**TC 3010**
31 x 3	93	0.83	50	**TC 313**
31.5 x 1.8	56.7	0.51	100	**TC 31518**
31.5 x 4	126	1.12	40	**TC 3154**
31 x 6	186	1.66	30	**TC 316**
32 x 6	192	1.71	30	**TC 326**
35 x 6	210	1.87	25	**TC 356**
38 x 3	114	1.02	50	**TC 383**
38 x 5	190	1.69	30	**TC 385**
38 x 6	228	2.03	25	**TC 386**
40 x 3	120	1.07	40	**TC 403**
40 x 4	160	1.43	30	**TC 404**
40 x 5	200	1.78	25	**TC 405**
40 x 6	240	2.14	25	**TC 406**
40 x 6.3	252	2.25	25	**TC 4063**
40 x 8	320	2.85	20	**TC 408**
50 x 3	150	1.34	40	**TC 503**
50 x 4	200	1.78	30	**TC 504**
50 x 5	250	2.23	20	**TC 505**
50 x 6	300	2.68	10 & 20	**TC 506**

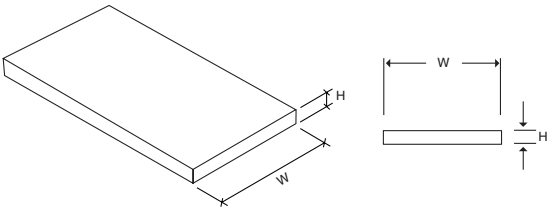
Table continues on P133

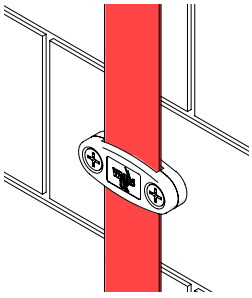
Bare Copper Tapes (continued)

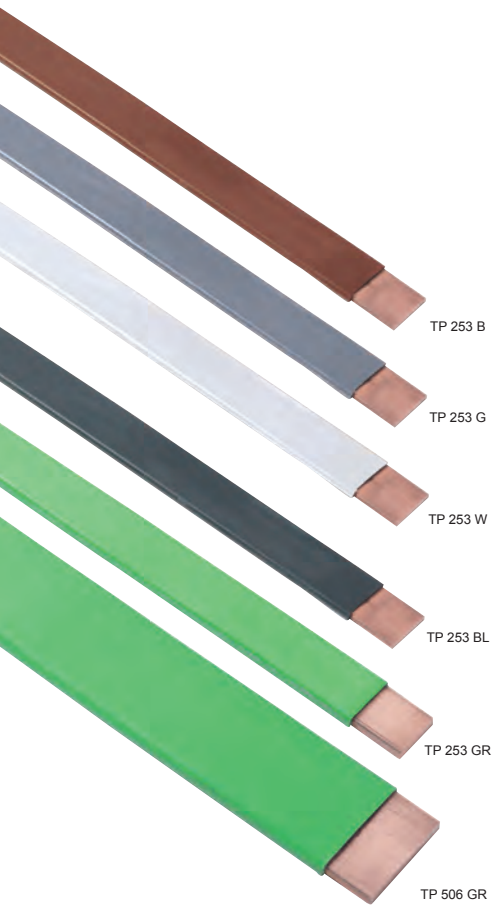
Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
50 x 6.3	315	2.81	20	**TC 5063**
50 x 7	350	3.12	20	**TC 507**
50 x 8	400	3.57	20	**TC 508**
50 x 10	500	4.46	10	**TC 5010**
50 x 12	600	5.35	10	**TC 5012**
60 x 5	300	2.68	20	**TC 605**
60 x 6	360	3.21	15	**TC 606**
60 x 8	480	4.28	12	**TC 608**
63 x 10	630	5.62	10	**TC 6310**
65 x 6	390	3.48	15	**TC 656**
70 x 6	420	3.75	15	**TC 706**
75 x 6	450	4.01	7	**TC 756**
75 x 12	900	8.03	8	**TC 7512**
80 x 6	480	4.28	12	**TC 806**

Material: Copper to BS EN 13601 (formerly BS 1432).

BS EN 62561-2







PVC Covered Copper Tapes

Wallis PVC covered copper tapes are mainly used as down conductors on a building's structural lightning protection system.

The copper is manufactured to BS EN 13601 and is annealed for ease of use.

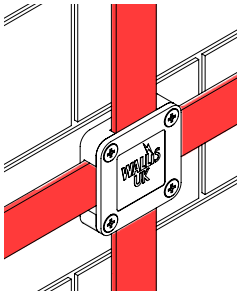
There is a choice of six standard PVC colours to match the most common building materials and provide an aesthetic finish to the external lightning protection system. All PVC coverings are UV stabilised although some discolouration may occur over time.

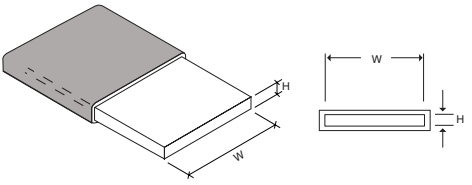
Other PVC colours are also available to order. These may be subject to minimum order quantities and lead times. Please contact our sales office for further information.

Size W x H mm	Colour	C.S.A. mm^2	Weight per Metre kg	Standard Coil Sizes m	Part Number
12.5 x 1.5	Black	18.75	0.21	100	**TP 121 BL**
25 x 3	Sand	75	0.725	25 & 50	**TP 253 AS**
	Brown				**TP 253 B**
	Black				**TP 253 BL**
	Cream				**TP 253 C**
	Grey				**TP 253 G**
	Green				**TP 253 GR**
	Light Ivory				**TP 253 LI**
	Stone				**TP 253 S**
	Terracotta				**TP 253 T**
	White				**TP 253 W**
25 x 6	Green	150	1.53	40	**TP 256 GR**
50 x 3	Green	150	1.59	40	**TP 503 GR**
50 x 6	Green	300	2.95	20	**TP 506 GR**

Material: Copper to BS EN 13601 (formerly BS 1432).
PVC colours to BS 5252 Green to BS 6746C

BS EN 62561-2



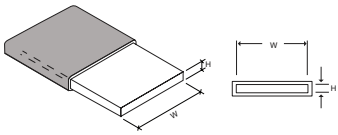


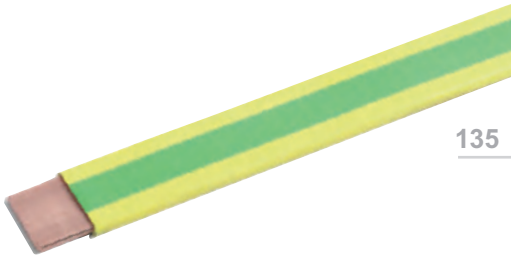
Green & Yellow PVC Insulated Copper Tape

Size W x H mm	C.S.A. mm²	Weight per Metre kg	Standard Coil Size m	Part Number
25 x 3	75	0.79	25 & 50	**TP 253 GY**
25 x 6	150	1.60	40	**TP 256 GY**

Material: Copper to BS EN 13601 (formerly BS 1432).
PVC colours to BS 6746C

BS EN 62561-2





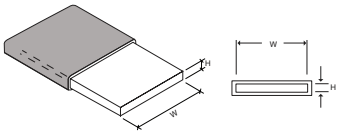
TP 253 GY

Lead Covered Copper Tape

Size W x H mm	C.S.A. mm²	Weight per Metre kg	Standard Coil Size m	Part Number
25 x 3	75	2.56	25	**TL 253**

Material: Copper to BS EN 13601 (formerly BS 1432).

BS EN 62561-2



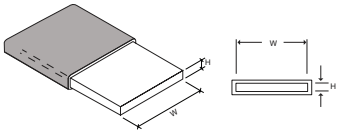
TL 253

LSOH Covered Copper Tapes

Size W x H mm	Colour	C.S.A. mm²	Weight per Metre kg	Standard Coil Size m	Part Number
25 x 3	Black	75	0.77	50	**TP 253 BLLSF**
25 x 3	Grey	75	0.77	25 & 50	**TP 253 GLSF**
25 x 3	Green	75	0.77	25 & 50	**TP 253 GRLSF**
25 x 3	White	75	0.77	50	**TP 253 WLSF**
25 x 6	Green	150	1.53	40	**TP 256 GRLSF**
40 x 6	Green	240	2.90	25	**TP 406 GRLSF**
50 x 6	Grey	300	2.95	20	**TP 506 GLSF**
50 x 6	Green	300	2.95	20	**TP 506 GRLSF**

Material: Copper to BS EN 13601 (formerly BS 1432)
PVC Colours to BS 5252 Green to BS 6746C.

BS EN 62561-2



TP 253 GRLSF

TT 506
TT 406
TT 303
TT 256
TT 253
TT 203

Tinned Copper Tapes

Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
12.5 x 1.5	18.75	0.17	100	**TT 121**
12.5 x 3	37.5	0.33	100	**TT 123**
20 x 1.5	30	0.27	100	**TT 201**
20 x 3	60	0.54	100	**TT 203**
20 x 4	80	0.71	70	**TT 204**
20 x 5	100	0.89	60	**TT 205**
25 x 1.5	37.5	0.33	100	**TT 251**
25 x 2	50	0.45	50	**TT 252**
25 x 2.5	62.5	0.56	90	**TT 2525**
25 x 3	75	0.67	25 & 50	**TT 253**
25 x 4	100	0.89	50	**TT 254**
25 x 5	125	1.12	40	**TT 255**
25 x 6	150	1.34	40	**TT 256**
30 x 2	60	0.54	50	**TT 302**
30 x 3	90	0.80	50	**TT 303**
30 x 3.5	105	0.94	50	**TT 3035**
30 x 4	120	1.07	40	**TT 304**
30 x 5	150	1.34	40	**TT 305**
30 x 10	300	2.68	20	**TT 3010**
31 x 3	93	0.83	50	**TT 313**
31.5 x 1.8	56.7	0.51	100	**TT 31518**
31.5 x 4	126	1.12	40	**TT 3154**
31 x 6	186	1.66	30	**TT 316**
32 x 6	192	1.71	30	**TT 326**
35 x 6	210	1.87	25	**TT 356**
38 x 3	114	1.02	25	**TT 383**
38 x 5	190	1.69	30	**TT 385**
38 x 6	228	2.03	25	**TT 386**
40 x 3	120	1.07	40	**TT 403**
40 x 4	160	1.43	30	**TT 404**
40 x 5	200	1.78	25	**TT 405**
40 x 6	240	2.14	25	**TT 406**
40 x 6.3	252	2.25	25	**TT 4063**
40 x 8	320	2.85	20	**TT 408**
50 x 3	150	1.34	40	**TT 503**
50 x 4	200	1.78	30	**TT 504**
50 x 5	250	2.23	20	**TT 505**
50 x 6	300	2.68	10 & 20	**TT 506**

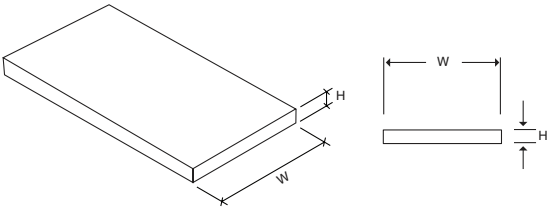
Table continues on P137

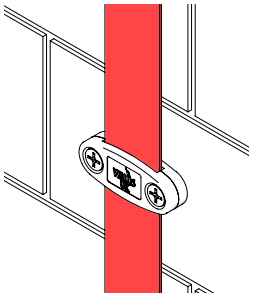
Tinned Copper Tapes (continued)

Size W x H mm	C.S.A. mm²	Weight per Metre kg	Standard Coil Size m	Part Number
50 x 6.3	315	2.81	20	**TT 5063**
50 x 7	350	3.12	20	**TT 507**
50 x 8	400	3.57	15	**TT 508**
50 x 10	500	4.46	10	**TT 5010**
50 x 12	600	5.35	10	**TT 5012**
60 x 5	300	2.68	20	**TT 605**
60 x 6	360	3.21	15	**TT 606**
60 x 8	480	4.28	12	**TT 608**
63 x 10	630	5.62	10	**TT 6310**
65 x 6	390	3.48	15	**TT 656**
70 x 6	420	3.75	15	**TT 706**
75 x 6	450	4.01	7	**TT 756**
75 x 12	900	8.03	8	**TT 7512**
80 x 6	480	4.28	12	**TT 806**

Material: Tinned Copper to BS EN 13601 (formerly BS 1432)

BS EN 62561-2

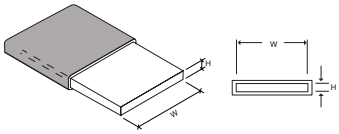


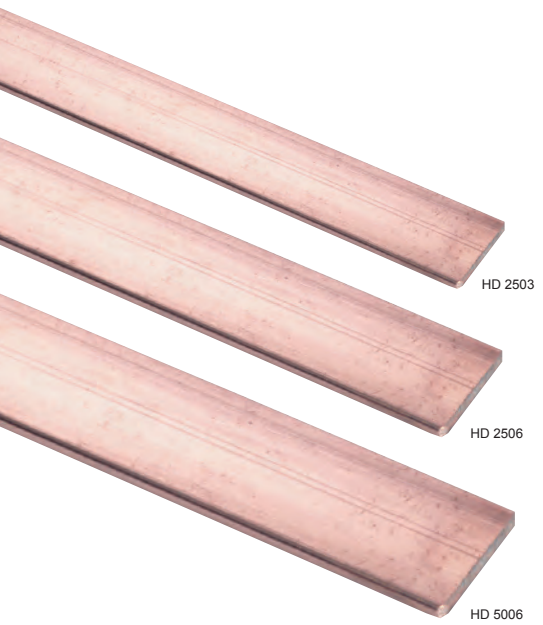


Green & Yellow PVC Insulated Tinned Copper Tape

Size W x H mm	C.S.A. mm²	Weight per Metre kg	Standard Coil Size m	Part Number
25 x 3	75	0.79	50	**TT 253 GY**

Material: Copper to BS EN 13601 (formerly BS 1432)
PVC colours to BS 6746C

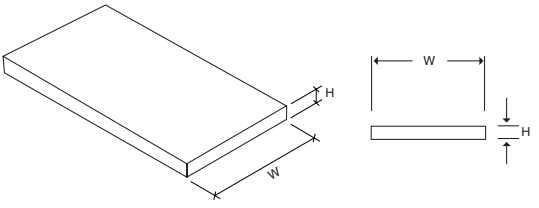




Bare Hard Drawn Copper Bars

Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Length m	Part Number
10 x 5	50	0.45	4	HD 1005
15 x 5	75	0.67		HD 1505
16 x 6	96	0.86		HD 1606
20 x 3	60	0.54		HD 2003
20 x 4	80	0.71		HD 2004
20 x 5	100	0.89		HD 2005
20 x 10	200	1.78		HD 2010
25 x 3	75	0.67		HD 2503
25 x 4	100	0.89		HD 2504
25 x 5	125	1.11		HD 2505
25 x 6	150	1.34		HD 2506
30 x 5	150	1.33		HD 3005
30 x 6	180	1.61		HD 3006
30 x 10	300	2.67		HD 3010
32 x 6	192	1.61		HD 3206
38 x 6	228	2.03		HD 3806
40 x 3	120	1.07		HD 4003
40 x 5	200	1.78		HD 4005
40 x 6	240	2.16		HD 4006
40 x 10	400	3.56		HD 4010
50 x 4	200	1.78		HD 5004
50 x 5	250	2.24		HD 5005
50 x 6	300	2.68		HD 5006
50 x 8	400	3.57		HD 5008
50 x 10	500	4.48		HD 5010
60 x 5	300	2.67		HD 6005
60 x 10	600	5.36		HD 6010
75 x 5	375	3.35		HD 7505
75 x 6	450	4.01		HD 7506
80 x 6	480	4.29		HD 8006
80 x 8	640	5.71		HD 8008
80 x 10	800	7.12		HD 8010
100 x 4	400	3.57		HD 10004
100 x 5	500	4.46		HD 10005
100 x 6	600	5.35		HD 10006
100 x 10	1000	8.94		HD 10010
100 x 12	1200	10.70		HD 10012

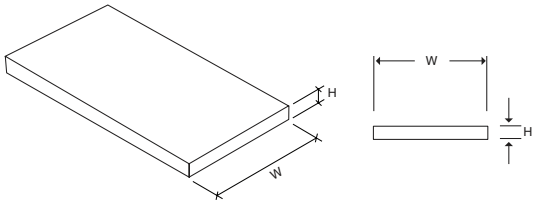
Material: Copper to BS EN 13601.

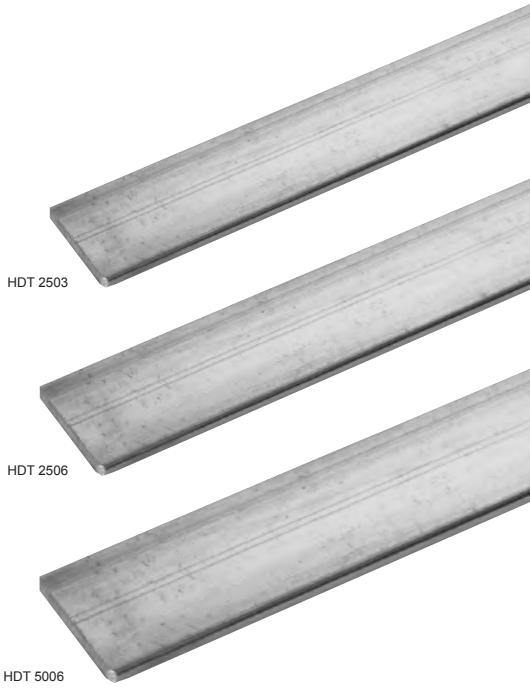


Tinned Hard Drawn Copper Bars

Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Length m	Part Number
10 x 5	50	0.45	4	HDT 1005
15 x 5	75	0.67		HDT 1505
16 x 6	96	0.86		HDT 1606
20 x 3	60	0.54		HDT 2003
20 x 4	80	0.71		HDT 2004
20 x 5	100	0.89		HDT 2005
20 x 10	200	1.78		HDT 2010
25 x 3	75	0.67		HDT 2503
25 x 4	100	0.89		HDT 2504
25 x 5	125	1.11		HDT 2505
25 x 6	150	1.34		HDT 2506
30 x 5	150	1.33		HDT 3005
30 x 6	180	1.61		HDT 3006
30 x 10	300	2.67		HDT 3010
32 x 6	192	1.61		HDT 3206
38 x 6	228	2.03		HDT 3806
40 x 3	120	1.07		HDT 4003
40 x 5	200	1.78		HDT 4005
40 x 6	240	2.16		HDT 4006
40 x 10	400	3.56		HDT 4010
50 x 4	200	1.78		HDT 5004
50 x 5	250	2.24		HDT 5005
50 x 6	300	2.68		HDT 5006
50 x 8	400	3.57		HDT 5008
50 x 10	500	4.48		HDT 5010
60 x 5	300	2.67		HDT 6005
60 x 10	600	5.36		HDT 6010
75 x 5	375	3.35		HDT 7505
75 x 6	450	4.01		HDT 7506
80 x 6	480	4.29		HDT 8006
80 x 8	640	5.71		HDT 8008
80 x 10	800	7.12		HDT 8010
100 x 4	400	3.57		HDT 10004
100 x 5	500	4.46		HDT 10005
100 x 6	600	5.35		HDT 10006
100 x 10	1000	8.94		HDT 10010
100 x 12	1200	10.70		HDT 10012

Material: Tinned Copper to BS EN 13601.

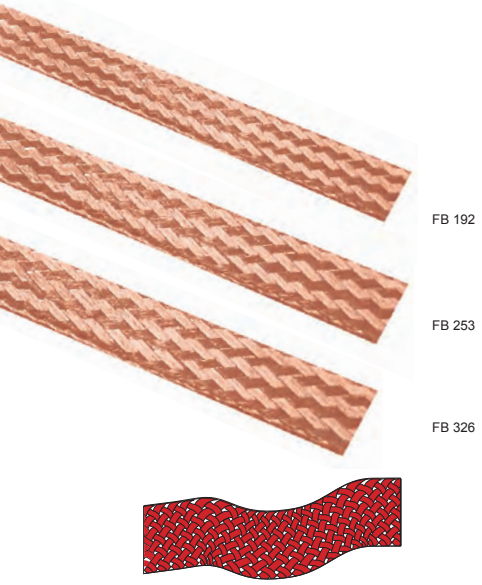




Bare Copper Flat Braids

Wallis copper braids are utilised as flexible earth bonding leads. Other sizes and constructions are available on request. Please contact our sales office for further information.

Nominal C.S.A mm^2	Nominal Size W x H mm	Current Rating Amps	Weight per Metre kg	Standard Coil Size m	Part Number
6	12 x 1.0	66	0.06	100	FB 121
10	15 x 1.5	90	0.10	50	FB 151
16	19 x 2.5	120	0.16		FB 192
25	23 x 2.0	160	0.25		FB 232
35	25 x 3.5	200	0.34		FB 253
50	30 x 5.0	250	0.48		FB 305
70	32 x 6.0	300	0.63		FB 326
95	37 x 6.0	350	0.93		FB 376
120	45 x 6.0	400	1.15		FB 456
150	50 x 8.0	500	1.45		FB 508

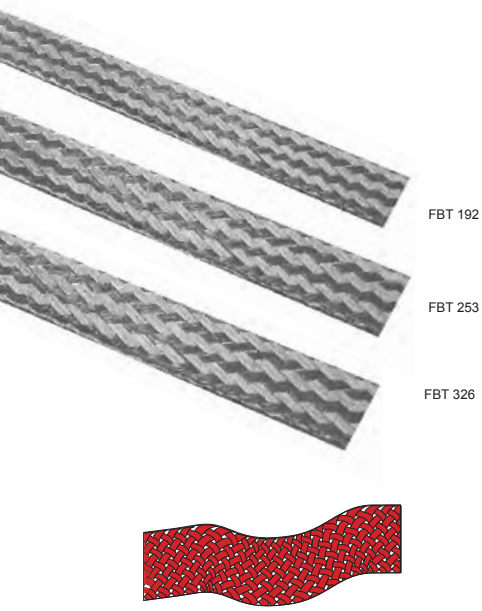


Material: Copper wire to BS EN 13602 (formerly BS 4109).

Tinned Copper Flat Braids

Wallis tinned copper braids are utilised as flexible earth bonding leads with additional corrosion protection
Other sizes, materials and constructions are available on request. Please contact our sales office for further information.

Nominal C.S.A mm^2	Nominal Size W x H mm	Current Rating Amps	Weight per Metre kg	Standard Coil Size m	Part Number
6	12 x 1.0	66	0.06	100	FBT 121
10	15 x 1.5	90	0.10	50	FBT 151
16	19 x 2.5	120	0.16		FBT 192
25	23 x 2.0	160	0.25		FBT 232
35	25 x 3.5	200	0.34		FBT 253
50	30 x 5.0	250	0.48		FBT 305
70	32 x 6.0	300	0.63		FBT 326
95	37 x 6.0	350	0.93		FBT 376
120	45 x 6.0	400	1.15		FBT 456
150	50 x 8.0	500	1.45		FBT 508



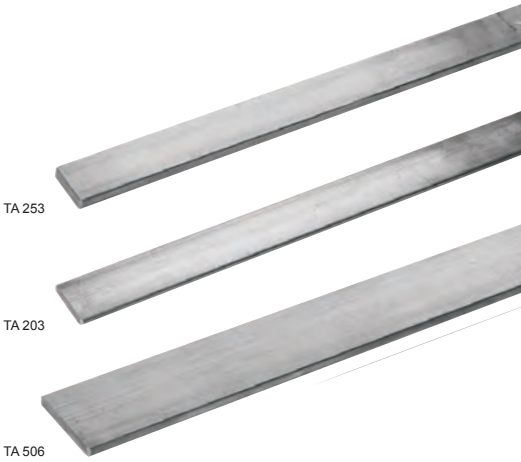
Material: Tinned Copper Wire to BS EN 13602 (formerly BS 4109).

Bare Aluminium Tapes

Wallis bare aluminium tapes are used on lightning protection system applications. The aluminium is annealed for ease of use and has radiused edges.

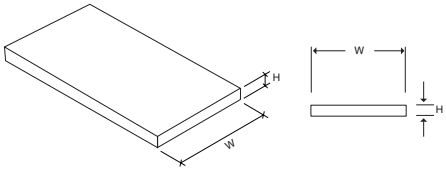
Customer naming requirements can be requested for this item. Additional costs might be incurred.

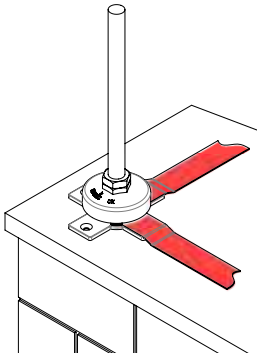
Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
12.5 x 1.5	18.75	0.05	50	**TA 121**
19 x 2	38	0.10		**TA 192**
20 x 1	20	0.05		**TA 201**
20 x 3	60	0.17		**TA 203**
25 x 3	75	0.21		**TA 253**
25 x 4	100	0.28		**TA 254**
25 x 6	150	0.42		**TA 256**
30 x 3	90	0.25		**TA 303**
40 x 3	120	0.34		**TA 403**
40 x 6	240	0.68		**TA 406**
50 x 3	150	0.42		**TA 503**
50 x 4	200	0.56		**TA 504**
50 x 6	300	0.85		**TA 506**
50 x 8	400	1.13		**TA 508**
60 x 3	180	0.51		**TA 603**
60 x 4	240	0.68		**TA 604**
60 x 6	360	1.02		**TA 606**
80 x 6	480	1.36		**TA 608**

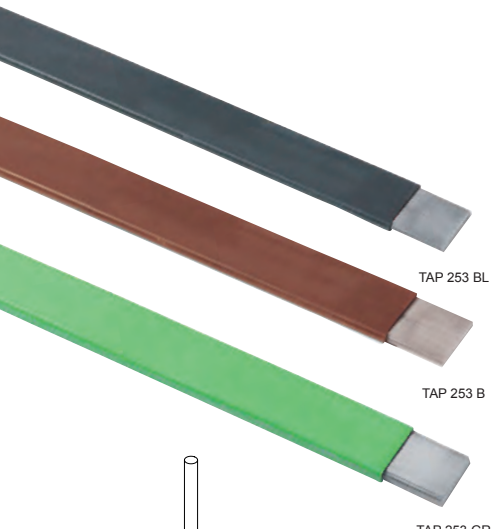


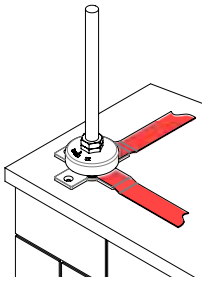
Material: Aluminium to BS EN 755-5.

BS EN 62561-2









PVC Covered Aluminium Tapes

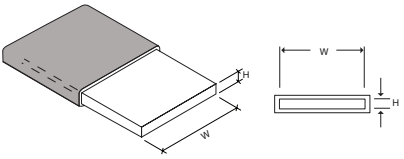
Wallis PVC covered aluminium tapes are available in a choice of seven standard colours to match the most common building materials and provide an aesthetic finish to the external lightning protection system. All PVC coverings are UV stabilised although some discolouration may occur over time.

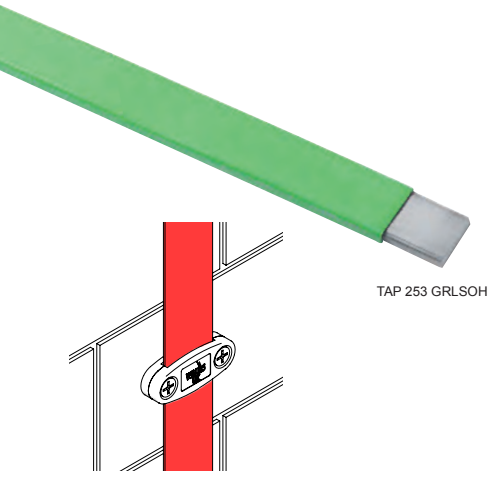
Other PVC colours are also available to order. These may be subject to minimum order quantities and lead times. Please contact our sales office for further information.

Size W x H mm	Colour	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
12.5 x 1.5	Black	18.75	0.09	50	TAP 121 BL
20 x 3	Black	60	0.25		TAP 203 BL
25 x 3	Brown	75	0.30		TAP 253 B
	Black				TAP 253 BL
	Grey				TAP 253 G
	Green				TAP 253 GR
	Stone				TAP 253 S
	Terracotta				TAP 253 T
	White				TAP 253 W

Material: Aluminium to BS EN 755-5,
PVC colours to BS 5252 Green to BS 6746C

BS EN 62561-2

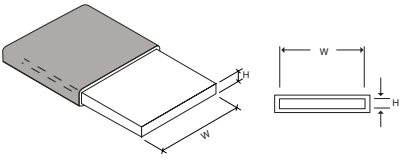




LSOH Covered Aluminium Tape

Size W x H mm	Colour	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
25 x 3	Grey	75	0.30	50	TAP 253 GLSOH
25 x 3	Green				TAP 253 GRLSOH

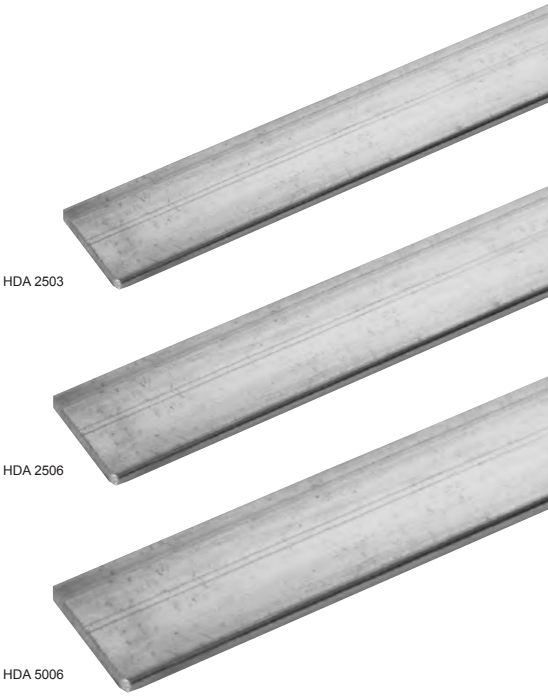
Material: Aluminium to BS EN 755-5,
PVC colours to BS 5252 Green to BS 6746C

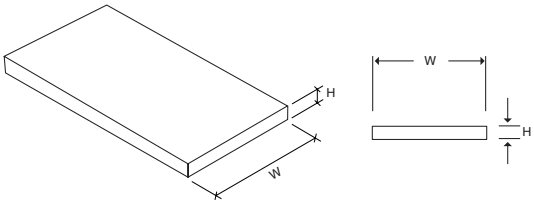


Bare Hard Drawn Aluminium Bars

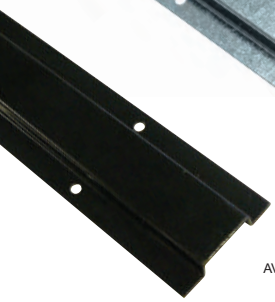
Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Length m	Part Number
25 x 3	75	0.21	4	**HDA 2503**
25 x 6	150	0.42		**HDA 2506**
30 x 5	150	0.42		**HDA 3005**
30 x 10	300	0.85		**HDA 3010**
38.91 x 9.5	369	1.04		**HDA 3809**
40 x 6	240	0.68		**HDA 4006**
50 x 6	300	0.85		**HDA 5006**
50 x 12.5	625	1.77		**HDA 50125**
60 x 3	180	0.51		**HDA 6003**
60 x 6	360	1.02		**HDA 6006**
80 x 6	480	1.36		**HDA 8006**
100 x 6	600	1.70		**HDA 1006**
127 x 6	762	2.15		**HDA 12706**

Material: Aluminium to BS EN 755-5.

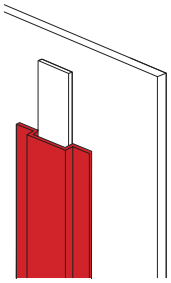




AVG



AVP



Anti-Vandal Tape Guards

Wallis anti-vandal tape guards provide protection from accidental damage, vandalism and theft for flat tapes up to 40mm wide.

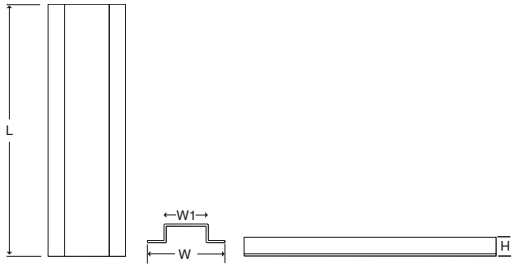
Easy to secure, the guard has a low profile and the galvanised finish offers long lasting resistance to corrosion.

L mm	W mm	W1 mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2000	72	40	17	1.98	1	AVG
3000				2.72		AVG 3

Material: Galvanised Steel

L mm	W mm	W1 mm	H mm	Unit Weight kg	Pack Quantity	Part Number
2000	72	40	17	1.98	1	AVP

Material: Mild Steel with black powder coating.

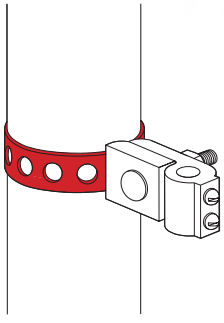


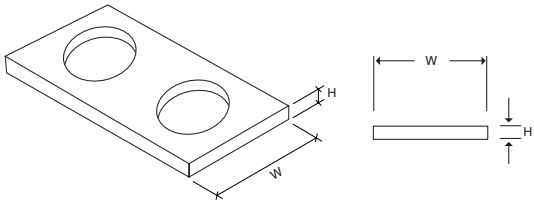
Bare Perforated Copper Tape

Wallis perforated copper tape is used for bonding of lightning protection systems. It is annealed for ease of use and has radiused edges.

Size W x H mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
25 x 1.5	37.5	0.33	100	PCT 251

Material: Copper to BS EN 13601 (formerly BS 1432)



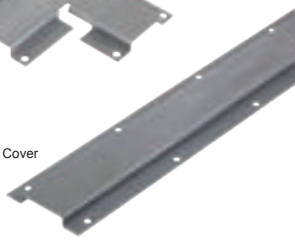


Anti-Vandal Tape Guard

Wallis Anti-Vandal Tape Guards provide protection from accidental damage, vandalism and theft for flat tapes up to 50mm wide.

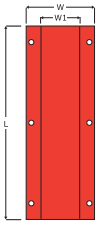
Benefits

- Quick and easy to fit.
- Eliminates vandalism and damage.
- Neat and tidy.
- Impossible to remove without specialist equipment.
- Permanent solution to theft.
- Zero corrosion to guard and pins.
- Low profile.
- **REMEMBER, A PHYSICAL BARRIER MAKES A DIFFERENCE**



Straight Cover

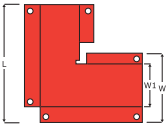
L mm	W mm	W1 mm	Tape Width mm	Unit Weight kg	Part Number
1080	80	40	25	1.25	**AVS 251**
300	80	40	25	0.34	**AVS 25.3**
1080	100	50	40	1.43	**AVS 401**
300	100	50	40	0.39	**AVS 40.3**
1080	110	60	50	1.54	**AVS 501**
300	110	60	50	0.43	**AVS 50.3**



Material: Galvanised steel. Also available in stainless steel.

"L" Cover

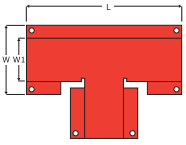
L mm	W mm	W1 mm	Tape Width mm	Unit Weight kg	Part Number
145	80	40	25	0.22	**AVL 025**
165	100	55	40	0.29	**AVL 040**
175	110	65	50	0.33	**AVL 050**



Material: Galvanised steel. Also available in stainless steel.

"T" Cover

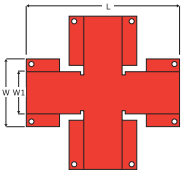
L mm	W mm	W1 mm	Tape Width mm	Unit Weight kg	Part Number
205	80	40	25	0.29	**AVT 025**
230	100	55	40	0.37	**AVT 040**
240	110	65	50	0.42	**AVT 050**



Material: Galvanised steel. Also available in stainless steel.

"X" Cover

L mm	W mm	W1 mm	Tape Width mm	Unit Weight kg	Part Number
205	80	40	25	0.34	**AVX 025**
230	100	55	40	0.44	**AVX 040**
240	110	65	50	0.49	**AVX 050**



Material: Galvanised steel. Also available in stainless steel.

Stainless Steel Anchor Pin

For securing Anti-Vandal Tape Guards and Copper Earth Tape.

Length mm	Unit Weight kg	Pack Quantity	Part Number
42	0.01	50	**PIN 100**

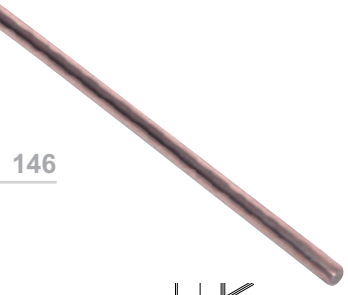
Material: Stainless steel.

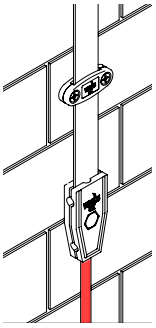
Stainless Steel Security Pin (with removable nut)

Used to secure Anti-Vandal Tape Guards when there is a need to remove the cover for testing.

Thread Size	Length mm	Unit Weight kg	Pack Quantity	Part Number
M6	50	0.01	50	**PIN 101**

Material: Stainless steel.



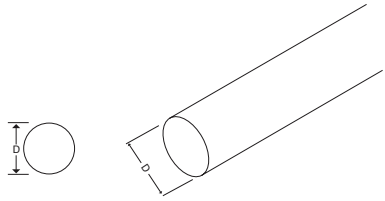


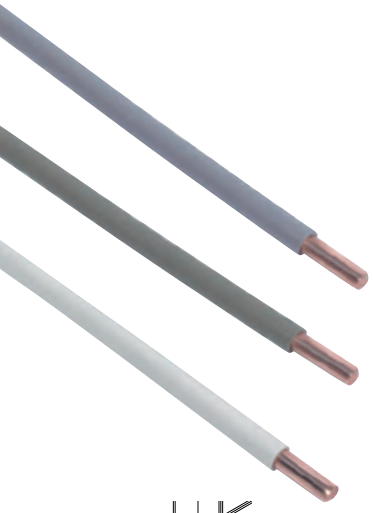
Bare Solid Circular Copper Conductor

Wallis bare 8mm and 10mm diameter solid circular conductor is used on lightning protection systems. It is annealed for ease of use.

D mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
8	50.27	0.44	50	CSC 08
10	78.55	0.70	40	CSC 10
11	95.05	0.85		CSC 11

Material: Copper to BS EN 13601 (formerly BS 1432).

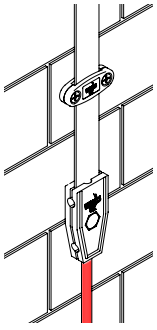




CPC 08 G

CPC 08 S

CPC 08 W



PVC Covered Solid Circular Copper Conductors

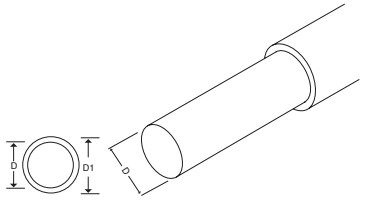
Wallis PVC covered 8mm diameter copper conductors are mainly used as down conductors on a building's structural lightning protection system.

There is a choice of five standard PVC colours to match the most common building materials and provide an aesthetic finish to the external lightning protection system. All the PVC coverings are UV stabilised although some discolouration may occur over time.

Other PVC colours are available to order but may be subject to minimum order quantities and lead-times. Please contact our sales office for further information.

D mm	Colour	C.S.A. mm^2	D1 mm	Weight per Metre kg	Standard Coil Size m	Part Number
8	Brown	50.27	10	0.49	50	CPC 08 B
	Black					CPC 08 BL
	Grey					CPC 08 G
	Stone					CPC 08 S
	White					CPC 08 W

Material: Copper to BS EN 13601 (formerly BS 1432)
PVC colours to BS 5252.

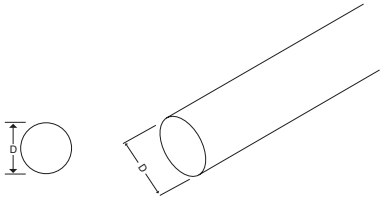


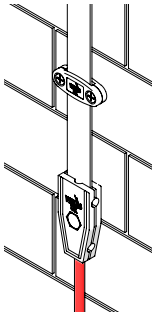
Tinned Solid Circular Copper Conductor

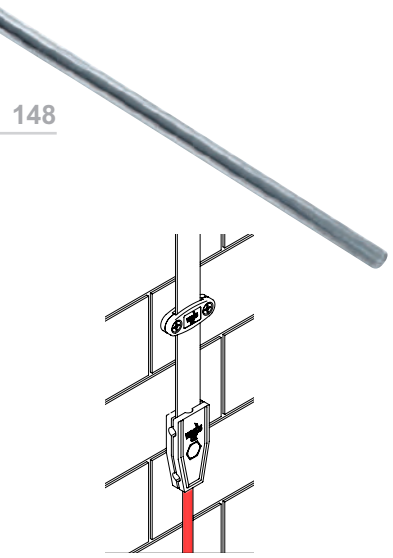
Wallis tinned 8mm diameter solid circular conductor is used on lightning protection systems. It is annealed for ease of use.

D mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
8	50.27	0.44	50	**CSC 08 T**

Material: Copper to BS EN 13601 (formerly BS 1432).





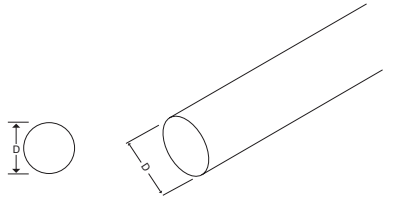


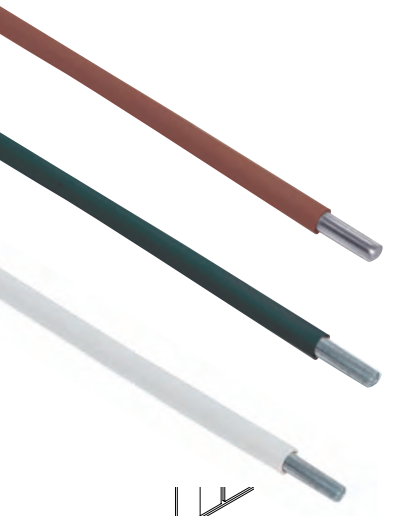
Bare Solid Circular Aluminium Conductor

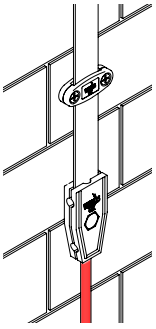
Wallis bare 8mm diameter solid circular aluminium conductor is used on lightning protection systems. It is annealed for ease of use.

D mm	C.S.A. mm^2	Weight per Metre kg	Standard Coil Size m	Part Number
8	50.27	0.12	50	CSA 08
10	78.55	0.14		CSA 10
13	132.74	0.14		CSA 13

Material: Aluminium to BS EN 755-5.







PVC Covered Solid Circular Aluminium Conductors

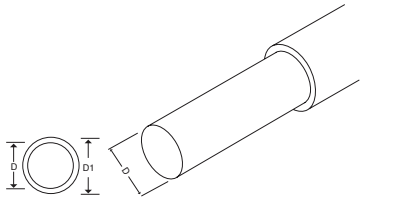
Wallis PVC covered 8mm diameter aluminium conductors are used as down conductors on a building's structural lightning protection system.

There is a choice of five standard PVC colours to match the most common building materials and provide an aesthetic finish to the external lightning protection system. All the PVC coverings are UV stabilised although some discolouration may occur over time.

Other PVC colours are available to order but may be subject to minimum order quantities and lead-times. Please contact our sales office for further information.

D mm	Colour	C.S.A. mm^2	D1 mm	Weight per Metre kg	Standard Coil Size m	Part Number
8	Brown	50.27	10	0.18	50	CPA 08 B
	Black					CPA 08 BL
	Grey					CPA 08 G
	Stone					CPA 08 S
	White					CPA 08 W

Material: Aluminium to BS EN 755-5.
PVC colours to BS 5252



Bare Stranded Copper Conductors

Wallis bare stranded copper conductor is used on both lightning protection and earthing systems.

Available as soft drawn (copper wire that has been heat treated) and hard drawn (copper wire that has not been annealed after drawing).

Soft Drawn

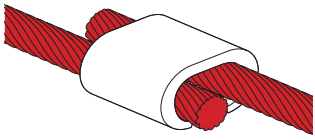
C.S.A. mm^2	Stranding No. x Ø mm	Nominal Ø mm	Maximum Resistance @ 20°C Ω/km	Weight per Metre kg	Part Number
6	7 x 1.04	3.12	3.080	0.05	**CBS 006**
10	7 x 1.35	4.05	1.830	0.09	**CBS 010**
16	7 x 1.70	5.10	1.150	0.15	**CBS 016**
25	7 x 2.14	6.42	0.727	0.23	**CBS 025**
34	19 x 1.53				**CBS 034**
35	7 x 2.52	7.56	0.524	0.32	**CBS 035**
50	19 x 1.78	8.90	0.387	0.43	**CBS 050**
70	19 x 2.14	10.70	0.268	0.62	**CBS 070**
95	19 x 2.52	12.60	0.193	0.86	**CBS 095**
120	37 x 2.03	14.21	0.153	1.09	**CBS 120**
150	37 x 2.25	15.75	0.124	1.33	**CBS 150**
185	37 x 2.52	17.64	0.099	1.67	**CBS 185**
240	61 x 2.25	20.25	0.075	2.20	**CBS 240**
300	61 x 2.52	22.68	0.060	2.76	**CBS 300**
400	61 x 2.85	25.65	0.047	3.53	**CBS 400**

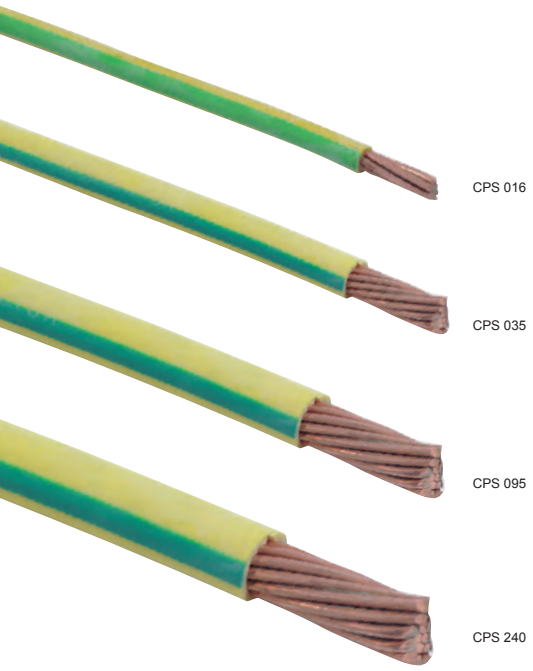
Material: Copper to BS EN 60228:2005.

Hard Drawn

C.S.A. mm^2	Stranding No. x Ø mm	Nominal Ø mm	Maximum Resistance @ 20°C Ω/km	Weight per Metre kg	Part Number
35	7 x 2.52	7.56	0.540	0.32	**CHS 035**
50	7 x 3.00	8.90	0.399	0.43	**CHS 050**
70	7 x 3.55	10.70	0.276	0.62	**CHS 070**
95	37 x 1.78	12.60	0.199	0.86	**CHS 095**

Material: Copper to BS EN 60228:2005.



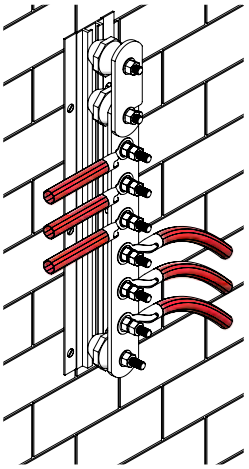


Green & Yellow PVC Insulated Stranded Copper Conductors

A range of single core stranded class 2 plain annealed copper conductors with a heat resistant polyvinyl chloride (PVC) outer sheath. These non-armoured single insulation cables are often referred to as 6491X and are manufactured in accordance with specification BS 6004. Harmonised code H07V-R. Voltage rating 450/750V (designated suitable 600/1000V systems). Heat resistant PVC insulation complying with BS 7655 Type TI 1. Operating temperatures 0°C to +70°C. Installation is not recommended for PVC below 0°C as the compound may become brittle.

C.S.A. mm^2	Stranding No. x Ø mm	Nominal Ø mm	Maximum Resistance @ 20°C Ω/km	Weight per Metre kg	Part Number
6	7 x 1.04	4.8	3.080	0.07	**CPS 006**
10	7 x 1.35	6.1	1.830	0.12	**CPS 010**
16	7 x 1.70	7.1	1.150	0.19	**CPS 016**
25	7 x 2.14	8.9	0.727	0.29	**CPS 025**
35	7 x 2.52	10.1	0.524	0.41	**CPS 035**
50	19 x 1.78	11.8	0.387	0.53	**CPS 050**
70	19 x 2.14	13.6	0.268	0.73	**CPS 070**
95	19 x 2.52	15.9	0.193	1.00	**CPS 095**
120	37 x 2.03	17.5	0.153	1.16	**CPS 120**
150	37 x 2.25	19.4	0.124	1.54	**CPS 150**
185	37 x 2.52	21.7	0.099	2.01	**CPS 185**
240	61 x 2.25	24.5	0.075	2.49	**CPS 240**
300	61 x 2.52	27.5	0.060	3.05	**CPS 300**
400	61 x 2.85	30.9	0.047	3.90	**CPS 400**

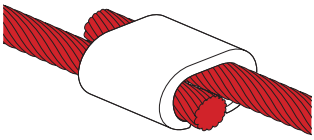
Material: Copper to BS EN 60228:2005
PVC Colour to BS 6746C.



Tinned Stranded Copper Conductors

C.S.A. mm^2	Stranding No. x Ø mm	Nominal Ø mm	Maximum Resistance @ 20°C Ω/km	Weight per Metre kg	Part Number
6	7 x 1.04	3.12	3.110	0.05	**CTS 006**
10	7 x 1.35	4.05	1.840	0.09	**CTS 010**
16	7 x 1.70	5.10	1.160	0.15	**CTS 016**
25	7 x 2.14	6.42	0.734	0.23	**CTS 025**
35	7 x 2.52	7.65	0.529	0.32	**CTS 035**
50	19 x 1.78	8.90	0.391	0.43	**CTS 050**
70	19 x 2.14	10.70	0.270	0.62	**CTS 070**
95	19 x 2.52	12.60	0.195	0.86	**CTS 095**
120	37 x 2.03	14.21	0.154	1.09	**CTS 120**
150	37 x 2.25	15.75	0.126	1.33	**CTS 150**
185	37 x 2.52	17.64	0.100	1.67	**CTS 185**
240	61 x 2.25	20.25	0.076	2.20	**CTS 240**
300	61 x 2.52	22.68	0.061	2.76	**CTS 300**
400	61 x 2.85	25.65	0.048	3.53	**CTS 400**

Material: Copper to BS EN 60228:2005.



Lead Covered Stranded Copper Conductors

C.S.A. mm^2	Stranding No. x Ø mm	Nominal Diameter mm	Weight per Metre kg	Part Number
185	37 x 2.52	21.64	2.71	**CLS 185**
240	61 x 2.25	24.25	3.58	**CLS 240**
300	61 x 2.52	26.58	4.49	**CLS 300**
400	61 x 2.85	29.65	5.74	**CLS 400**

Material: Copper to BS EN 60228:2005.

CLS 185

CLS 240

Anti-Vandal Cable Guards

Wallis anti-vandal cable guards provide protection from accidental damage, vandalism and theft for cables up to 50mm diameter.

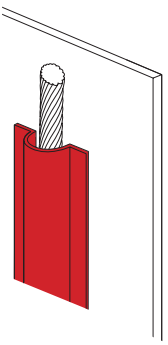
For installation on walls etc.
These guards have flat flanges and are supplied with screw fixing holes for ease of installation.

AVC 001

L mm	W mm	D mm	Colour	Unit Weight kg	Pack Quantity	Part Number
3000	105	50	Grey	2.40	1	**AVC 001**

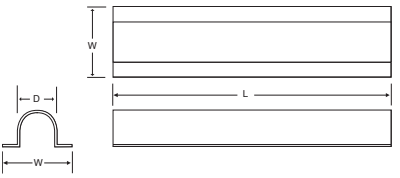
Material: Plastic.

For installation on wooden telegraph poles
These guards have angled flanges and are supplied with screw fixing holes for ease of installation.



L mm	W mm	D mm	Colour	Unit Weight kg	Pack Quantity	Part Number
3000	95	50	Black	2.40	1	**AVC 002**

Material: Plastic.



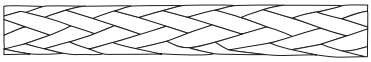
Bare Copper Round Braids

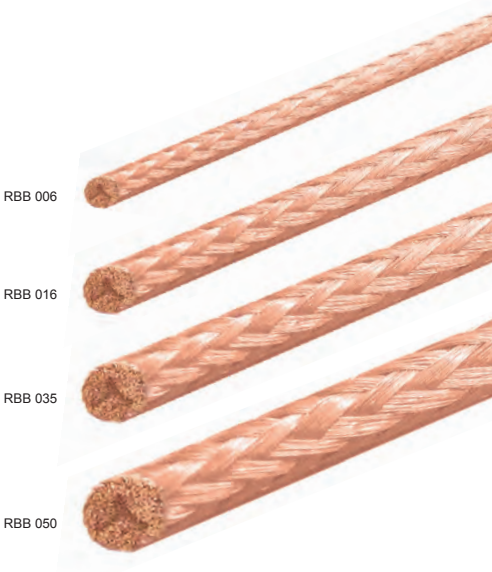
Wallis copper round braids are utilised as flexible earth bonding leads.

Other sizes and constructions are available on request. Please contact our sales office for further information.

Norminal C.S.A. mm^2	Nominal Ø mm	Wire Strand Ø mm	Current Rating Amps	Weight per Metre kg	Standard Coil Size m	Part Number
6	5.0	0.15	69	0.05	100	**RBB 006**
10	7.0		97	0.08	50	**RBB 010**
16	8.0		132	0.13	50	**RBB 016**
25	10.0		178	0.22	50	**RBB 025**
35	12.0		223	0.30	50	**RBB 035**
50	15.0		282	0.44	50	**RBB 050**

Material: Copper wire to BS EN 13602 (formerly BS 4109).





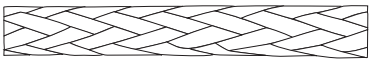
Tinned Copper Round Braids

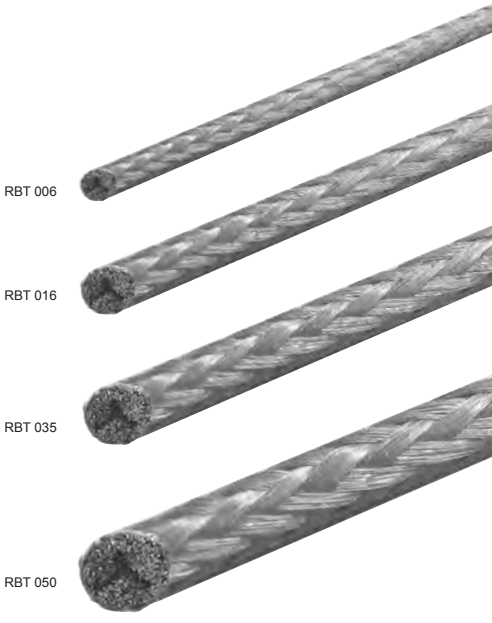
Wallis tinned copper round braids are utilised as flexible earth bonding leads with additional corrosion protection.

Other sizes and constructions are available on request. Please contact our sales office for further information.

Norminal C.S.A. mm^2	Nominal Ø mm	Wire Strand Ø mm	Current Rating Amps	Weight per Metre kg	Standard Coil Size m	Part Number
6	5.0	0.15	69	0.05	100	**RBT 006**
10	7.0		97	0.08	50	**RBT 010**
16	8.0		132	0.13	50	**RBT 016**
25	10.0		178	0.22	50	**RBT 025**
35	12.0		223	0.30	50	**RBT 035**
50	15.0		282	0.44	50	**RBT 050**

Material: Copper wire to BS EN 13602 (formerly BS 4109).





Fasteners & Fixings

Hexagon Head Set Screws

Phosphor Bronze

Thread Size	Length mm	Weight per 100 kg	Pack Quantity	Part Number
M6	10	1.20	100	OSP 0610
	12	1.30		OSP 0612
	16	1.50		OSP 0616
	20	1.90		OSP 0620
M8	16	1.75	100	OSP 0816
	20	2.00		OSP 0820
	25	2.30		OSP 0825
	30	2.90		OSP 0830
M10	16	1.95	100	OSP 1016
	20	2.20		OSP 1020
	25	2.75		OSP 1025
	30	3.10		OSP 1030
	35	3.40		OSP 1035
M12	25	4.50	100	OSP 1225
	30	4.75		OSP 1230
	35	5.00		OSP 1235
	40	5.70		OSP 1240
	50	6.30		OSP 1250

Material: Phosphor Bronze.

Brass

Thread Size	Length mm	Weight per 100 kg	Pack Quantity	Part Number
M6	10	1.20	100	OSB 0610
	12	1.30		OSB 0612
	16	1.50		OSB 0616
	20	1.90		OSB 0620
M8	16	1.75	100	OSB 0816
	20	2.00		OSB 0820
	25	2.30		OSB 0825
	30	2.90		OSB 0830
M10	16	1.95	100	OSB 1016
	20	2.20		OSB 1020
	25	2.75		OSB 1025
	30	3.10		OSB 1030
	35	3.40		OSB 1035
M12	25	4.50	100	OSB 1225
	30	4.75		OSB 1230
	35	5.00		OSB 1235
	40	5.70		OSB 1240
	50	6.30		OSB 1250

Material: Brass.

Hexagon Head Set Screws (continued)

Stainless Steel

Thread Size	Length mm	Weight per 100 kg	Pack Quantity	Part Number
M6	10	1.20	100	OSS 0610
	12	1.30		OSS 0612
	16	1.50		OSS 0616
	20	1.90		OSS 0620
M8	16	1.75	100	OSS 0816
	20	2.00		OSS 0820
	25	2.30		OSS 0825
	30	2.90		OSS 0830
M10	16	1.95	100	OSS 1016
	20	2.20		OSS 1020
	25	2.75		OSS 1025
	30	3.10		OSS 1030
	35	3.40		OSS 1035
M12	25	4.50	100	OSS 1225
	30	4.75		OSS 1230
	35	5.00		OSS 1235
	40	5.70		OSS 1240
	50	6.30		OSS 1250

Material: Stainless Steel.

Hexagon Nuts

Phosphor Bronze

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.35	100	ONP 06
M8	0.90		ONP 08
M10	1.15		ONP 10
M12	1.65		ONP 12

Material: Phosphor Bronze.

Brass

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.25	100	ONB 06
M8	0.80		ONB 08
M10	1.15		ONB 10
M12	1.65		ONB 12

Material: Brass.

Stainless Steel

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.25	100	ONS 06
M8	0.80		ONS 08
M10	1.15		ONS 10
M12	1.65		ONS 12

Material: Stainless Steel.

Flat Washers

Phosphor Bronze

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.05	100	OWP 06
M8	0.15		OWP 08
M10	0.25		OWP 10
M12	0.50		OWP 12

Material: Phosphor Bronze.

Brass

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.05	100	OWB 06
M8	0.15		OWB 08
M10	0.25		OWB 10
M12	0.50		OWB 12

Material: Brass.

Stainless Steel

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.05	100	OWS 06
M8	0.15		OWS 08
M10	0.25		OWS 10
M12	0.50		OWS 12

Material: Stainless Steel.

Spring Washers

Phosphor Bronze

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.04	100	OTP 06
M8	0.10		OTP 08
M10	0.20		OTP 10
M12	0.50		OTP 12

Material: Phosphor Bronze.

Stainless Steel

Thread Size	Weight per 100 kg	Pack Quantity	Part Number
M6	0.04	100	OTS 06
M8	0.10		OTS 08
M10	0.20		OTS 10
M12	0.50		OTS 12

Material: Stainless Steel.

Bimetallic Twin Washer

These connectors are used to join flat aluminium conductors to flat copper conductors. They are a neat and practical jointing method without the need for tinning, riveting or wrapping the joint.

The washers are typically used in areas where a full sized bimetallic connector cannot be used.

L1 mm	L2 mm	H mm	Weight per 100 kg	Pack Quantity	Part Number
30	6	2	0.50	100	BIM30-6
	8		0.50		BIM30-8
	10		0.40		BIM30-10
	13		0.40		BIM30-13
	14		0.40		BIM30-14
	16		0.30		BIM30-16

Material: Copper & Aluminium.

Countersunk Wood Screws

Brass

Size	Weight per 100 kg	Pack Quantity	Part Number
1¼" x No. 10	0.20	100	OAB 132
1¼" x No. 12	0.30		OAB 133
1½" x No. 10	0.50		OAB 138
1½" x No. 12	0.60		OAB 139
2" x No. 10	0.80		OAB 151
2" x No. 12	1.00		OAB 152

Material: Brass.

Stainless Steel

Size	Weight per 100 kg	Pack Quantity	Part Number
1¼" x No. 10	0.20	100	OAS 132
1¼" x No. 12	0.30		OAS 133
1½" x No. 10	0.50		OAS 138
1½" x No. 12	0.60		OAS 139
2" x No. 10	0.80		OAS 151
2" x No. 12	1.00		OAS 152

Material: Stainless Steel.

Round Head Wood Screws

Brass

Size	Weight per 100 kg	Pack Quantity	Part Number
1¼" x No. 10	0.20	100	ORB 132
1¼" x No. 12	0.30		ORB 133
1½" x No. 10	0.50		ORB 138
1½" x No. 12	0.60		ORB 139
2" x No. 10	0.80		ORB 151
2" x No. 12	1.00		ORB 152

Material: Brass.

Stainless Steel

Size	Weight per 100 kg	Pack Quantity	Part Number
1¼" x No. 10	0.20	100	ORS 132
1¼" x No. 12	0.30		ORS 133
1½" x No. 10	0.50		ORS 138
1½" x No. 12	0.60		ORS 139
2" x No. 10	0.80		ORS 151
2" x No. 12	1.00		ORS 152

Material: Stainless Steel.

Countersunk Machine Screws

Brass

Thread Size	Length mm	Weight per 100 kg	Pack Quantity	Part Number
M6	12	0.30	100	OMB 0612
	16	0.40		OMB 0616
	20	0.50		OMB 0620
M8	16	0.45	100	OMB 0816
	20	0.55		OMB 0820
	25	0.65		OMB 0825
M10	25	0.75	100	OMB 1025
	30	0.85		OMB 1030
	35	0.95		OMB 1035

Material: Brass.

Stainless Steel

Thread Size	Length mm	Weight per 100 kg	Pack Quantity	Part Number
M6	12	0.30	100	OMS 0612
	16	0.40		OMS 0616
	20	0.50		OMS 0620
M8	16	0.45	100	OMS 0816
	20	0.55		OMS 0820
	25	0.65		OMS 0825
M10	25	0.75	100	OMS 1025
	30	0.85		OMS 1030
	35	0.95		OMS 1035

Material: Stainless Steel.

Plastic Wall Plugs

Screw Size	Colour	Weight per 100 kg	Pack Quantity	Part Number
No. 10 - 14	Black	0.15	100	OP10 BLA
	Blue			OP10 BLU
	Brown			OP10 BRO
	Red			OP10 RED

Material: Plastic.

Round Head Copper Nails

Length mm	Weight per 100 kg	Pack Quantity	Part Number
50	0.70	100	**OCN 050**

Material: Copper.

Round Head Rivets

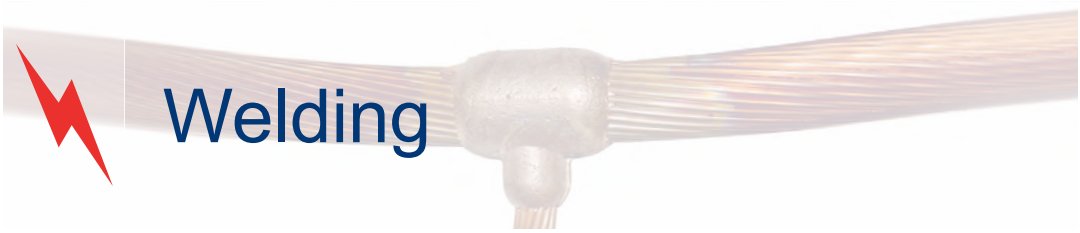
Size mm	Weight per 100 kg	Pack Quantity	Part Number
5 x 12	0.35	100	**ORC 512**
5 x 20	0.45		**ORC 520**

Material: Copper.

Aluminium

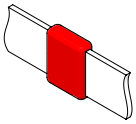
Size mm	Weight per 100 kg	Pack Quantity	Part Number
5 x 12	0.12	100	**ORA 512**
5 x 20	0.15		**ORA 520**

Material: Aluminium.

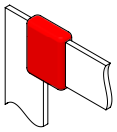


Welding

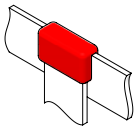
Bar to Bar



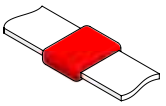
BB1 - Page 167



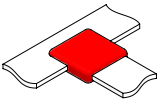
BB2 - Page 167



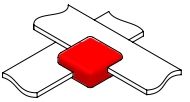
BB3 - Page 168



BB7 - Page 168

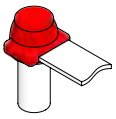


BB14 - Page 169

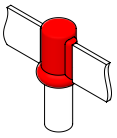


BB41 - Page 169

Bar to Earth Rod

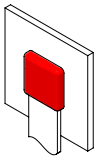


BR1 - Page 170

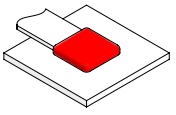


BR2 - Page 171

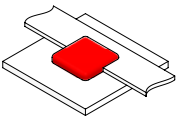
Bar to Steel Surface



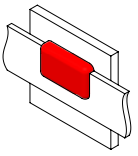
BS1 - Page 172



BS2 - Page 172

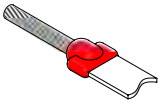


BS3 - Page 173

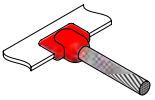


BS4 - Page 173

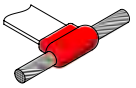
Cable to Bar



CB1 - Page 174

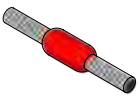


CB4 - Page 175

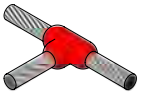


CB5 - Page 176

Cable to Cable

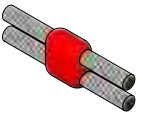


CC1 - Page 177

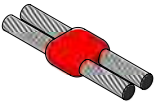


CC2 - Page 177 & 178

CC4 - Page 178

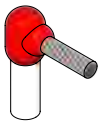


CC7 - Page 179

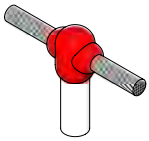


CC14 - Page 180

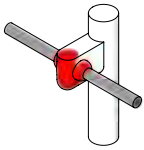
Cable to Earth Rod



CR1 - Page 181

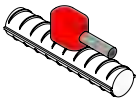


CR2 - Page 182

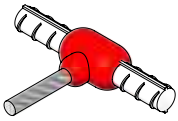


CR3 - Page 183

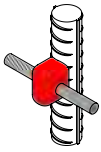
Cable to Rebar



CRE1 - Page 184

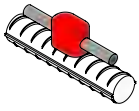


CRE2 - Page 184 & 185



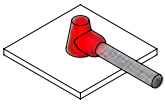
CRE3 - Page 185

CRE6 - Page 186

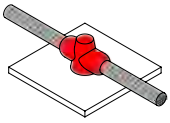


CRE17 - Page 186

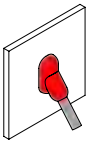
Cable to Steel Surface



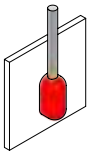
CS1 - Page 187



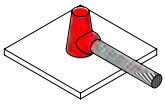
CS2 - Page 187



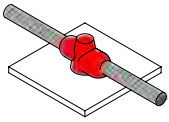
CS3 - Page 187



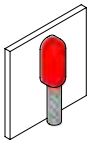
CS7 - Page 188



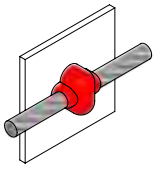
CS8 - Page 188



CS9 - Page 188

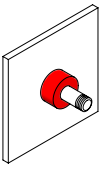


CS25 - Page 189

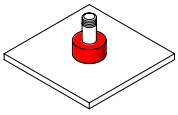


CS27- Page 189

Stud to Steel Surface



RS1 - Page 189

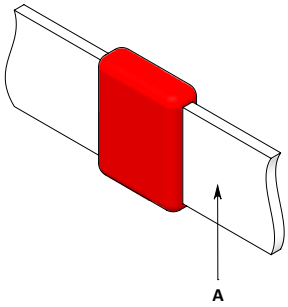


RS2 - Page 189

Your connection not shown?
Then contact our sales office on +44 (0) 115 927 1721
or e-mail info@an-wallis.com

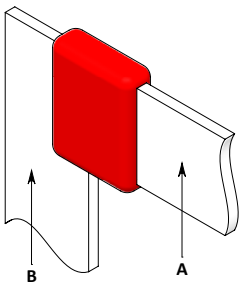
BB1 - Bar to Bar

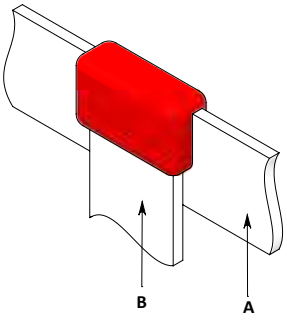
A mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	WEP 045	BB1-C-203	
25 x 3	WEP 065	BB1-C-253	
25 x 4	WEP 090	BB1-C-254	
25 x 6	WEP 150	BB1-C-256	
30 x 2	WEP 065	BB1-C-302	
30 x 3	WEP 090	BB1-C-303	
30 x 4	WEP 115	BB1-C-304	
30 x 5		BB1-C-305	
31 x 3	WEP 065	BB1-C-313	
31 x 6	WEP 115	BB1-C-316	HCC 001
38 x 3	WEP 150	BB1-C-383	
38 x 5		BB1-C-385	
38 x 6	WEP 200	BB1-C-386	
40 x 3	WEP 115	BB1-C-403	
40 x 4	WEP 150	BB1-C-404	
40 x 5		BB1-C-405	
40 x 6	WEP 200	BB1-C-406	
50 x 3	WEP 150	BB1-C-503	
50 x 4	WEP 200	BB1-C-504	
50 x 5	WEP 200	BB1-C-505	
50 x 6	WEP 250	BB1-C-506	
50 x 8	2 x WEP 150	BB1-D-508	HCD 001



BB2 - Bar to Bar

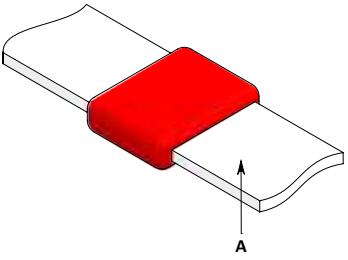
A mm x mm	B mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	20 x 3	WEP 045	BB2-C-203203	
25 x 3	25 x 3	WEP 065	BB2-C-253253	
25 x 4	25 x 4	WEP 090	BB2-C-254254	
25 x 6	25 x 6	WEP 115	BB2-C-256256	
30 x 2	30 x 2	WEP 065	BB2-C-302302	
30 x 3	30 x 3	WEP 090	BB2-C-303303	
30 x 4	30 x 4	WEP 115	BB2-C-304304	
30 x 5	30 x 5		BB2-C-305305	
31 x 3	31 x 3	WEP 090	BB2-C-313313	
31 x 6	31 x 6	WEP 150	BB2-C-316316	HCC 001
38 x 3	38 x 3	WEP 115	BB2-C-383383	
38 x 5	38 x 5	WEP 150	BB2-C-385385	
38 x 6	38 x 6	WEP 200	BB2-C-386386	
40 x 3	40 x 3	WEP 115	BB2-C-403403	
40 x 4	40 x 4	WEP 150	BB2-C-404404	
40 x 5	40 x 5		BB2-C-405405	
40 x 6	40 x 6	WEP 200	BB2-C-406406	
50 x 3	50 x 3	WEP 090	BB2-C-503503	
50 x 4	50 x 4	WEP 150	BB2-C-504504	
50 x 5	50 x 5	WEP 200	BB2-C-505505	
50 x 6	50 x 6	WEP 250	BB2-C-506506	
50 x 8	50 x 8	2 x WEP 150	BB2-D-508508	HCD 001





BB3 - Bar to Bar

A mm x mm	B mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	20 x 3	WEP 065	BB3-C-203203	HCC 001
25 x 3	25 x 3		BB3-C-253253	
25 x 4	25 x 4	WEP 090	BB3-C-254254	
25 x 6	25 x 6	WEP 150	BB3-C-256256	
30 x 2	30 x 2	WEP 065	BB3-C-302302	
30 x 3	30 x 3	WEP 090	BB3-C-303303	
30 x 4	30 x 4	WEP 115	BB3-C-304304	
30 x 5	30 x 5		BB3-C-305305	
30 x 5	50 x 5	WEP 200	BB3-D-305505	
31 x 3	31 x 3	WEP 115	BB3-C-313313	
31 x 6	31 x 6	WEP 200	BB3-C-316316	
38 x 3	38 x 3	WEP 115	BB3-C-383383	
38 x 5	38 x 5	WEP 150	BB3-C-385385	
38 x 6	38 x 6	WEP 200	BB3-C-386386	
40 x 3	40 x 3	WEP 115	BB3-C-403403	
40 x 4	40 x 4	WEP 150	BB3-C-404404	
40 x 5	40 x 5		BB3-C-405405	
40 x 6	40 x 6	WEP 200	BB3-C-406406	
50 x 3	50 x 3		BB3-C-503503	
50 x 4	50 x 4		BB3-C-504504	
50 x 5	50 x 5		BB3-C-505505	
50 x 6	50 x 6	WEP 250	BB3-C-506506	
50 x 8	50 x 8	2 x WEP 150	BB3-D-508508	HCD 001



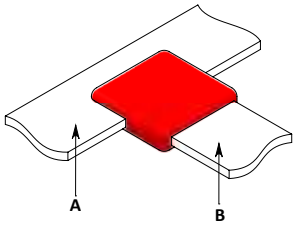
BB7 - Bar to Bar

A mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	WEP 045	BB7-C-203	HCC 001
25 x 3	WEP 065	BB7-C-253	
25 x 4	WEP 090	BB7-C-254	
25 x 6	WEP 115	BB7-C-256	
30 x 2	WEP 065	BB7-C-302	
30 x 3		BB7-C-303	
30 x 4	WEP 090	BB7-C-304	
30 x 5	WEP 115	BB7-C-305	
31 x 3	WEP 065	BB7-C-313	
31 x 6	WEP 150	BB7-C-316	
38 x 3	WEP 090	BB7-C-383	
38 x 5	WEP 150	BB7-C-385	
38 x 6	WEP 200	BB7-C-386	
40 x 3	WEP 090	BB7-C-403	
40 x 4	WEP 115	BB7-C-404	
40 x 5	WEP 150	BB7-C-405	
40 x 6	WEP 200	BB7-C-406	
50 x 3	WEP 150	BB7-D-503	HCD 001
50 x 4	WEP 200	BB7-D-504	
50 x 5		BB7-D-505	
50 x 6	WEP 250	BB7-D-506	
50 x 8	2 x WEP 150	BB7-D-508	

A mm x mm	B mm x mm	Weld Powder	Mould	Handle Clamp
40 x 5	30 x 5	WEP 150	BB7-D-405305	HCD 001
70 x 4	70 x 4	2 x WEP 150	BB7-D-704704	

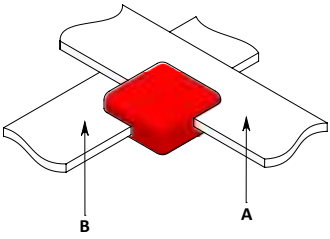
BB14 - Bar to Bar

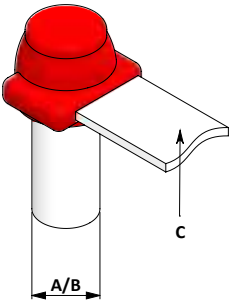
A mm x mm	B mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	20 x 3	WEP 045	BB14-C-203203	HCC 001
25 x 3	25 x 3	WEP 065	BB14-C-253253	
25 x 4	25 x 4	WEP 090	BB14-C-254254	
25 x 6	25 x 6	WEP 115	BB14-C-256256	
30 x 2	30 x 2	WEP 065	BB14-C-302302	
30 x 3	30 x 3		BB14-C-303303	
30 x 4	30 x 4	WEP 090	BB14-C-304304	
30 x 5	30 x 5	WEP 115	BB14-C-305305	
31 x 3	31 x 3	WEP 090	BB14-C-313313	
31 x 6	31 x 6	WEP 150	BB14-C-316316	
38 x 3	38 x 3	WEP 090	BB14-C-383383	
38 x 5	38 x 5	WEP 150	BB14-C-385385	
38 x 6	38 x 6	WEP 200	BB14-C-386386	
40 x 3	40 x 3	WEP 090	BB14-C-403403	
40 x 4	40 x 4	WEP 115	BB14-C-404404	
40 x 5	40 x 5	WEP 150	BB14-C-405405	
40 x 6	40 x 6	WEP 200	BB14-C-406406	
50 x 3	50 x 3	WEP 150	BB14-D-503503	HCD 001
50 x 4	50 x 4	WEP 200	BB14-D-504504	
50 x 5	50 x 5		BB14-D-505505	
50 x 6	25 x 3	WEP 150	BB14-D-506253	
50 x 6	25 x 6		BB14-D-506256	
50 x 6	30 x 4	WEP 200	BB14-D-506304	
50 x 6	30 x 5		BB14-D-506305	
50 x 6	31 x 6		BB14-D-506316	
50 x 6	40 x 4		BB14-D-506404	
50 x 6	50 x 3		BB14-D-506503	
50 x 6	50 x 6	WEP 200	BB14-D-506506	
50 x 8	50 x 8	2 x WEP 150	BB14-D-508508	
70 x 4	70 x 4		BB14-D-704704	

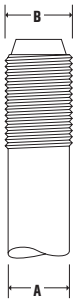


BB41 - Bar to Bar

A mm x mm	B mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	20 x 3	WEP 065	BB41-C-203203	HCC 001
25 x 3	25 x 3		BB41-C-253253	
25 x 4	25 x 4	WEP 090	BB41-C-254254	
25 x 6	25 x 6	WEP 115	BB41-C-256256	
30 x 2	30 x 2	WEP 090	BB41-C-302302	
30 x 3	30 x 3	WEP 115	BB41-C-303303	
30 x 4	30 x 4		BB41-C-304304	
30 x 5	30 x 5		BB41-C-305305	
31 x 3	31 x 3		BB41-C-313313	
31 x 6	31 x 6		BB41-C-316316	
38 x 3	38 x 3	WEP 150	BB41-C-383383	
38 x 5	38 x 5		BB41-C-385385	
38 x 6	38 x 6	WEP 200	BB41-C-386386	
40 x 3	40 x 3		BB41-C-403403	
40 x 4	40 x 4		BB41-C-404404	
40 x 5	40 x 5		BB41-C-405405	
40 x 6	40 x 6		BB41-C-406406	
50 x 3	50 x 3		BB41-D-503503	HCD 001
50 x 4	50 x 4		BB41-D-504504	
50 x 5	50 x 5		BB41-D-505505	
50 x 6	50 x 6		BB41-D-506506	
50 x 8	50 x 8	WEP 250	BB41-D-508508	







Earth rod threads must be removed before joint is made.

BR1 - Bar to Earth Rod

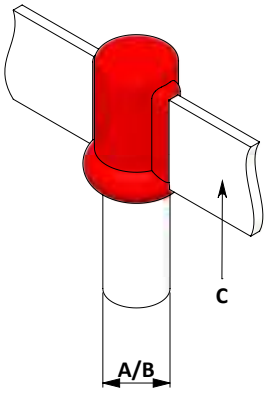
A mm	B inches	C mm x mm	Weld Powder	Mould	Handle Clamp
12.7	½"	20 x 3	WEP 090	BR1-C-127203	HCC 001
		25 x 3		BR1-C-127253	
		25 x 4		BR1-C-127254	
		30 x 2		BR1-C-127302	
		30 x 3		BR1-C-127303	
		31 x 3		BR1-C-127313	
		38 x 3		BR1-C-127383	
		40 x 3		BR1-C-127403	
		50 x 3	WEP 115	BR1-C-127503	
		50 x 6		BR1-C-127506	
14.2	⅝"	20 x 3	WEP 090	BR1-C-142203	HCC 001
		25 x 3		BR1-C-142253	
		25 x 4	WEP 115	BR1-C-142254	
		25 x 6		BR1-C-142256	
		30 x 2		BR1-C-142302	
		30 x 3		BR1-C-142303	
		30 x 4	WEP 150	BR1-C-142304	
		30 x 5		BR1-C-142305	
		31 x 3	WEP 115	BR1-C-142313	
		31 x 6	WEP 150	BR1-C-142316	
		38 x 3	WEP 115	BR1-C-142383	
		38 x 5	WEP 150	BR1-C-142385	
		38 x 6	WEP 200	BR1-C-142386	
		40 x 3	WEP 115	BR1-C-142403	
		40 x 4	WEP 150	BR1-C-142404	
		40 x 5		BR1-C-142405	
		40 x 6	WEP 200	BR1-C-142406	
		50 x 3	WEP 150	BR1-C-142503	
		50 x 4	WEP 200	BR1-C-142504	
		50 x 5		BR1-C-142505	
		50 x 6	WEP 250	BR1-C-142506	
17.2	¾"	20 x 3	WEP 115	BR1-C-172203	HCC 001
		25 x 3	WEP 150	BR1-C-172253	
		25 x 4		BR1-C-172254	
		25 x 6	WEP 200	BR1-C-172256	
		30 x 2	WEP 150	BR1-C-172302	
		30 x 3		BR1-C-172303	
		30 x 4	WEP 250	BR1-C-172304	
		30 x 5	WEP 200	BR1-C-172305	
		31 x 3	WEP 150	BR1-C-172313	
		31 x 6	WEP 250	BR1-C-172316	
		38 x 3	WEP 200	BR1-C-172383	
		38 x 5		BR1-C-172385	
		38 x 6	2 x WEP 150	BR1-D-172386	HCD 001
		40 x 3	WEP 200	BR1-C-172403	HCC 001
		40 x 4		BR1-C-172404	
		40 x 5		BR1-D-172405	HCD 001
		40 x 6	2 x WEP 150	BR1-D-172406	
		50 x 3		BR1-D-172503	
		50 x 4		BR1-D-172504	
		50 x 5		BR1-D-172505	
		50 x 6	2 x WEP 200	BR1-D-172506	
		50 x 8		BR1-D-172508	
		70 x 4	2 x WEP 150	BR1-D-172704	

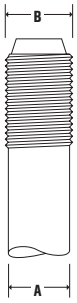
Suitable only for Copperbond Earth Rods. Please contact our sales office for details on connections to Solid Copper and Stainless Steel Earth Rods.

BR2 - Bar to Earth Rod

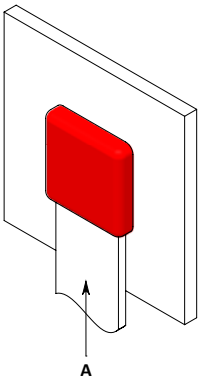
A mm	B inches	C mm x mm	Weld Powder	Mould	Handle Clamp
12.7	½"	20 x 3	WEP 090	BR2-C-127203	HCC 001
		25 x 3		BR2-C-127253	
		25 x 4		BR2-C-127254	
		30 x 2		BR2-C-127302	
		30 x 3		BR2-C-127303	
		31 x 3		BR2-C-127313	
		38 x 3		BR2-C-127383	
		40 x 3		BR2-C-127403	
		50 x 3	WEP 115	BR2-C-127503	
		50 x 6		BR2-C-127506	
14.2	⅝"	20 x 3	WEP 090	BR2-C-142203	HCC 001
		25 x 3		BR2-C-142253	
		25 x 4	WEP 115	BR2-C-142254	
		25 x 6	WEP 150	BR2-C-142256	
		30 x 2	WEP 090	BR2-C-142302	
		30 x 3	WEP 115	BR2-C-142303	
		30 x 4	WEP 150	BR2-C-142304	
		30 x 5		BR2-C-142305	
		31 x 3	WEP 115	BR2-C-142313	
		31 x 6	WEP 150	BR2-C-142316	
		38 x 3		BR2-C-142383	
		38 x 5		BR2-C-142385	
		38 x 6	WEP 200	BR2-C-142386	
		40 x 3	WEP 150	BR2-C-142403	
		40 x 4		BR2-C-142404	
		40 x 5		BR2-C-142405	
		40 x 6	WEP 200	BR2-C-142406	
		50 x 3		BR2-C-142503	
		50 x 4		BR2-C-142504	
		50 x 5		BR2-C-142505	
		50 x 6	WEP 250	BR2-C-142506	
17.2	¾"	20 x 3	WEP 150	BR2-C-172203	HCC 001
		25 x 3		BR2-C-172253	
		25 x 4	WEP 200	BR2-C-172254	
		25 x 6		BR2-C-172256	
		30 x 2	WEP 150	BR2-C-172302	
		30 x 3		BR2-C-172303	
		30 x 4	WEP 250	BR2-C-172304	
		30 x 5	WEP 200	BR2-C-172305	
		31 x 3		BR2-C-172313	
		31 x 6	WEP 250	BR2-C-172316	
		38 x 3	WEP 200	BR2-C-172383	
		38 x 5		BR2-C-172385	
		38 x 6	WEP 250	BR2-C-172386	
		40 x 3	WEP 200	BR2-C-172403	
		40 x 4		BR2-C-172404	
		40 x 5		BR2-C-172405	
		40 x 6	WEP 250	BR2-C-172406	
		50 x 3	2 x WEP 150	BR2-D-172503	HCD 001
		50 x 4		BR2-D-172504	
		50 x 5		BR2-D-172505	
		50 x 6		BR2-D-172506	
		50 x 8	2 x WEP 200	BR2-D-172508	

Suitable only for Copperbond Earth Rods. Please contact our sales office for details on connections to Solid Copper and Stainless Steel Earth Rods.



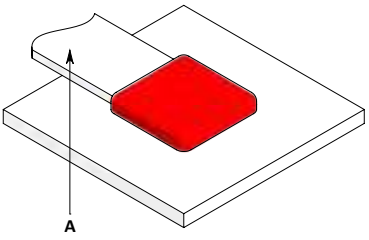


Earth rod threads must be removed before joint is made.



BS1 - Bar to Steel Surface

A mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	WEP 065	BS1-C-203	HCC 001
25 x 3	WEP 090	BS1-C-253	
25 x 4		BS1-C-254	
25 x 6	WEP 150	BS1-C-256	
30 x 2	WEP 090	BS1-C-302	
30 x 3		BS1-C-303	
30 x 4	WEP 115	BS1-C-304	
30 x 5	WEP 150	BS1-C-305	
31 x 3	WEP 090	BS1-C-313	
31 x 6	WEP 200	BS1-C-316	
38 x 3	WEP 150	BS1-C-383	
38 x 5	WEP 200	BS1-C-385	
38 x 6	WEP 250	BS1-C-386	
40 x 3	WEP 150	BS1-C-403	
40 x 4	WEP 200	BS1-C-404	
40 x 5		BS1-C-405	
40 x 6	WEP 250	BS1-C-406	
50 x 3	WEP 200	BS1-C-503	
50 x 4	WEP 250	BS1-C-504	
50 x 5		BS1-C-505	
50 x 6	2 x WEP 150	BS1-D-506	HCD 001

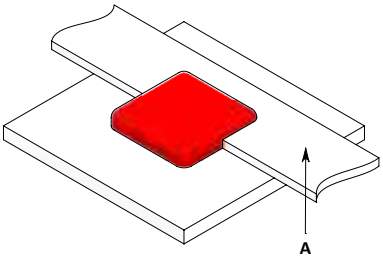


BS2 - Bar to Steel Surface

A mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	WEP 090	BS2-C-203	HCC 001
25 x 3		BS2-C-253	
25 x 4		BS2-C-254	
25 x 6	WEP 150	BS2-C-256	
30 x 2	WEP 115	BS2-C-302	
30 x 3		BS2-C-303	
30 x 4	WEP 150	BS2-C-304	
30 x 5	WEP 200	BS2-C-305	
31 x 3	WEP 115	BS2-C-313	
31 x 6	WEP 200	BS2-C-316	
38 x 3	WEP 150	BS2-C-383	
38 x 5	WEP 200	BS2-C-385	
38 x 6		BS2-C-386	
40 x 3	WEP 115	BS2-C-403	
40 x 4	WEP 200	BS2-C-404	
40 x 5		BS2-C-405	
40 x 6	WEP 250	BS2-C-406	
50 x 3	WEP 200	BS2-C-503	
50 x 4	2 x WEP 150	BS2-D-504	HCD 001
50 x 5		BS2-D-505	
50 x 6		BS2-D-506	

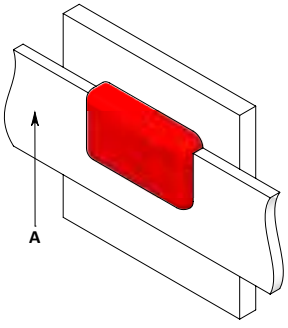
BS3 - Bar to Steel Surface

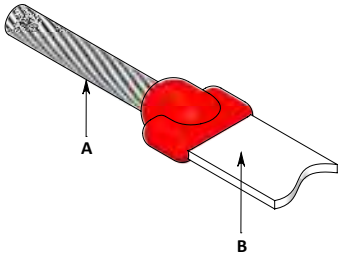
A mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	WEP 090	BS3-C-203	HCC 001
25 x 3	WEP 115	BS3-C-253	
25 x 4		BS3-C-254	
25 x 6	WEP 150	BS3-C-256	
30 x 2	WEP 115	BS3-C-302	
30 x 3		BS3-C-303	
30 x 4	WEP 150	BS3-C-304	
30 x 5	WEP 200	BS3-C-305	
31 x 3	WEP 115	BS3-C-313	
31 x 6	WEP 200	BS3-C-316	
38 x 3	WEP 150	BS3-C-383	
38 x 5	WEP 200	BS3-C-385	
38 x 6	WEP 250	BS3-C-386	
40 x 3	WEP 150	BS3-C-403	
40 x 4	WEP 200	BS3-C-404	
40 x 5	WEP 250	BS3-C-405	
40 x 6		BS3-C-406	
50 x 3		BS3-C-503	
50 x 4		BS3-C-504	
50 x 5		BS3-C-505	
50 x 6		BS3-C-506	



BS4 - Bar to Steel Surface

A mm x mm	Weld Powder	Mould	Handle Clamp
20 x 3	WEP 090	BS4-C-203	HCC 001
25 x 3	WEP 115	BS4-C-253	
25 x 4	WEP 150	BS4-C-254	
25 x 6		BS4-C-256	
30 x 2	WEP 115	BS4-C-302	
30 x 3		BS4-C-303	
30 x 4	WEP 200	BS4-C-304	
30 x 5		BS4-C-305	
31 x 3	WEP 150	BS4-C-313	
31 x 6	WEP 200	BS4-C-316	
38 x 3	WEP 150	BS4-C-383	
38 x 5	WEP 200	BS4-C-385	
38 x 6	WEP 250	BS4-C-386	
40 x 3	WEP 150	BS4-C-403	
40 x 4	WEP 200	BS4-C-404	
40 x 5		BS4-C-405	
40 x 6	WEP 250	BS4-C-406	
50 x 3	WEP 200	BS4-C-503	
50 x 4	WEP 250	BS4-C-504	
50 x 5	2 x WEP 150	BS4-D-505	HCD 001
50 x 6		BS4-D-506	



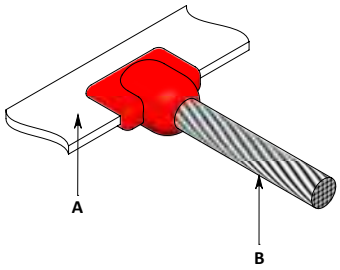


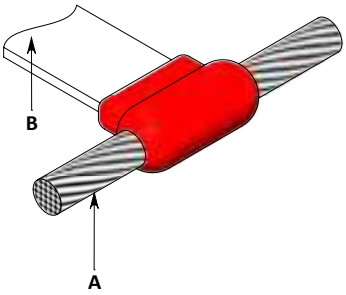
CB1 - Cable to Bar

A mm²	B mm x mm	Weld Powder	Mould	Handle Clamp
16	20 x 3	WEP 045	CB1-C-16203	HCC 001
	25 x 3		CB1-C-16253	
25	20 x 3		CB1-C-25203	
	25 x 3		CB1-C-25253	
35	20 x 3		CB1-C-35203	
	25 x 3		CB1-C-35253	
8mm Ø	20 x 3		CB1-C-8SC203	
	25 x 3	WEP 065	CB1-C-8SC253	
50	20 x 3	WEP 045	CB1-C-50203	
	25 x 3	WEP 065	CB1-C-50253	
70	25 x 3		CB1-C-70253	
	25 x 4		CB1-C-70254	
	25 x 6		CB1-C-70256	
95	25 x 3	WEP 090	CB1-C-95253	
	25 x 4		CB1-C-95254	
	25 x 6		CB1-C-95256	
120	25 x 3		CB1-C-120253	
	25 x 4		CB1-C-120254	
	25 x 6		CB1-C-120256	
150	30 x 5	WEP 115	CB1-C-120305	
	25 x 6		CB1-C-150256	
	30 x 5		CB1-C-150305	
	40 x 5	WEP 150	CB1-C-150405	
	50 x 3	WEP 115	CB1-C-150503	
	50 x 4	WEP 150	CB1-C-150504	
	50 x 6		CB1-C-150506	
	50 x 8	WEP 200	CB1-C-150508	
185	30 x 5	WEP 150	CB1-C-185305	
	31 x 6		CB1-C-185316	
	38 x 6		CB1-C-185386	
	40 x 5		CB1-C-185405	
	50 x 4	WEP 200	CB1-D-185504	HCD 001
	50 x 5		CB1-D-185505	
	50 x 6		CB1-D-185506	
	50 x 8	WEP 250	CB1-D-185508	
240	50 x 3	WEP 200	CB1-D-240503	
	50 x 4		CB1-D-240504	
	50 x 5		CB1-D-240505	
	50 x 6	2 x WEP 150	CB1-D-240506	
300	50 x 6		CB1-D-300506	
	50 x 8	2 x WEP 200	CB1-D-300508	

CB4 - Cable to Bar

A mm x mm	B mm²	Weld Powder	Mould	Handle Clamp
20 x 3	16	WEP 045	CB4-C-20316	HCC 001
	25		CB4-C-20325	
	35		CB4-C-20335	
	8mm Ø		CB4-C-2038SC	
	50		CB4-C-20350	
25 x 3	16		CB4-C-25316	
	25	WEP 032	CB4-C-25325	
	35	WEP 045	CB4-C-25335	
	8mm Ø		CB4-C-2538SC	
	50		CB4-C-25350	
	70	WEP 065	CB4-C-25370	
	95	WEP 090	CB4-C-25395	
	120		CB4-C-253120	
25 x 4	70	WEP 065	CB4-C-25470	
	95	WEP 090	CB4-C-25495	
	120		CB4-C-254120	
25 x 6	70		CB4-C-25670	
	95	WEP 115	CB4-C-25695	
	120		CB4-C-256120	
	150		CB4-C-256150	
30 x 5	25	WEP 090	CB4-C-30525	
	70		CB4-C-30570	
	120	WEP 115	CB4-C-305120	
	150		CB4-C-305150	
	185	WEP 150	CB4-C-305185	
	240	WEP 250	CB4-D-305240	
	400		CB4-D-305400	HCD 001
31 x 6	185	WEP 150	CB4-C-316185	HCC 001
38 x 6	185		CB4-C-386185	
40 x 5	150	WEP 115	CB4-C-405150	
	185	WEP 150	CB4-C-405185	
40 x 6	95	WEP 115	CB4-C-40695	
	120		CB4-C-406120	
50 x 3	150	WEP 115	CB4-C-503150	
	240	WEP 200	CB4-C-503240	
50 x 4	150	WEP 115	CB4-C-504150	
	185	WEP 150	CB4-C-504185	
	240	WEP 200	CB4-C-504240	
50 x 5	185	WEP 150	CB4-C-505185	
	240	WEP 200	CB4-C-505240	
50 x 6	150	WEP 150	CB4-C-506150	
	185		CB4-C-506185	
	240	WEP 250	CB4-C-506240	
	300	2 x WEP 150	CB4-D-506300	HCD 001
50 x 8	150	WEP 150	CB4-C-508150	HCC 001
	185	WEP 200	CB4-C-508185	
	300	2 x WEP 200	CB4-D-508300	HCD 001



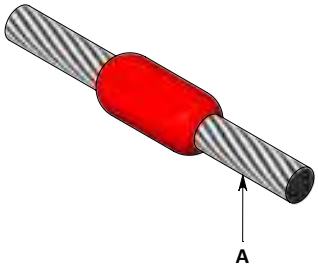


CB5 - Cable to Bar

A mm²	B mm x mm	Weld Powder	Mould	Handle Clamp
16	20 x 3	WEP 045	CB5-C-16203	HCC 001
	25 x 3	WEP 065	CB5-C-16253	
25	20 x 3	WEP 045	CB5-C-25203	
	25 x 3	WEP 065	CB5-C-25253	
35	20 x 3	WEP 045	CB5-C-35203	
	25 x 3	WEP 065	CB5-C-35253	
8mm Ø	20 x 3		CB5-C-8SC203	
	25 x 3		CB5-C-8SC253	
50	20 x 3		CB5-C-50203	
	25 x 3		CB5-C-50253	
70	25 x 3	WEP 090	CB5-C-70253	
	25 x 4	WEP 115	CB5-C-70254	
	25 x 6	WEP 200	CB5-C-70256	
	50 x 3		CB5-C-70503	
95	25 x 3	WEP 115	CB5-C-95253	
	25 x 4	WEP 150	CB5-C-95254	
	25 x 6		CB5-C-95256	
120	25 x 3		CB5-C-120253	
	25 x 4		CB5-C-120254	
	25 x 6		CB5-C-120256	
	30 x 5	WEP 200	CB5-C-120305	
150	25 x 6		CB5-C-150256	
	30 x 5		CB5-C-150305	
	40 x 5	WEP 250	CB5-C-150405	
	50 x 3	WEP 200	CB5-C-150503	
	50 x 4	WEP 250	CB5-C-150504	
	50 x 6	2 x WEP 150	CB5-D-150506	HCD 001
	50 x 8	2 x WEP 200	CB5-D-150508	
185	30 x 5	WEP 250	CB5-C-185305	HCC 001
	31 x 6		CB5-C-185316	
	38 x 6		CB5-C-185386	
	40 x 5		CB5-C-185405	
	50 x 4		CB5-D-185504	HCD 001
	50 x 5	2 x WEP 150	CB5-D-185505	
	50 x 6		CB5-D-185506	
	50 x 8	2 x WEP 200	CB5-D-185508	
240	50 x 3	2 x WEP 150	CB5-D-240503	
	50 x 4		CB5-D-240504	
	50 x 5		CB5-D-240505	
	50 x 6	2 x WEP 200	CB5-D-240506	
300	50 x 6	2 x WEP 250	CB5-D-300506	
	50 x 8		CB5-D-300508	

CC1 - Cable to Cable

A mm²	Weld Powder	Mould	Handle Clamp
16	WEP 032	CC1-C-16	HCC 001
25		CC1-C-25	
35		CC1-C-35	
8mm Ø	WEP 045	CC1-C-8SC	
50		CC1-C-50	
70	WEP 065	CC1-C-70	
95	WEP 090	CC1-C-95	
120	WEP 115	CC1-C-120	
150		CC1-C-150	
185	WEP 150	CC1-C-185	
240	WEP 200	CC1-C-240	
300	WEP 250	CC1-C-300	
400	2 x WEP 150	CC1-D-400	HCD 001



CC2 - Cable to Cable

A mm²	B mm²	Weld Powder	Mould	Handle Clamp
16	16	WEP 045	CC2-C-1616	HCC 001
25	25		CC2-C-2525	
35	25		CC2-C-3525	
	35		CC2-C-3535	
8mm Ø	8mm Ø	WEP 065	CC2-C-88SC	
50	25		CC2-C-5025	
	35		CC2-C-5035	
	50	WEP 090	CC2-C-5050	
70	16	WEP 065	CC2-C-7016	
	25		CC2-C-7025	
	35		CC2-C-7035	
	50	WEP 090	CC2-C-7050	
	70		CC2-C-7070	
95	35		CC2-C-9535	
	50		CC2-C-9550	
	70		CC2-C-9570	
	95	WEP 115	CC2-C-9595	
120	35	WEP 090	CC2-C-12035	
	50		CC2-C-12050	
	70		CC2-C-12070	
	95	WEP 150	CC2-C-12095	
	120		CC2-C-120120	
	240	WEP 200	CC2-C-120240	
150	16	WEP 090	CC2-C-15016	
	25		CC2-C-15025	
	35		CC2-C-15035	
	50		CC2-C-15050	
	70		CC2-C-15070	
	95	WEP 150	CC2-C-15095	
	120		CC2-C-150120	
	150	WEP 200	CC2-C-150150	
185	70	WEP 090	CC2-C-18570	
	95	WEP 150	CC2-C-18595	
	120	WEP 200	CC2-C-185120	
	150		CC2-C-185150	
	185		CC2-C-185185	
240	25	WEP 090	CC2-C-24025	
	95	WEP 150	CC2-C-24095	
	120	WEP 200	CC2-C-240120	

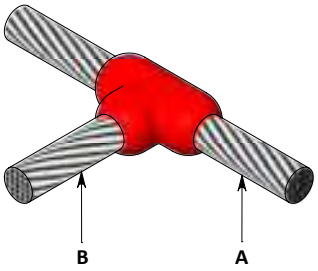
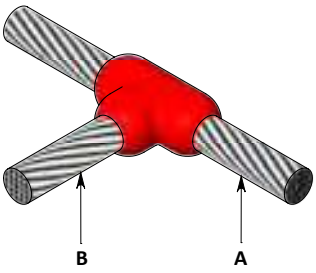
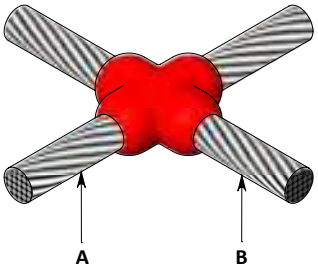


Table continued on page 178



CC2 - Cable to Cable (continued)

A mm²	B mm²	Weld Powder	Mould	Handle Clamp
240	150	WEP 200	CC2-C-240150	HCC 001
	185		CC2-C-240185	
	240	2 x WEP 150	CC2-D-240240	HCD 001
	300		CC2-D-240300	
300	25	WEP 150	CC2-C-30025	HCC 001
	70		CC2-C-30070	
	120		CC2-C-300120	
	150	WEP 200	CC2-C-300150	
	185	WEP 250	CC2-C-300185	
	240	2 x WEP 200	CC2-D-300240	HCD 001
	300		CC2-D-300300	
630	70	3 x WEP 200	CC2-D-63070	

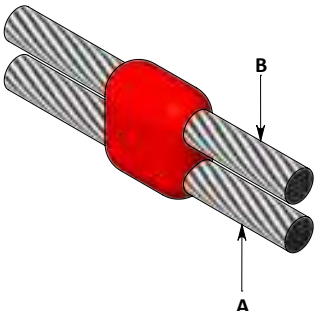


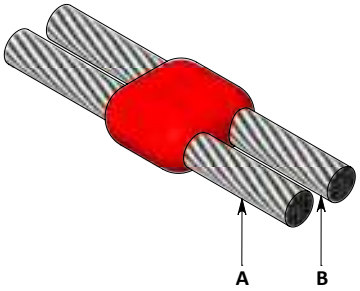
CC4 - Cable to Cable

A mm²	B mm²	Weld Powder	Mould	Handle Clamp
16	16	WEP 045	CC4-C-1616	HCC 001
25	25		CC4-C-2525	
35	25	WEP 065	CC4-C-3525	
	35		CC4-C-3535	
8mm Ø	8mm Ø	WEP 090	CC4-C-88SC	
50	25		CC4-C-5025	
	35		CC4-C-5035	
	50		CC4-C-5050	
70	25	WEP 115	CC4-C-7025	
	35		CC4-C-7035	
	50		CC4-C-7050	
	70		CC4-C-7070	
95	35		CC4-C-9535	
	50		CC4-C-9550	
	70	WEP 150	CC4-C-9570	
	95		CC4-C-9595	
120	35	WEP 115	CC4-C-12035	
	50	WEP 150	CC4-C-12050	
	70		CC4-C-12070	
	95	WEP 200	CC4-C-12095	
	120		CC4-C-120120	
150	50	WEP 150	CC4-C-15050	
	70		CC4-C-15070	
	95	WEP 200	CC4-C-15095	
	120	WEP 250	CC4-C-150120	
	150		CC4-C-150150	
185	70	WEP 200	CC4-C-18570	
	95		CC4-C-18595	
	120	WEP 250	CC4-C-185120	
	150		CC4-C-185150	
	185	2 x WEP 150	CC4-D-185185	HCD 001
240	95		CC4-D-24095	
	120		CC4-D-240120	
	150	2 x WEP 200	CC4-D-240150	
	185		CC4-D-240185	
	240	2 x WEP 250	CC4-D-240240	
300	120	2 x WEP 200	CC4-D-300120	
	150	2 x WEP 250	CC4-D-300150	
	185		CC4-D-300185	
	240	3 x WEP 200	CC4-D-300240	
	300		CC4-D-300300	

CC7 - Cable to Cable

A mm²	B mm²	Weld Powder	Mould	Handle Clamp
16	16	WEP 045	CC7-C-1616	HCC 001
25	25		CC7-C-2525	
35	25	WEP 065	CC7-C-3525	
	35		CC7-C-3535	
8mm Ø	8mm Ø	WEP 090	CC7-C-88SC	
50	25	WEP 065	CC7-C-5025	
	35	WEP 090	CC7-C-5035	
	50		CC7-C-5050	
70	25		CC7-C-7025	
	35		CC7-C-7035	
	50	WEP 115	CC7-C-7050	
	70		CC7-C-7070	
95	35		CC7-C-9535	
	50		CC7-C-9550	
	70		CC7-C-9570	
	95	WEP 150	CC7-C-9595	
120	35		CC7-C-12035	
	50		CC7-C-12050	
	70		CC7-C-12070	
	95	WEP 200	CC7-C-12095	
	120		CC7-C-120120	
150	50	WEP 150	CC7-C-15050	
	70		CC7-C-15070	
	95	WEP 200	CC7-C-15095	
	120	WEP 250	CC7-C-150120	
	150	2 x WEP 150	CC7-D-150150	HCD 001
185	70	WEP 200	CC7-C-18570	HCC 001
	95		CC7-C-18595	
	120	WEP 250	CC7-C-185120	
	150	2 x WEP 150	CC7-D-185150	HCD 001
	185		CC7-D-185185	
240	95	WEP 250	CC7-C-24095	HCC 001
	120		CC7-C-240120	
	150	2 x WEP 150	CC7-D-240150	HCD 001
	185		CC7-D-240185	
	240	2 x WEP 200	CC7-D-240240	
300	120	2 x WEP 150	CC7-D-300120	
	150		CC7-D-300150	
	185	2 x WEP 200	CC7-D-300185	
	240	2 x WEP 250	CC7-D-300240	
	300		CC7-D-300300	





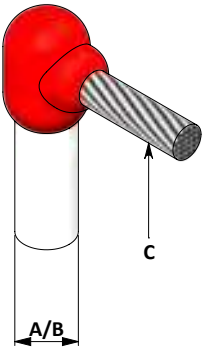
CC14 - Cable to Cable

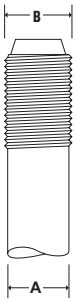
A mm²	B mm²	Weld Powder	Mould	Handle Clamp
16	16	WEP 045	CC14-C-1616	HCC 001
25	25		CC14-C-2525	
35	25	WEP 065	CC14-C-3525	
	35		CC14-C-3535	
8mm Ø	8mm Ø	WEP 090	CC14-C-88SC	
50	25		CC14-C-5025	
	35		CC14-C-5035	
	50		CC14-C-5050	
70	25		CC14-C-7025	
	35		CC14-C-7035	
	50	WEP 115	CC14-C-7050	
	70		CC14-C-7070	
95	35		CC14-C-9535	
	50	WEP 150	CC14-C-9550	
	70		CC14-C-9570	
	95		CC14-C-9595	
120	35		CC14-C-12035	
	50		CC14-C-12050	
	70	WEP 200	CC14-C-12070	
	95		CC14-C-12095	
	120		CC14-C-120120	
150	50	WEP 150	CC14-C-15050	
	70		CC14-C-15070	
	95	WEP 200	CC14-C-15095	
	120	WEP 250	CC14-C-150120	
	150	2 x WEP 150	CC14-D-150150	HCD 001
185	70	WEP 200	CC14-C-18570	HCC 001
	95		CC14-C-18595	
	120	WEP 250	CC14-C-185120	
	150	2 x WEP 150	CC14-D-185150	HCD 001
	185		CC14-D-185185	
240	95	WEP 250	CC14-C-24095	HCC 001
	120		CC14-C-240120	
	150	2 x WEP 150	CC14-D-240150	HCD 001
	185		CC14-D-240185	
	240	2 x WEP 200	CC14-D-240240	
300	120	2 x WEP 150	CC14-D-300120	
	150		CC14-D-300150	
	185	2 x WEP 200	CC14-D-300185	
	240	2 x WEP 250	CC14-C-300240	
	300		CC14-D-300300	

Cable to Earth Rod

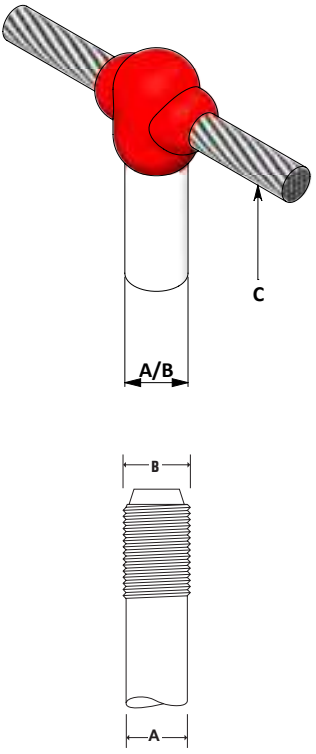
A mm	B inches	C mm²	Weld Powder	Mould	Handle Clamp
12.7	½"	16	WEP 065	CR1-C-12716	HCC 001
		25		CR1-C-12725	
		35		CR1-C-12735	
		8mm Ø		CR1-C-1278SC	
		50		CR1-C-12750	
		70	WEP 090	CR1-C-12770	
		95		CR1-C-12795	
		120		CR1-C-127120	
		150	WEP 115	CR1-C-127150	
		185		CR1-C-127185	
		240	WEP 150	CR1-C-127240	
		300		CR1-C-127300	
14.2	⅝"	16	WEP 065	CR1-C-14216	HCC 001
		25		CR1-C-14225	
		35		CR1-C-14235	
		8mm Ø	WEP 090	CR1-C-1428SC	
		50		CR1-C-14250	
		70		CR1-C-14270	
		95		CR1-C-14295	
		120	WEP 115	CR1-C-142120	
		150		CR1-C-142150	
		185		CR1-C-142185	
		240	WEP 150	CR1-C-142240	
		300	WEP 200	CR1-C-142300	
16	¾"	70	WEP 090	CR1-C-1670	HCC 001
17.2		16	WEP 065	CR1-C-17216	
		25		CR1-C-17225	
		35		CR1-C-17235	
		8mm Ø	WEP 090	CR1-C-1728SC	
		50		CR1-C-17250	
		70		CR1-C-17270	
		95		CR1-C-17295	
		120		CR1-C-172120	
		150	WEP 115	CR1-C-172150	
		185		CR1-C-172185	
		240	WEP 150	CR1-C-172240	
		300	WEP 200	CR1-C-172300	

Suitable only for Copperbond Earth Rods. Please contact our sales office for details on connections to Solid Copper and Stainless Steel Earth Rods.





Earth rod threads must be removed before joint is made.



Earth rod threads must be removed before joint is made.

CR2- Cable to Earth Rod

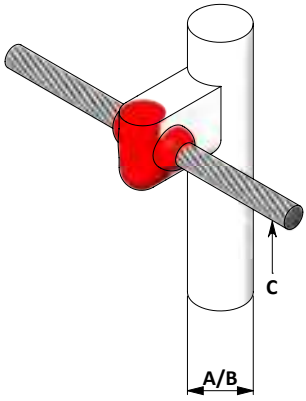
A mm	B inches	C mm²	Weld Powder	Mould	Handle Clamp
12.7	½"	16	WEP 090	CR2-C-12716	HCC 001
		25		CR2-C-12725	
		35		CR2-C-12735	
		8mm Ø	WEP 065	CR2-C-1278SC	
		50	WEP 090	CR2-C-12750	
		70		CR2-C-12770	
		95	WEP 115	CR2-C-12795	
		120	WEP 150	CR2-C-127120	
		150		CR2-C-127150	
		185	WEP 200	CR2-C-127185	
		240		CR2-C-127240	
		300	WEP 250	CR2-C-127300	
14.2	⅝"	16	WEP 065	CR2-C-14216	HCC 001
		25	WEP 090	CR2-C-14225	
		35		CR2-C-14235	
		8mm Ø		CR2-C-1428SC	
		50		CR2-C-14250	
		70	WEP 115	CR2-C-14270	
		95		CR2-C-14295	
		120	WEP 150	CR2-C-142120	
		150	WEP 200	CR2-C-142150	
		185		CR2-C-142185	
		240	WEP 250	CR2-C-142240	
		300	2 x WEP 150	CR2-D-142300	HCD 001
17.2	¾"	16	WEP 090	CR2-C-17216	HCC 001
		25		CR2-C-17225	
		35		CR2-C-17235	
		8mm Ø	WEP 115	CR2-C-1728SC	
		50		CR2-C-17250	
		70		CR2-C-17270	
		95		CR2-C-17295	
		120	WEP 150	CR2-C-172120	
		150	WEP 200	CR2-C-172150	
		185		CR2-C-172185	
		240	WEP 250	CR2-C-172240	
		300	2 x WEP 150	CR2-D-172300	HCD 001

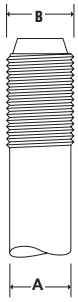
Suitable only for Copperbond Earth Rods. Please contact our sales office for details on connections to Solid Copper and Stainless Steel Earth Rods.

CR3 - Cable to Earth Rod

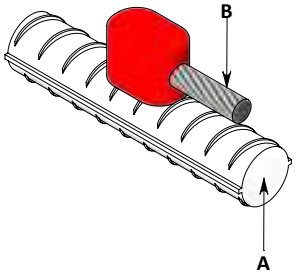
A mm	B inches	C mm²	Weld Powder	Mould	Handle Clamp
12.7	½"	16	WEP 090	CR3-E-12716	HCC 001
		25		CR3-E-12725	
		35		CR3-E-12735	
		8mm Ø	WEP 115	CR3-E-1278SC	
		50		CR3-E-12750	
		70		CR3-E-12770	
		95		CR3-E-12795	
		120	WEP 150	CR3-E-127120	
		150		CR3-E-127150	
		185	WEP 250	CR3-E-127185	
		240	2 x WEP 200	CR3-E-127240	
		300	2 x WEP 250	CR3-E-127300	
14.2	⅝"	16	WEP 090	CR3-E-14216	HCC 001
		25		CR3-E-14225	
		35		CR3-E-14235	
		8mm Ø	WEP 115	CR3-E-1428SC	
		50		CR3-E-14250	
		70		CR3-E-14270	
		95		CR3-E-14295	
		120	WEP 150	CR3-E-142120	
		150	WEP 200	CR3-E-142150	
		185	WEP 250	CR3-E-142185	
		240	2 x WEP 200	CR3-J-142240	HCD 001
		300	2 x WEP 250	CR3-J-142300	
16	¾"	95	WEP 115	CR3-E-1695	HCD 001
17.2		16	WEP 090	CR3-E-17216	HCC 001
		25		CR3-E-17225	
		35		CR3-E-17235	
		8mm Ø	WEP 115	CR3-E-1728SC	
		50		CR3-E-17250	
		70	WEP 150	CR3-E-17270	
		95		CR3-E-17295	
		120	WEP 200	CR3-E-172120	
		150	WEP 250	CR3-E-172150	HCD 001
		185	2 x WEP 200	CR3-J-172185	
		240		CR3-J-172240	
		300	3 x WEP 200	CR3-J-172300	

Suitable only for Copperbond Earth Rods. Please contact our sales office for details on connections to Solid Copper and Stainless Steel Earth Rods.





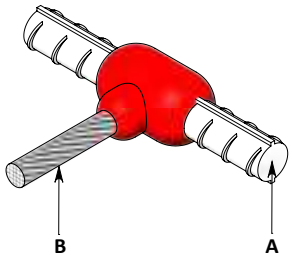
Earth rod threads must be removed before joint is made.



CRE1 - Cable to Rebar

A mm	B mm²	Weld Powder	Mould	Handle Clamp
10 - 40	16	WEP 045	CRE1-C-16	HCC 001
	25		CRE1-A-25	HCA 001
	35		CRE1-A-35	
	8mm Ø	WEP 090	CRE1-C-8SC	HCC 001
	50		CRE1-C-50	
	70		CRE1-C-70	
	95		CRE1-C-95	
	120		CRE1-C-120	
	150	WEP 150	CRE1-C-150	
	185	WEP 250	CRE1-C-185	
	240	2 x WEP 150	CRE1-D-240	HCD 001
	300		CRE1-D-300	

To safely and effectively weld cable to rebar some form of mould packing must be used. Preformed ceramic fibre packing (Part no. PAK001) or Duxseal (Part no. DXS001) can be used for this purpose.



CRE2 - Cable to Rebar

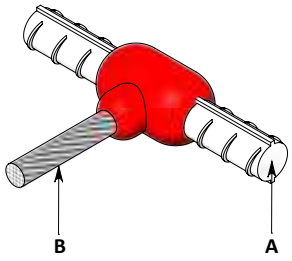
A mm	B mm²	Weld Powder	Mould	Handle Clamp
16	16	WEP 090	CRE2-C-16R16	HCC 001
	25		CRE2-C-16R25	
	35		CRE2-C-16R35	
	50	WEP 115	CRE2-C-16R50	
	8mm Ø		CRE2-C-16R8SC	
	70	WEP 115	CRE2-C-16R70	
	95	WEP 150	CRE2-C-16R95	
	120		CRE2-C-16R120	
	150	WEP 200	CRE2-C-16R150	
	185		CRE2-C-16R185	
	240	WEP 250	CRE2-C-16R240	
	300	2 x WEP 150	CRE2-D-16R300	HCD 001
20	16	WEP 115	CRE2-C-20R16	HCC 001
	25		CRE2-C-20R25	
	35		CRE2-C-20R35	
	50	WEP 150	CRE2-C-20R50	
	8mm Ø		CRE2-C-20R8SC	
	70		CRE2-C-20R70	
	95	WEP 200	CRE2-C-20R95	
	120		CRE2-C-20R120	
	150		CRE2-C-20R150	
	185	WEP 250	CRE2-C-20R185	
	240	2 x WEP 150	CRE2-D-20R240	HCD 001
	300	2 x WEP 200	CRE2-D-20R300	

Table continued on page 185

CRE2 - Cable to Rebar (continued)

A mm	B mm²	Weld Powder	Mould	Handle Clamp
25	16	WEP 200	CRE2-C-25R16	HCC 001
	25		CRE2-C-25R25	
	35		CRE2-C-25R35	
	50		CRE2-C-25R50	
	8mm Ø		CRE2-C-25R8SC	
	70	WEP 250	CRE2-C-25R70	
	95		CRE2-C-25R95	
	120		CRE2-C-25R120	
	150	2 x WEP 150	CRE2-D-25R150	HCD 001
	185		CRE2-D-25R185	
	240	2 x WEP 200	CRE2-D-25R240	
	300		CRE2-D-25R300	
30	16	WEP 250	CRE2-C-30R16	HCC 001
	25		CRE2-C-30R25	
	35		CRE2-C-30R35	
	50	2 x WEP 150	CRE2-D-30R50	HCD 001
	8mm Ø		CRE2-D-30R8SC	
	70		CRE2-D-30R70	
	95		CRE2-D-30R95	
	120	2 x WEP 200	CRE2-D-30R120	
	150		CRE2-D-30R150	
	185	2 x WEP 250	CRE2-D-30R185	
	240	3 x WEP 200	CRE2-D-30R240	
	300		CRE2-D-30R300	

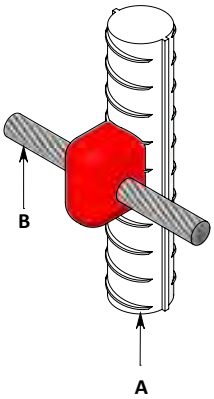
To safely and effectively weld cable to rebar some form of mould packing must be used. Preformed ceramic fibre packing (Part no. PAK001) or Duxseal (Part no. DXS001) can be used for this purpose.

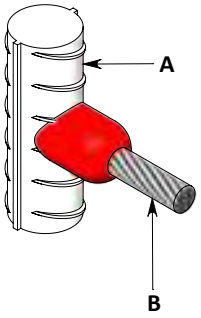


CRE3 - Cable to Rebar

A mm	B mm²	Weld Powder	Mould	Handle Clamp
10 - 40	16	WEP 045	CRE3-C-16	HCC 002
	25		CRE3-C-25	
	35		CRE3-C-35	
	8mm Ø	WEP 090	CRE3-C-8SC	
	50		CRE3-C-50	
	70		CRE3-C-70	
	95		CRE3-C-95	
	120		CRE3-C-120	
	150	WEP 150	CRE3-C-150	
	185	WEP 250	CRE3-C-185	
	240	2 x WEP 150	CRE3-D-240	HCD 002
	300		CRE3-D-300	

To safely and effectively weld cable to rebar some form of mould packing must be used. Preformed ceramic fibre packing (Part no. PAK001) or Duxseal (Part no. DXS001) can be used for this purpose.

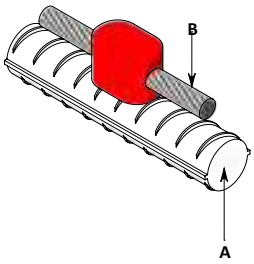




CRE6 - Cable to Rebar

A mm	B mm²	Weld Powder	Mould	Handle Clamp
10 - 40	16	WEP 045	CRE6-C-16	HCC 002
	25		CRE6-C-25	
	35		CRE6-C-35	
	8mm Ø	WEP 065	CRE6-C-8SC	
	50		CRE6-C-50	
	70	WEP 090	CRE6-C-70	
	95		CRE6-C-95	
	120		CRE6-C-120	
	150	WEP 150	CRE6-C-150	
	185		CRE6-C-185	
	240	WEP 200	CRE6-C-240	
	300		CRE6-C-300	

To safely and effectively weld cable to rebar some form of mould packing must be used. Preformed ceramic fibre packing (Part no. PAK001) or Duxseal (Part no. DXS001) can be used for this purpose.



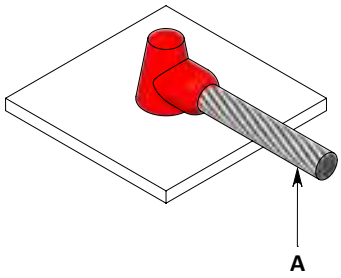
CRE17 - Cable to Rebar

A mm	B mm²	Weld Powder	Mould	Handle Clamp
10 - 40	16	WEP 045	CRE17-C-16	HCC 001
	25		CRE17-C-25	
	35		CRE17-C-35	
	8mm Ø	WEP 090	CRE17-C-8SC	
	50		CRE17-C-50	
	70		CRE17-C-70	
	95		CRE17-C-95	
	120		CRE17-C-120	
	150	WEP 150	CRE17-C-150	
	185	WEP 250	CRE17-C-185	
	240	2 X WEP 150	CRE17-D-240	HCD 001
	300		CRE17-D-300	

To safely and effectively weld cable to rebar some form of mould packing must be used. Preformed ceramic fibre packing (Part no. PAK001) or Duxseal (Part no. DXS001) can be used for this purpose.

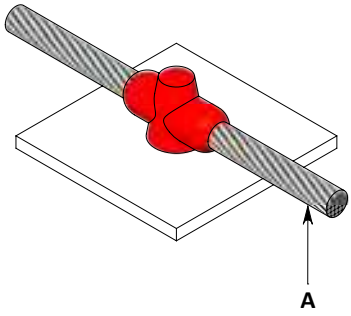
CS1 - Cable to Steel Surface

A mm²	Weld Powder	Mould	Handle Clamp
16	USE MOULD TYPE CS8 ON PAGE 188		
25			
35			
8mm Ø	WEP 045	CS1-C-8SC	HCC 001
50		CS1-C-50	
70	WEP 065	CS1-C-70	
95	WEP 090	CS1-C-95	
120	WEP 115	CS1-C-120	
150	WEP 150	CS1-C-150	
185	WEP 200	CS1-C-185	
240		CS1-C-240	
300		CS1-D-300	HCD 001



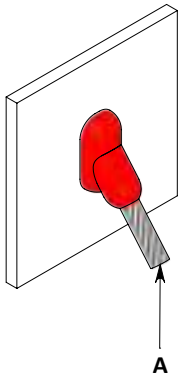
CS2 - Cable to Steel Surface

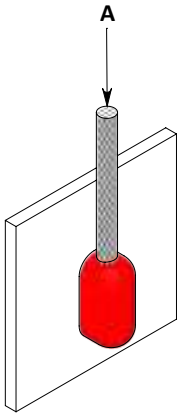
A mm²	Weld Powder	Mould	Handle Clamp
16	USE MOULD TYPE CS9 ON PAGE 188		
25			
35			
8mm Ø	WEP 090	CS2-C-8SC	HCC 001
50		CS2-C-50	
70	WEP 115	CS2-C-70	
95		CS2-C-95	
120	WEP 150	CS2-C-120	
150	WEP 200	CS2-C-150	
185	WEP 250	CS2-C-185	
240	2 x WEP 150	CS2-D-240	HCD 001
300	2 x WEP 200	CS2-D-300	



CS3 - Cable to Steel Surface

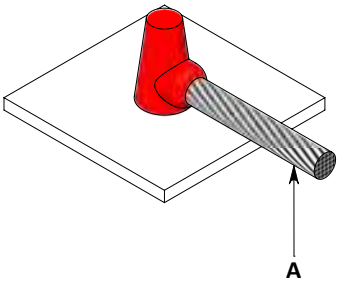
A mm²	Weld Powder	Mould	Handle Clamp
16	WEP 045	CS3-C-16	HCC 001
25		CS3-C-25	
35		CS3-C-35	
8mm Ø	WEP 065	CS3-C-8SC	
50		CS3-C-50	
70	WEP 090	CS3-C-70	
95	WEP 115	CS3-C-95	
120		CS3-C-120	
150		CS3-C-150	
185	WEP 200	CS3-C-185	
240		CS3-C-240	
300	WEP 250	CS3-C-300	





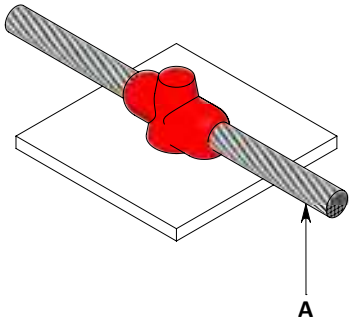
CS7 - Cable to Steel Surface

A mm²	Weld Powder	Mould	Handle Clamp
16	WEP 045	CS7-C-16	HCC 001
25	WEP 065	CS7-C-25	
35		CS7-C-35	
8mm Ø	WEP 090	CS7-C-8SC	
50		CS7-C-50	
70	WEP 150	CS7-C-70	
95	WEP 200	CS7-D-95	HCD 001
120		CS7-D-120	
150	WEP 250	CS7-D-150	
185	2 x WEP 150	CS7-D-185	
240		CS7-D-240	
300	2 x WEP 200	CS7-D-300	



CS8 - Cable to Steel Surface

A mm²	Weld Powder	Mould	Handle Clamp
16	WEP 025	CS8-A-16	HCA 001
25	WEP 032	CS8-A-25	
35		CS8-A-35	
8mm Ø	WEP 045	CS8-A-8SC	
50		CS8-A-50	
70	WEP 065	CS8-C-70	HCC 001
95	WEP 090	CS8-C-95	
120	WEP 115	CS8-C-120	
150	WEP 150	CS8-C-150	
185	WEP 200	CS8-C-185	
240		CS8-C-240	
300	WEP 250	CS8-C-300	

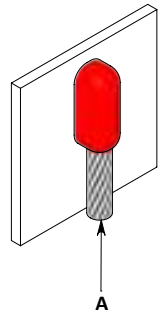


CS9 - Cable to Steel Surface

A mm²	Weld Powder	Mould	Handle Clamp
16	WEP 045	CS9-A-16	HCA 001
25		CS9-A-25	
35		CS9-A-35	
8mm Ø	WEP 090	CS9-C-8SC	HCC 001
50		CS9-C-50	
70	WEP 115	CS9-C-70	
95		CS9-C-95	
120	WEP 150	CS9-C-120	
150	WEP 200	CS9-C-150	
185	WEP 250	CS9-C-185	
240	2 x WEP 150	CS9-C-240	
300	2 x WEP 200	CS9-C-300	

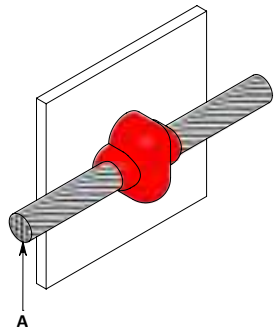
CS25 - Cable to Steel Surface

A mm²	Weld Powder	Mould	Handle Clamp
16	WEP 045	CS25-C-16	HCC 001
25		CS25-C-25	
35		CS25-C-35	
8mm Ø	WEP 065	CS25-C-8SC	
50		CS25-C-50	
70	WEP 090	CS25-C-70	
95	WEP 115	CS25-C-95	
120		CS25-C-120	
150	WEP 150	CS25-C-150	
185	WEP 200	CS25-C-185	
240		CS25-C-240	
300	WEP 250	CS25-C-300	



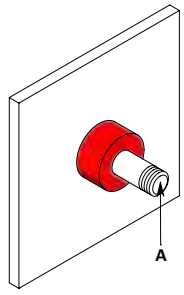
CS27 - Cable to Steel Surface

A mm²	Weld Powder	Mould	Handle Clamp
16	WEP 045	CS27-C-16	HCC 001
25		CS27-C-25	
35		CS27-C-35	
8mm Ø	WEP 065	CS27-C-8SC	
50		CS27-C-50	
70	WEP 115	CS27-C-70	
95	WEP 150	CS27-C-95	
120		CS27-C-120	
150	WEP 200	CS27-C-150	
185	WEP 250	CS27-C-185	HCD 001
240	2 x WEP 150	CS27-D-240	
300	2 x WEP 200	CS27-D-300	



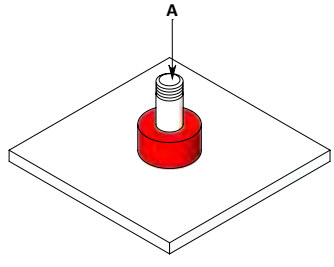
RS1- Stud to Steel Surface

A	Weld Powder	Mould	Handle Clamp
M6	WEP 025	RS1-C-M6	HCC 001
M8	WEP 032	RS1-C-M8	
M10	WEP 045	RS1-C-M10	
M12	WEP 065	RS1-C-M12	
M16	WEP 115	RS1-C-M16	



RS2- Stud to Steel Surface

A	Weld Powder	Mould	Handle Clamp
M6	WEP 025	RS2-C-M6	HCC 001
M8	WEP 032	RS2-C-M8	
M10	WEP 045	RS2-C-M10	
M12	WEP 065	RS2-C-M12	
M16	WEP 115	RS2-C-M16	



Weld Powders

Part Number	Description	Box Quantity
WEP 025	25g Weld Powder	20
WEP 032	32g Weld Powder	
WEP 045	45g Weld Powder	
WEP 065	65g Weld Powder	
WEP 090	90g Weld Powder	10
WEP 115	115g Weld Powder	
WEP 150	150g Weld Powder	
WEP 200	200g Weld Powder	
WEP 250	250g Weld Powder	

Cu-nnect Weld Metal is a high quality mixture of copper oxide and aluminium, contained inside plastic cartridges which are packed in boxes of 10 or 20 pieces depending on the powder weight. The metal retaining discs are contained in a separate bag inside each box. Each weld connection uses one disc.

The starting powder is compacted at the bottom of each cartridge under a pull-ring. The starting powder is released by pulling the pull-ring out of the cartridge.

Cu-nnect Weld Powder is NOT explosive, shock sensitive or subject to spontaneous ignition.

Moulds

A semi-permanent graphite mould is used for making all Cu-nnect welded connections. Each mould is precision machined to control the flow of the molten Cu-nnect Weld Metal and the end shape of the connection. If used carefully and cleaned properly each mould will provide for approximately 50 connections.

Handle Clamps

Part Number	Description
HCA 001	Small Handle Clamp
HCC 001	Medium Handle Clamp
HCC 002	Medium Handle Clamp with Vertical Chain Support
HCC 003	Medium Handle Clamp with Vertical Beam Support
HCC 004	Medium Handle Clamp with Horizontal Chain Support
HCD 001	Large Handle Clamp
HCD 002	Large Handle Clamp with Vertical Chain Support
HCD 003	Large Handle Clamp with Vertical Beam Support
HCD 004	Large Handle Clamp with Horizontal Chain Support

A Handle Clamp is required to hold the graphite mould and conductors in place whilst the connection is being made. Three sizes of Handle Clamp cover the range of connections shown in this catalogue.

Handle Clamps with a Chain Support are used to securely hold a Cu-nnect mould to either a Vertical or Horizontal pipe or reinforcement bar up to 4” in diameter.

Handle Clamps with a Beam Support are used to securely hold a Cu-nnect mould to a Vertical steel column or angle.

Tools & Accessories

Part Number	Description
TCB 001	Tape Cleaning Brush
CCB 001	Cable Cleaning Brush
MCB 001	Mould Cleaning Brush
MCS 001	Mould Cleaning Scraper
FGN 001	Flint Gun
FLT 001	Replacement Flints
DSC 001	Disc Container
DXS 001	Duxseal Sealing Compound (1lb)
PAK 001	Ceramic Packing
BTT 001	Butane Torch
TBX 001	Welding Toolbox
CTK 001	Cu-nnect Toolkit for Bar Connections. Contains the following: Tape Cleaning Brush (TCB 001) Mould Cleaning Brush (MCB 001) Mould Cleaning Scraper (MCS 001) Flint Gun (FGN 001)
CTK 002	Cu-nnect Toolkit for Cable Connections. Contains the following: Tape Cleaning Brush (TCB 001) Cable Cleaning Brush (CCB 001) Mould Cleaning Brush (MCB 001) Mould Cleaning Scraper (MCS 001) Flint Gun (FGN 001)

A comprehensive range of tools and cleaning materials to aid your welding programme.

SURGE PROTECTION

Surge Protective Device Selection Flow chart

Is the Mains Incoming Power supplied by overhead power line and / or, does the building have a Lightning Protection System (LPS) installed?

No Yes → Type I, Class I 10/350 SPD's are required e.g. Single Phase – WSP240/III/TT or Three Phase WSP415/III/TT

WSP415/III/TT

Is there sensitive electronic equipment in the building e.g. PC's, Servers, Routers, Fax, Telecom equipment etc?

No Yes → Type II, Class II 8/20 SPD's are also required e.g. WSP240M1, WSP415M1 and WSP415M1R or WSP1M and WSP3M Series

Is there a requirement for 'redundant two stage' back up surge protection?

No Yes → Type II, Class II 8/20 SPD's are required e.g. Single Phase – WSP240M1 or Three Phase WSP415M1 or WSP415M1R

WSP415M1

Is there a requirement for surge protection modules to be 'hot wire' replaceable?

No Yes → Type II, Class II 8/20 SPD's are required e.g. Single Phase – WSP1M/40/230N or Three Phase WSP3M/40/230N

WSP3M/40/230N

Is there a requirement for 'Fine' local Plug-In protection?

No Yes → Type III Class III SPD's are required e.g. surge protected adaptors and socket

WSPMC

Is surge protection already installed at all incoming and outgoing Telecom and Datacom points entering and leaving the building?

Yes No → Data Line Protection and Telecom Protection SPD's are required

WSPCCTV/B

WSPTLP/10LR

WSP240M1

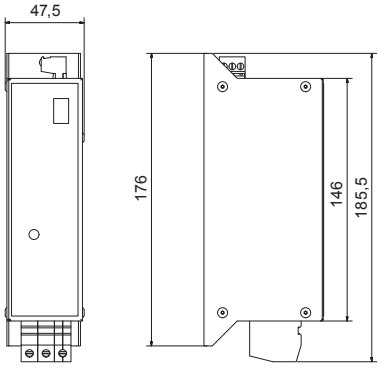
Single Phase Type 1 and 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

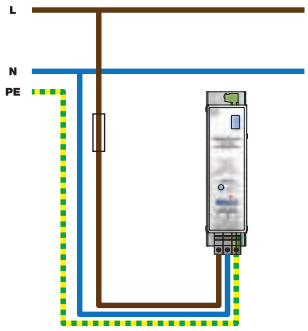
Features and Benefits:

- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Pre-failure warning and reserve protection stages allow for continuous protection of equipment.
- Proven technology for safe disconnection of the device from abnormal supply conditions or at end of life.
- Per-phase visual indication of surge protection status.
- Remote changeover contacts can be used for integration into a building management system or other remote warning system.
- Visual indication of high neutral to earth voltages. High Neutral to Earth voltages are indicative of potentially dangerous site conditions/faults.
- Robust epoxy coated steel construction
- The compact design allows the unit to be installed in any convenient location,minimising the length of connecting cables and let-through voltage (Up).

Part Number	WSP240M1
Type	Mains, Type 1 & 2
Nominal V	240
Operating V Range	200-300 (L-N)
Max. Surge current 10/350µs (I_{imp})	6.25kA
Nominal Surge Current 8/20µs (I_n)	20kA
Max. Surge current 8/20µs (I_{max})	40kA
Let-through V (U_p)	<1.5kV @ I_n ; <800V @ I_{imp}
Location	LPZ 0 - 1 or 1 - 2
Dimensions	mm

TESTED **BS EN 61643-11**





WSP415M1

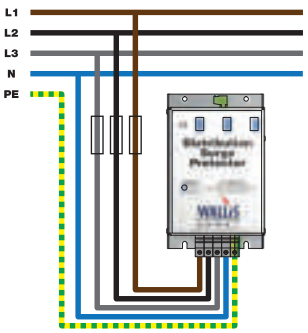
Three Phase Type 1 and 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

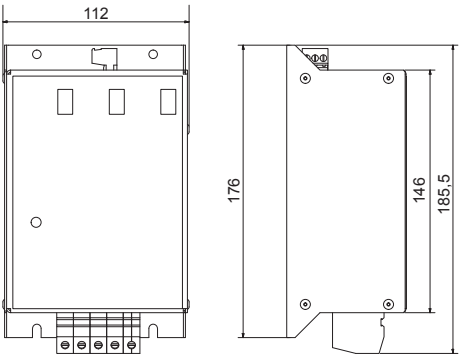
Features and Benefits:

- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Pre-failure warning and reserve protection stages allow for continuous protection of equipment.
- Proven technology for safe disconnection of the device from abnormal supply conditions or at end of life.
- Per-phase visual indication of surge protection status.
- Remote changeover contacts can be used for integration into a building management system or other remote warning system.
- Visual indication of high neutral to earth voltages. High Neutral to Earth voltages are indicative of potentially dangerous site conditions/faults.
- Robust epoxy coated steel construction
- The compact design allows the unit to be installed in any convenient location,minimising the length of connecting cables and let-through voltage (Up).

Part Number	WSP415M1
Type	Mains, Type 1 & 2
Nominal V	415
Operating V Range	200-300 (L-N) 350-500 (L-N)
Max. Surge current 10/350µs (I_{imp})	6.25kA (per phase)
Nominal Surge Current 8/20µs (I_n)	20kA (per phase)
Max. Surge current 8/20µs (I_{max})	40kA (per phase)
Let-through V (U_p)	<1.5kV @ I_n ; <800V @ I_{imp}
Location	LPZ 0 - 1 or 1 - 2
Dimensions	mm

TESTED **BS EN 61643-11**





WSP415M1R

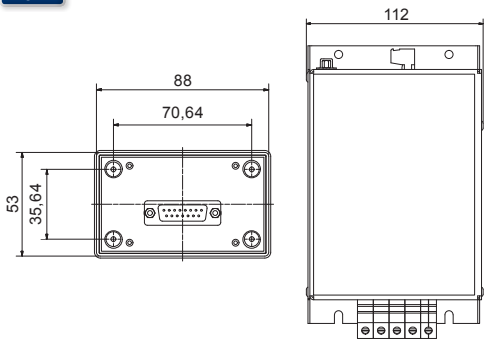
Three Phase Type 1 and 2 tested (BS EN 61643) surge protector with remote monitoring panel for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

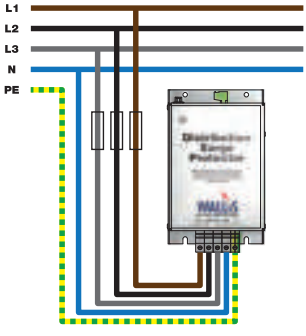
Features and Benefits:

- Remote monitoring panel allows surge protection status to be checked when the device is installed in an inaccessible location.
- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Pre-failure warning and reserve protection stages allow for continuous protection of equipment.
- Proven technology for safe disconnection of the device from abnormal supply conditions or at end of life.
- Per-phase visual indication of surge protection status.
- Remote changeover contacts can be used for integration into a building management system or other remote warning system.
- Visual indication of high neutral to earth voltages. High Neutral to Earth voltages are indicative of potentially dangerous site conditions/faults.
- Robust epoxy coated steel construction
- The compact design allows the unit to be installed in any convenient location, minimising the length of connecting cables and let-through voltage (Up).

Part Number	WSP415M1R
Type	Mains, Type 1 & 2
Nominal V	415
Operating V Range	200-300 (L-N) 350-500 (L-L)
Max. Surge current 10/350µs (I_{imp})	6.25kA (per phase)
Nominal Surge Current 8/20µs (I_n)	20kA (per phase)
Max. Surge current 8/20µs (I_{max})	40kA (per phase)
Let-through V (U_p)	<1.5kV @ I_n ; <800V @ I_{imp}
Location	LPZ 0 - 1 or 1 - 2
Dimensions	mm

BS EN 61643-11





WSP415M2

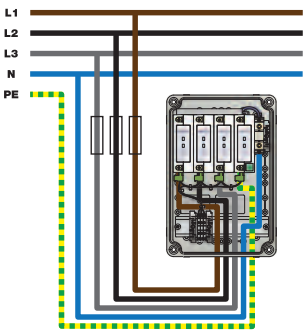
Three Phase Type 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

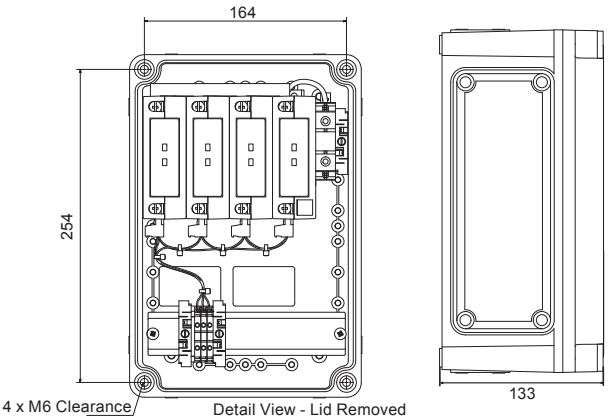
Features and Benefits:

- High current handling capability for demanding applications
- Modular protection for ease of service
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP415M2
Type	Mains, Type 2
Nominal V	415
Operating V Range	380-515 (L-L)
Nominal Surge Current 8/20µs (I_n)	40kA (per phase)
Max. Surge current 8/20µs (I_{max})	90kA (L to N) (per phase);90kA, (N to PE)
Let-through V (U_p)	<1.6kV @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP3/150/12

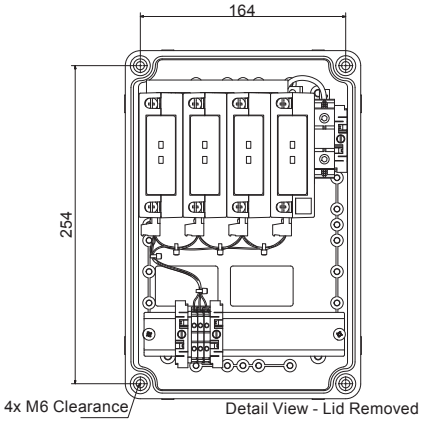
Three Phase Type 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

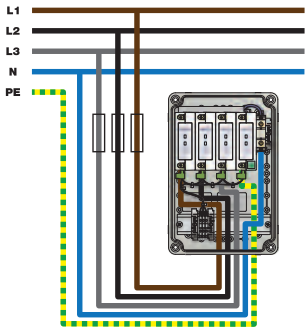
Features and Benefits:

- High current handling capability for demanding applications
- Modular protection for ease of service
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP3/150/12
Type	Mains, Type 2
Nominal V	415
Operating V Range	380-515 (L-L)
Nominal Surge Current 8/20µs (I_n)	40kA (per phase)
Max. Surge current 8/20µs (I_{max})	150kA (L to N) (per phase);150kA, (N to PE)
Let-through V (U_p)	<1.6kV @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP240/I/TT

Single Phase Type 1 and 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages.

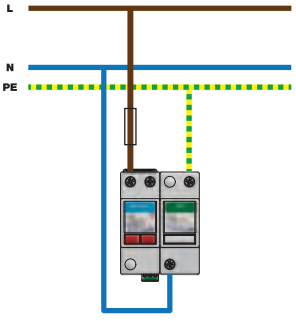
Designed for use at the boundaries of LPZ 0a to LPZ 2 as part of a coordinated SPD system (BS EN 62305), this type of protection is usually used for equipotential bonding in structures that have a Lightning Protection System (LPS) fitted, at the point cables enter the structure (LPZ 0a or b to LPZ1 boundary).

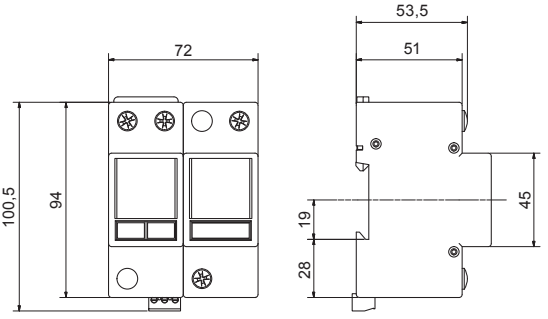
Features and Benefits:

- Repeated protection in lightning intense environments.
- Per-phase remote signalling contacts allow surge protection status to be monitored via a building management system.
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP240/I/TT
Type	Mains, Type 1 & 2
Nominal V	240
Operating V Range	275 Max (L-N)
Max. Current rating	N/A or 125A (config dependant)
Max. Surge current 10/350µs (I_{imp})	25kA (L to N); 50kA, (N to PE)
Nominal Surge Current 8/20µs (I_{max})	25kA
Max. Surge current 8/20µs (I_{max})	40kA (L to N); 40kA, (N to PE)
Let-through V (U_p)	<1.2kV @ I_{imp}
Location	LPZ 0 - 1 or 1 - 2
Dimensions	mm

BS EN 61643-11





WSP415/I/TT

Three Phase Type 1 and 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages.

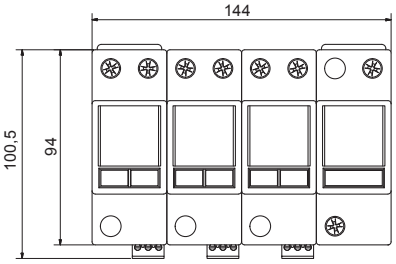
Designed for use at the boundaries of LPZ 0a to LPZ 2 as part of a coordinated SPD system (BS EN 62305), this type of protection is usually used for equipotential bonding in structures that have a Lightning Protection System (LPS) fitted, at the point cables enter the structure (LPZ 0a or b to LPZ1 boundary).

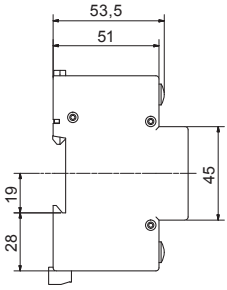
Features and Benefits:

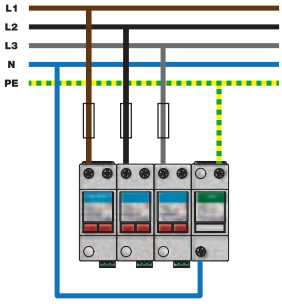
- Repeated protection in lightning intense environments.
- Per-phase remote signalling contacts allow surge protection status to be monitored via a building management system.
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	**WSP415/I/TT**
Type	Mains, Type 1 & 2
Nominal V	415
Operating V Range	275 Max (L-N)
Max. Current rating	N/A or 125A (config dependant)
Max. Surge current 10/350µs (I_{imp})	25kA (L to N) (per phase); 100kA, (N to PE)
Nominal Surge Current 8/20µs (I_n)	25kA (per phase)
Max. Surge current 8/20µs (I_{max})	40kA (L to N) (per phase); 40kA, (N to PE)
Let-through V (U_p)	<1.2kV @ I_{imp}
Location	LPZ 0 - 1 or 1 - 2
Dimensions	mm

BS EN 61643-11







WSP240/III/TT

Single Phase Type 1 and 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages.

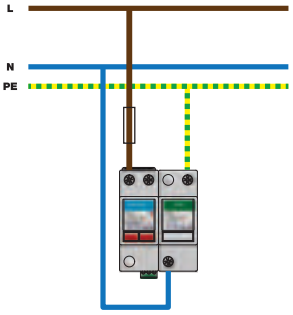
Designed for use at the boundaries of LPZ 0a to LPZ 2 as part of a coordinated SPD system (BS EN 62305), this type of protection is usually used for equipotential bonding in structures that have a Lightning Protection System (LPS) fitted, at the point cables enter the structure (LPZ 0a or b to LPZ1 boundary).

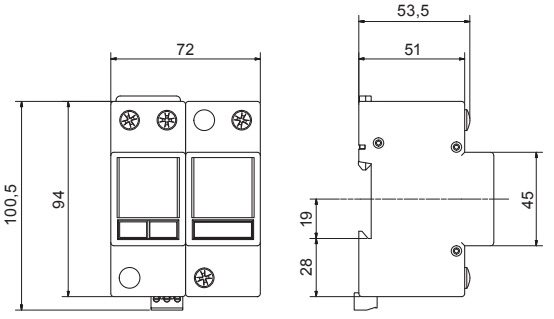
Features and Benefits:

- Repeated protection in lightning intense environments.
- Per-phase remote signalling contacts allow surge protection status to be monitored via a building management system.
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP240/III/TT
Type	Mains, Type 1 & 2
Nominal V	240
Operating V Range	275 Max (L-N)
Max. Current rating	N/A or 125A (config dependant)
Max. Surge current 10/350µs (I_{imp})	12.5kA (L to N); 25kA, (N to PE)
Nominal Surge Current 8/20µs (I_n)	25kA
Max. Surge current 8/20µs (I_{max})	40kA (L to N); 40kA, (N to PE)
Let-through V (U_p)	<1.2kV @ I_{imp}
Location	LPZ 0 - 1 or 1 - 2
Dimensions	mm

BS EN 61643-11





WSP415/III/TT

Three Phase Type 1 and 2 tested (BS EN 61643) surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages.

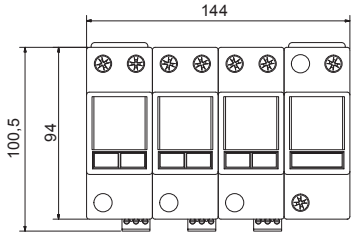
Designed for use at the boundaries of LPZ 0a to LPZ 2 as part of a coordinated SPD system (BS EN 62305), this type of protection is usually used for equipotential bonding in structures that have a Lightning Protection System (LPS) fitted, at the point cables enter the structure (LPZ 0a or b to LPZ1 boundary).

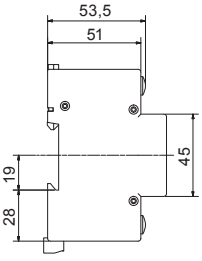
Features and Benefits:

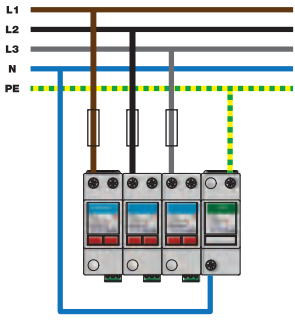
- Repeated protection in lightning intense environments.
- Per-phase remote signalling contacts allow surge protection status to be monitored via a building management system.
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP415/III/TT
Type	Mains, Type 1 & 2
Nominal V	415
Operating V Range	275 Max (L-N)
Max. Current rating	N/A or 125A (config dependant)
Max. Surge current 10/350µs (I_{imp})	12.5kA (L to N) (per phase); 50kA, (N to PE)
Nominal Surge Current 8/20µs (I_n)	25kA (per phase)
Max. Surge current 8/20µs (I_{max})	40kA (L to N) (per phase); 40kA, (N to PE)
Let-through V (U_p)	<1.2kV @ I_{imp}
Location	LPZ 0 - 1 or 1 - 2
Dimensions	mm

TESTED **BS EN 61643-11**







WSP1M/40/230N

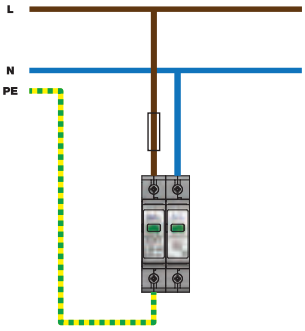
Single Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

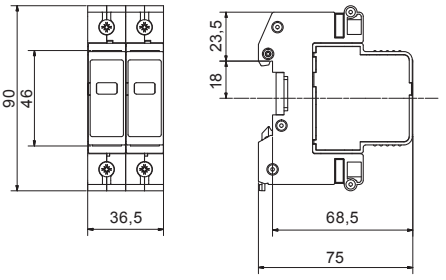
Features and Benefits:

- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP1M/40/230N
Type	Mains, Type 2
Nominal V	240
Operating V Range	200-300
Nominal Surge Current 8/20µs (I_n)	20kA
Max. Surge current 8/20µs (I_{max})	40kA, (L to N); 40kA, (N to PE)
Let-through V (U_p)	<1.3kV @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP1M/40/230NR

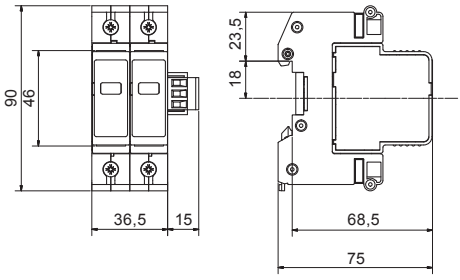
Single Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

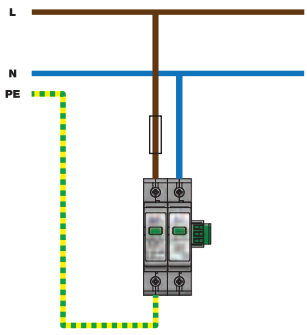
Features and Benefits:

- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication, Remote status indication option
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP1M/40/230NR
Type	Mains, Type 2
Nominal V	240
Operating V Range	200-300
Nominal Surge Current 8/20µs (I_n)	20kA
Max. Surge current 8/20µs (I_{max})	40kA, (L to N); 40kA, (N to PE)
Let-through V (U_p)	<1.3kV @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP3M/40/230R

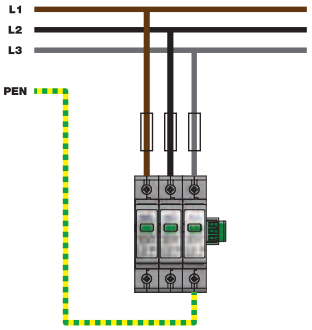
Three Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

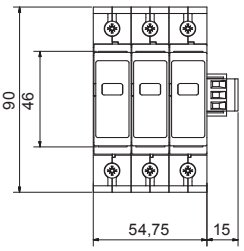
Features and Benefits:

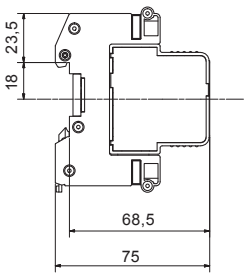
- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication, Remote status indication option
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP3M/40/230R
Type	Mains, Type 2
Nominal V	415
Operating V Range	380-515
Nominal Surge Current 8/20µs (I_n)	20kA
Max. Surge current 8/20µs (I_{max})	40kA, (L to N) (per phase)
Let-through V (U_p)	<1.3kV @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11







WSP3M/40/230N

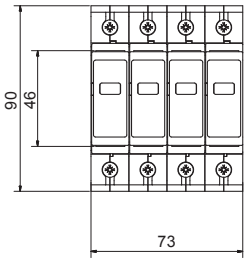
Three Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

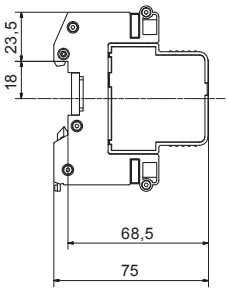
Features and Benefits:

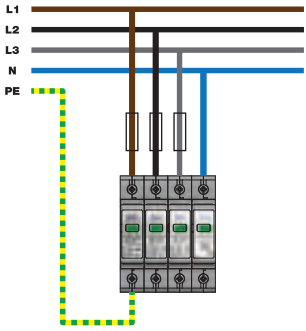
- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP3M/40/230N
Type	Mains, Type 2
Nominal V	415
Operating V Range	380-515
Nominal Surge Current 8/20µs (I_n)	20kA
Max. Surge current 8/20µs (I_{max})	40kA, (L to N); (per phase); 40kA, (N to PE)
Let-through V (U_p)	<1.3kV @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11







WSP3M/40/230NR

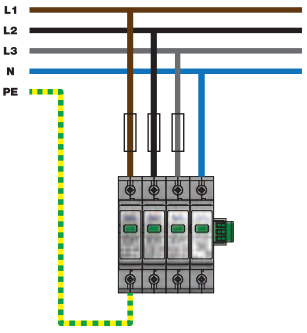
Three Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

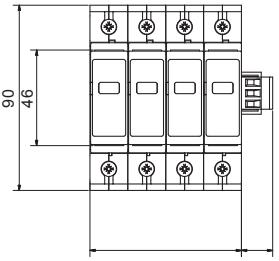
Features and Benefits:

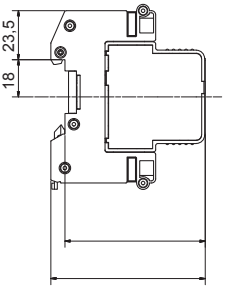
- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication, Remote status indication option
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP3M/40/230NR
Type	Mains, Type 2
Nominal V	415
Operating V Range	380-515
Nominal Surge Current 8/20µs (I_n)	20kA
Max. Surge current 8/20µs (I_{max})	40kA, (L to N); (per phase); 40kA, (N to PE)
Let-through V (U_p)	<1.3kV @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11







WSP1M/6/230

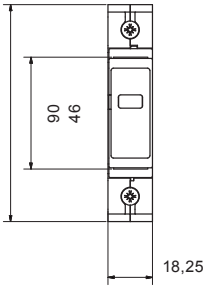
Single Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

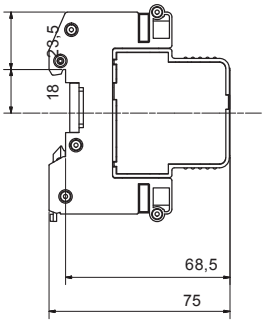
Features and Benefits:

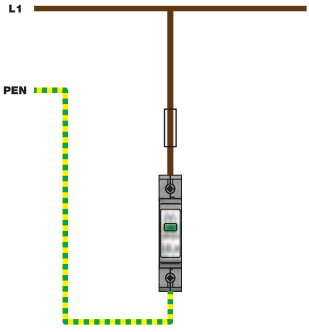
- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP1M/6/230
Type	Mains, Type 2
Nominal V	240
Operating V Range	200-300
Nominal Surge Current 8/20µs (I_n)	3kA
Max. Surge current 8/20µs (I_{max})	6kA
Let-through V (U_p)	<500V @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11







WSP1M/6/230R

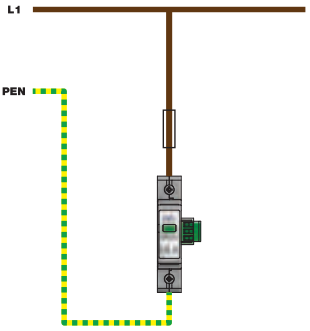
Single Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

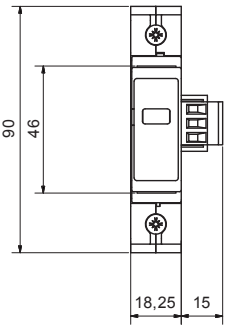
Features and Benefits:

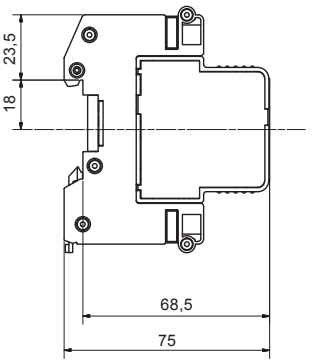
- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication, Remote status indication option
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP1M/6/230R
Type	Mains, Type 2
Nominal V	240
Operating V Range	200-300
Nominal Surge Current 8/20µs (I_n)	3kA
Max. Surge current 8/20µs (I_{max})	6kA
Let-through V (U_p)	<500V @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11







WSP1M/6/230N

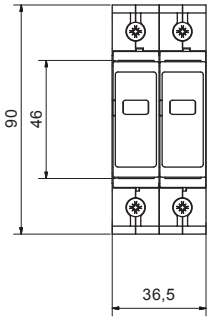
Single Phase Type 2 and 3 tested (BS EN 61643) modular surge protector for use primarily on mains power distribution systems to protect connected equipment from transient overvoltages. For use at the boundaries of LPZ 0b to LPZ 3 as part of a coordinated SPD system (BS EN 62305).

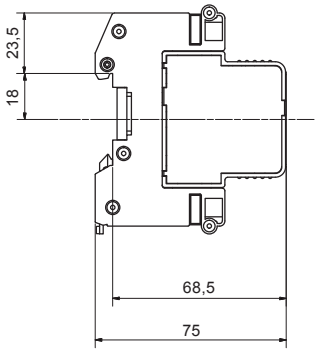
Features and Benefits:

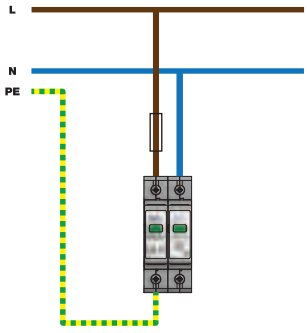
- 1, 2, 3 or 4 modular DIN rail mount connection bases.
- 40kA MOV (Type 2) and 6kA SAD (Type 2 and 3) plug-in protection modules.
- Protection status indication
- Thermal disconnect for safe disconnection from abnormal or faulty supplies

Part Number	WSP1M/6/230N
Type	Mains, Type 2
Nominal V	240
Operating V Range	200-300
Nominal Surge Current 8/20µs (I_n)	3kA (L-N);20kA (N-E)
Max. Surge current 8/20µs (I_{max})	6kA (L-N);40kA (N-E)
Let-through V (U_p)	<500V @ I_n (L-N);<1.3kV @ I_n (N-E)
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11







WSP-T1PDM3/12.5/50/230R

The WSP-T1PDM3/12.5/50/230R is a Type 1 and 2 lightning arrester according to EN 61643-11. These arresters are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 0-1 (according to IEC 1312-1 and EN 62305) for lightning current equipotential bonding and elimination of switching surges that originate in power supply system's entering the building. The main use of these arresters is structures of LPL III to IV according to EN 62305.

The WSP-T1PDM3/12.5/50/230R is mainly intended for use in TNS, TNC-S or TT systems.

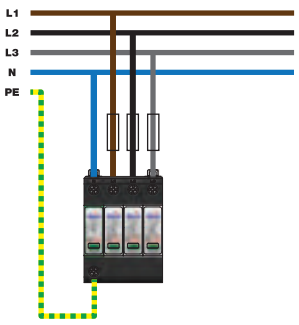
When the WSP-T1PDM3/12.5/50/230R is operating correctly, the terminations 1-2 are connected to normally closed contacts, 2-3 are normally open. If the internal varistor component is damaged as a result of thermal overloading, terminations 1-2 will then be open and 2-3 closed.

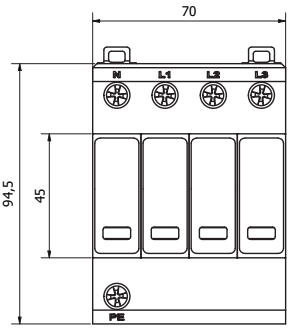
Features and Benefits:

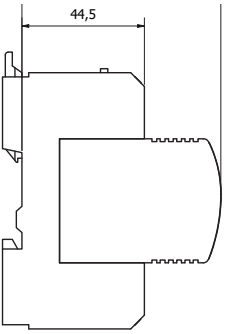
- A response time (L/N t_A) of <25 ns
- A response time (N/PE t_A) of < 100 ns
- Remote Signalling
- Minimum life of 100,000 hours

Part Number	WSP-T1PDM3/12.5/50/230R
Max. Continuous Operating Voltage (U_c)	275 V
Lightning Impulse Current (10/350) L/N (I_{imp})	12.5 kA
• Charge (Q)	6.25 As
• Specific Energy (W/R)	39 kJ/Ω
Lightning Impulse Current (10/350) N/PE (I_{imp})	50 kA
• Charge (Q)	25 As
• Specific Energy (W/R)	625 kJ/ Ω
Total Lightning Current (10/350) L1+L2+L3+N to PE (I_{total})	50kA
Temporary Overvoltage (TOV) L/N (U_t)	335 V/5 sec
Temporary Overvoltage (TOV) N/PE (U_t)	1200 V/0.2 sec
Voltage Protection Level (U_P)	< 1.2kV
Dimensions	mm

TESTED **BS EN 61643-11**







WSP-T2PDM3/20/50/275R

The WSP-T2PDM3/20/50/275R is a four-pole, metal oxide varistor surge arrester combined with a gas discharge tube, Type 2 according to BS EN 61643-11 and IEC 61643-11. These arresters are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 1-2 (according to IEC 1312-1 and BS EN 62305), where they provide the equipotential bonding and discharge of the switching overvoltage, which is generated in power supply systems entering the building.

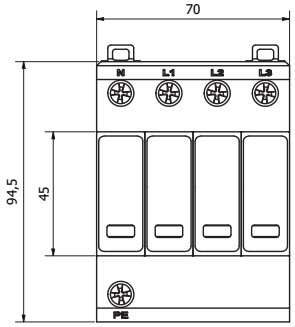
The main use of the WSP-T2PDM3/20/50/275R arrester is in all kinds of industry, residential and administration buildings. They are to be placed into the subsidiary switchboards or control boxes.

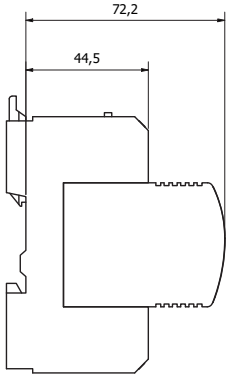
This unit has removable and replaceable modules.

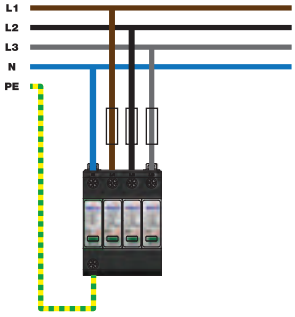
Features and Benefits:
- Simple to install
- Minimum life of 100,000 hours
- Lightweight item weighing 346g

Part Number	WSP-T2PDM3/20/50/275R
Maximum Continuous Operating Voltage (U_c)	275V AC/350V DC
Maximum Discharge Current (I_{max})	50 kA
Nominal Discharge Current for Class II Test (8/20) (I_n)	20 kA
Total Discharge Current (8/20) L1+L2+L3+N -> PE (I_{total})	50kA
Voltage Protection Level (U_p)	<1.3 kV
Impulse Discharge Current for Class I test (10/350) N/PE (I_{imp})	20kA
Temporary Overvoltage (TOV) L/N (U_T)	335V/5s
Temporary Overvoltage (TOV) N/PE (U_T)	1200V/0.2S
Short-Circuit Withstand Capability (IP)	60kA$_{rms}$
Dimensions	mm

TESTED **BS EN 61643-11**







WSP440-230/G

The WSP440-230/G Type 2 surge protectors are compact devices designed to protect 3-phase+N networks at the main switchboard. They provide a common or common/differential mode protection.

This surge protection device is based on high energy varistor equipped with thermal disconnectors and failure indicator to comply with the necessary standards.

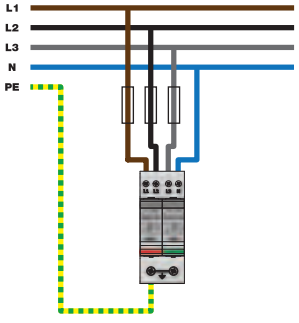
The WSP440-230/G is DIN rail compatible and is built with a plug-in module and fixed base, which allows an easy and fast maintenance.

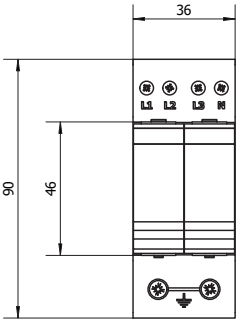
Features and Benefits:

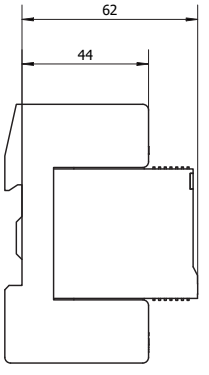
- Compact 3-phase Type 2 surge protector.
- In: 20kA.
- Imax: 40 kA.
- Common Mode / Differential Mode.
- Pluggable Module.

Part Number	WSP440-230/G
Network	230/400 V 3-Phase
Max. AC Operating Voltage (U_c)	255 Vac
Temporary Over Voltage (TOV) 5 Sec. Without Disconnection (U_T)	335 Vac withstand
Temporary Over Voltage (TOV) 120 mn Without Disconnection or with Safety Disconnection (U_T)	440 Vac disconnection
Temporary Over Voltage N/PE (TOV HT) Without Disconnection or with Safety Disconnection (U_T)	1200 V/300A/200 ms withstand
Nominal Discharge Current 15 x 8/20 µs Impulses (I_n)	20 kA
Max. Discharge Current Max. Withstand @8/20 µs per Pole (I_{max})	40 kA
Dimensions	mm

TESTED **BS EN 61643-11**







WSP-HSA/40/40/230RCF

The WSP-HSA/40/40/230RCF is an all-mode Class 2/3 surge arrester to BS EN 61643-11.

Designed for the protection of sensitive equipment, the arrester is an ideal solution for installation at the boundary of LPZ1/LPZ2 to help fulfil the requirements of BS EN 62305.

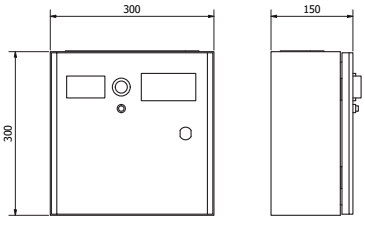
The arrester features high surge current, all mode protection, thermal and overcurrent protection and a resettable surge counter, with visual, audible and remote indication of the arresters status.

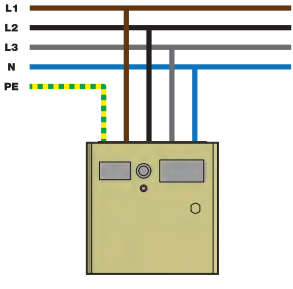
Features and Benefits:

- Contains a capacitive filter to reduce EMI/RFI, up to 50dB from 10kHz to 1000MHz.
- Monitors all modes of protection and can be factory configured to operate at the customers specified surge magnitude.
- Surge counter trigger peak @ current magnitude 50A pulse or customer selection.
- Surge counter reset button – cannot be operated accidentally.
- Equipped with an audible alarm, LED status indication and remote monitoring contacts to warn the user in the event of a surge protection fault.
- The audible alarm can be silenced via a pushbutton, without affecting other status indication

Part Number	WSP-HSA/40/40/230RCF
Nominal Operating Voltage	240 rms
Maximum Continuous Operating Voltage (U_c)	275 rms
Protection Modes	Phase-Neutral; Phase-Earth; Neutral-Earth; Phase-Phase
Voltage Protection Level at 5kA 8/20 µs (U_p)	<670V L-N; L-E; N-E <1340V L-L
Max. Surge Current (8/20 µS) L-N; L-E, N-E (I_{max})	40kA/Mode or Phase
Dimensions	mm

BS EN 61643-11





WSP-HSA/80/80/230RCF

The WSP-HSA/80/80/230RCF is an all-mode Class 2 surge arrester to BS EN 61643-11.

Designed for the protection of the distribution boards of large structures in high lightning exposure areas, the arrester is an ideal solution for installation at the boundary of LPZ0b/LPZ1 or LPZ1/LPZ2 to help fulfil the requirements of BS EN 62305.

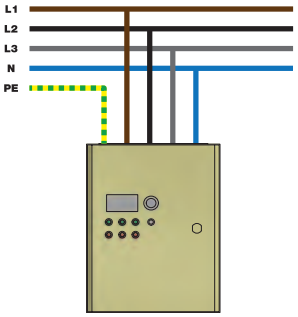
The arrester features high surge current, all mode protection, thermal and overcurrent protection and a resettable surge counter, with visual, audible and remote indication of the arrester status.

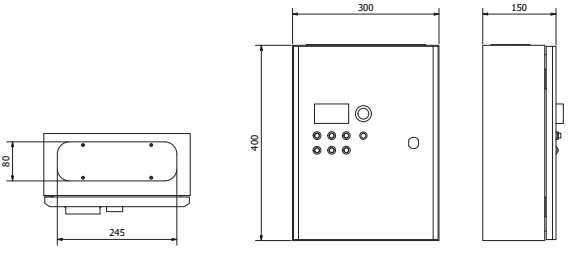
Features and Benefits:

- Contains a capacitive filter to reduce EMI/RFI, up to 50dB from 10kHz to 1000MHz.
- Monitors all modes of protection and can be factory configured to operate at the customers specified surge magnitude.
- Surge counter trigger peak @ current magnitude 50A pulse or customer selection.
- Surge counter reset button – cannot be operated accidentally.
- Equipped with an audible alarm, LED status indication and remote monitoring contacts to warn the user in the event of a surge protection fault.
- The audible alarm can be silenced via a pushbutton, without affecting other status indication.

Part Number	WSP-HSA/80/80/230RCF
Nominal Operating Voltage	240 rms
Maximum Continuous Operating Voltage (U_c)	275 rms
Temporary Overvoltage (TOV), L/N, L/E (U_t)	335 V/5 sec
Protection Modes	Phase-Neutral; Phase-Earth; Neutral-Earth; Phase-Phase
Voltage Protection Level at 5kA 8/20 µs (U_p)	<1100V L-N; L-E; N-E <2200V L-L
Max. Surge Current (8/20 µS) L-N; L-E (I_{max})	40kA/Mode, 80kA/Phase
Max. Surge Current (8/20 µS) L-N; N-E (I_{max})	80kA
Dimensions	mm

BS EN 61643-11





WSP-HSA/50/100/230RCF

The WSP-HSA/50/100/230RCF is an all-mode Class 1 surge arrester to BS EN 61643-11.

Designed for the protection of the incoming supply and main switchboards of large structures in high lightning exposure areas, the arrester is an ideal solution for installation at the boundary of LPZ0a/LPZ1 to help fulfil the requirements of BS EN 62305.

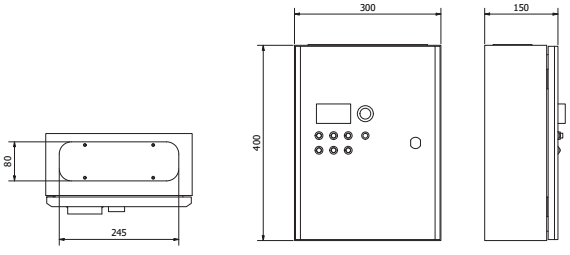
The arrester features high surge current, all mode protection, thermal and overcurrent protection and a resettable surge counter, with visual, audible and remote indication of the arresters status.

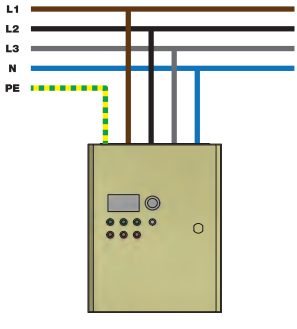
Features and Benefits:

- Contains a capacitive filter to reduce EMI/RFI, up to 50dB from 10kHz to 1000MHz.
- Monitors all modes of protection and can be factory configured to operate at the customers specified surge magnitude.
- Surge counter trigger peak @ current magnitude 50A pulse or customer selection.
- Surge counter reset button – cannot be operated accidentally.
- Equipped with an audible alarm, LED status indication and remote monitoring contacts to warn the user in the event of a surge protection fault.
- The audible alarm can be silenced via a pushbutton, without affecting other status indication.

Part Number	WSP-HSA/50/100/230RCF
Nominal Operating Voltage	240 rms
Maximum Continuous Operating Voltage (U_c)	275 rms
Operating Frequency	50-60Hz
Temporary Overvoltage (TOV), L/N, L/E (U_t)	335 V/5 sec
Protection Modes	Phase-Neutral; Phase-Earth; Neutral-Earth; Phase-Phase
Voltage Protection Level at I_{imp} (U_p)	<1300V L-N; L-E; N-E <2600V L-L
Lightning Impulse Current (I_{imp})	100kA
Dimensions	mm

BS EN 61643-11





WSP230S

The WSP230S is a class 3 surge arrester that offers a flexible solution to protecting individual pieces of equipment. Perfectly suited to protecting – ring mains & individual sockets, switch fuse spurs, lighting, fire alarm panels, CCTV cameras etc.

Its small size means that it can be mounted in confined spaces and the audible alarm will indicate if the arrester needs to be replaced.

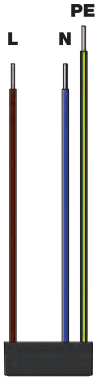
The WSP230S will offer up to 10 metres of protection either side of the device it is installed on.

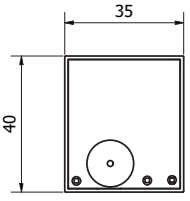
Features and Benefits:

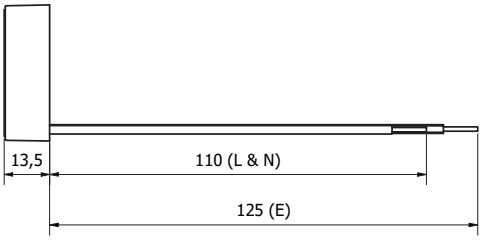
- Simple to install
- A response time (t_A) < 25 ns
- Operating temperature between -25°C - +70°C

Part Number	WSP230S
Nominal A.C. Voltage (U_N)	230 V
Max. Continuous Operating A.C. Voltage (U_C)	250 V
Nominal Discharge Current (8/20 µs) (I_n)	1.5 kA
Total Discharge Current (8/20 µs) (L+N-PE) (I_{total})	3 kA
Temporary Overvoltage (TOV) (L-N) (U_T)	335 V / 5 Sec
Temporary Overvoltage (TOV) (L/N-PE) (U_T)	400 V / 5 Sec
Temporary Overvoltage (TOV) (L+N-PE) (U_T)	1200 V + U_{cs} / 200ms
Dimensions	mm

BS EN 61643-11







WSP240/5A

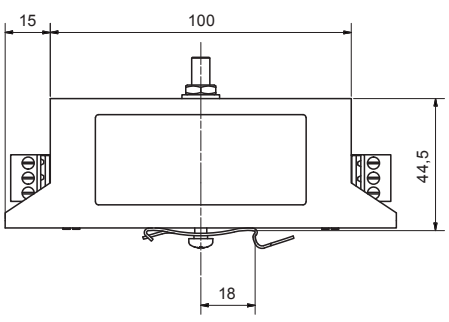
Single Phase Type 2 and 3 tested (BS EN 61643) surge protector for use on single phase mains power circuits up to 5 or 16A (e.g. Alarm panels) to protect connected equipment from transient overvoltages.

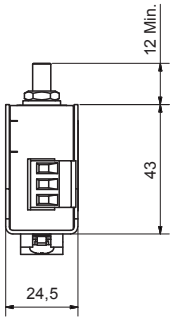
Available in 90 to 135V or 200 to 280V AC voltages.

Features and Benefits:
- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Available in IP66 rated enclosure for use in dusty or damp environments
- Available for 35mm DIN rail mounting

Part Number	WSP240/5A
Type	Mains, Type 2
Nominal V	240
Operating V Range	280 Max
Max. current rating	5A
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	<660V @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP240/5A/BX

Single Phase Type 2 and 3 tested (BS EN 61643) surge protector for use on single phase mains power circuits up to 5 or 16A (e.g. Alarm panels) to protect connected equipment from transient overvoltages.

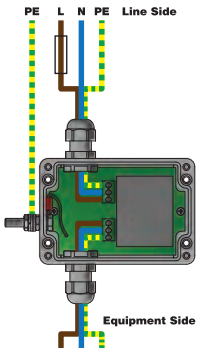
Available in 90 to 135V or 200 to 280V AC voltages.

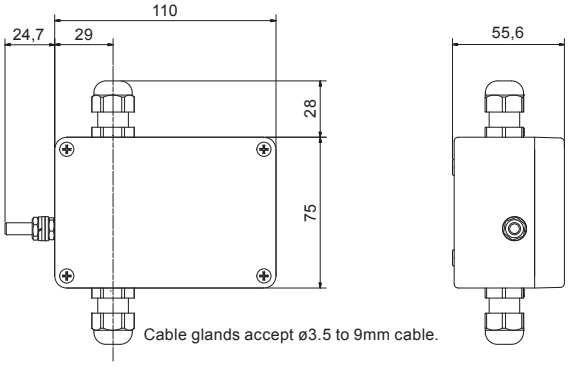
Features and Benefits:

- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Available in IP66 rated enclosure for use in dusty or damp environments
- Available for 35mm DIN rail mounting

Part Number	WSP240/5A/BX
Type	Mains, Type 2
Nominal V	240
Operating V Range	280 Max
Max. current rating	5A
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	<660V @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP240/16A/BX

Single Phase Type 2 and 3 tested (BS EN 61643) surge protector for use on single phase mains power circuits up to 5 or 16A (e.g. Alarm panels) to protect connected equipment from transient overvoltages.

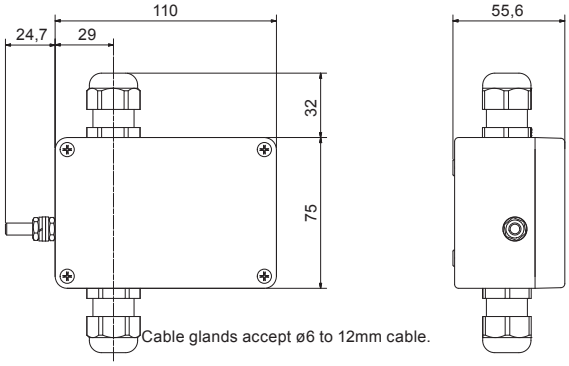
Available in 90 to 135V or 200 to 280V AC voltages.

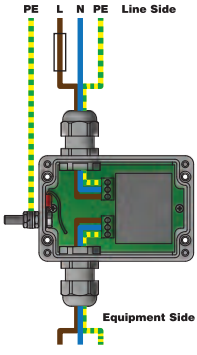
Features and Benefits:

- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Available in IP66 rated enclosure for use in dusty or damp environments
- Available for 35mm DIN rail mounting

Part Number	WSP240/16A/BX
Type	Mains, Type 2
Nominal V	240
Operating V Range	280 Max
Max. current rating	16A
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	<660V @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP240/16A

Single Phase Type 2 and 3 tested (BS EN 61643) surge protector for use on single phase mains power circuits up to 5 or 16A (e.g. Alarm panels) to protect connected equipment from transient overvoltages.

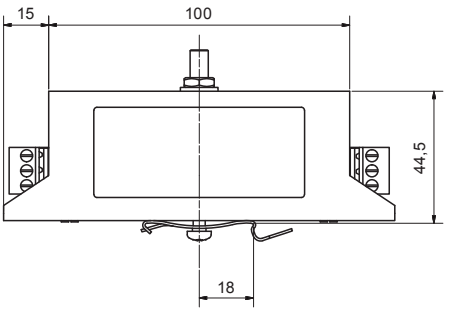
Available in 90 to 135V or 200 to 280V AC voltages.

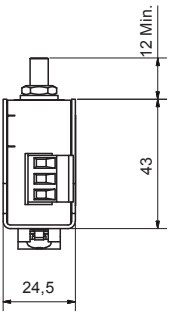
Features and Benefits:

- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Available in IP66 rated enclosure for use in dusty or damp environments
- Available for 35mm DIN rail mounting

Part Number	WSP240/16A
Type	Mains, Type 2
Nominal V	240
Operating V Range	280 Max
Max. current rating	16A
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	<660V @ I_n
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-11





WSP-F1/230/3, WSP-F1/230/7, WSP-F1/230/13

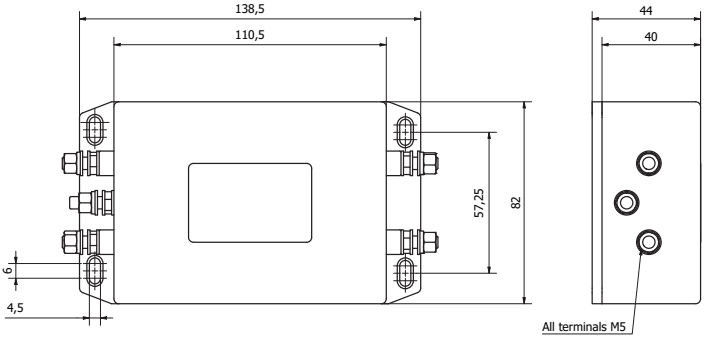
The Low Current EMI Filter, WSP-F1/230 is a standalone design that can be mounted close to the point of use. The filter is available in single and three phase options. The filter is enclosed in a metal housing to ensure the best possible screening. The filter also has the added benefit of Surge Protection. The filter is series mounted to the supply with the Surge Protection and Capacitor Suppression in parallel, within the unit.

Features and Benefits:

- Simple to install
- A response time of <10 ns

Part Number	WSP-F1/230/3	WSP-F1/230/7	WSP-F1/230/13
Voltage Rating (Nominal)	230V rms		
Low Current Range	3Amp	7Amp	13Amp
Surge Handling (8/20µs)	19.5kA		
Average Attenuation, Symmetric 1-30MHz (db)	-50		
Voltage Protection Level (Up) 8/20µs	900V @3kA 8/20µs		
Dimensions	mm		

BS EN 61643-21



WSP-CAT5E/6-1-48

The WSP-CAT5E/6-1-48 surge protection device is intended for computer networks and are specially designed for securing a faultless data transfer within computer networks category 6.

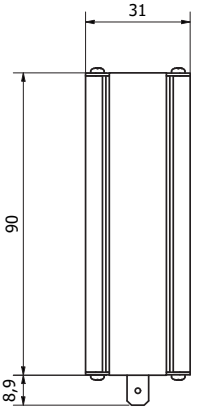
The WSP-CAT5E/6-1-48 protects the input electronic circuits of network cards against damage caused by surge effects caused by lightning and transient over voltages. It is recommended to use this protection device at the input of protected equipment.

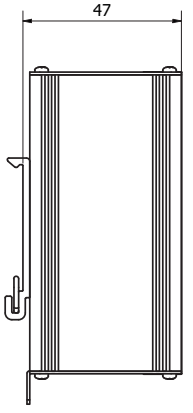
Features and Benefits:

- Simple to install
- RJ45-RJ45 connector
- Operating temperature between -40°C - +70°C

Part Number	WSP-CAT5E/6-1-48
Connector Type	RJ45/RJ45
Max. Continuous Operating Voltage (DC) (U_C)	58 V
Max. Continuous Operating Voltage (AC) (U_C)	41 V
Rated Load Current (I_L)	1 A
C1 Nominal Discharge Current Line/Line (8/20) (I_n)	300 V/150 A
C2 Max. Discharge Current Line/PE (8/20) (I_{max})	2 kV/1 kA
C3 Voltage Protection Level at 1kV/ms (U_P)	< 120 V
Dimensions	mm

TESTED **BS EN 61643-21**





WSP/DBP/F/72

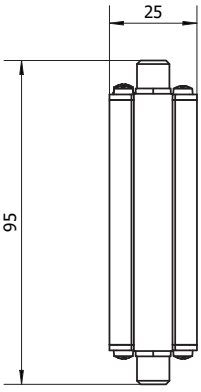
The WSP/DBP/F/72 is a 75Ω, 50W, Type F Protector and is designed to protect satellite equipment. The casing of this protector is made out of light alloy, which ensures high mechanical and thermal resistance.

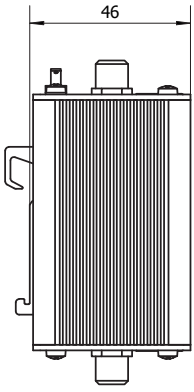
Features and Benefits:

- Simple to install
- Frequency range 0 to 2GHz

Part Number	WSP/DBP/F/72
Max. Continuous Operating Voltage (U_C)	72 V
Rated Load Current (I_N)	0.5A
Voltage Protection Level at 1kV/ms (U_P)	500 V
Max. Transmission Power Capacity	50 W
Insertion Loss	< 0.5 dB
Return Loss	> 20 dB
Dimensions	mm

BS EN 61643-21





WSP06D / WSP15D / WSP30D / WSP50D

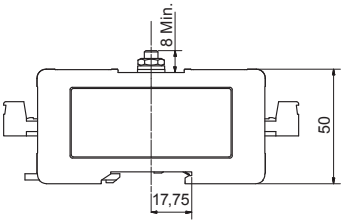
Designed for business and industrial applications, these products provide protection for local area networks, CCTV/video equipment, computer communication interfaces and process control systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

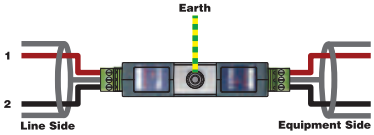
Features and Benefits:

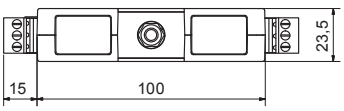
- Meets the requirements of BS EN 62305-4:2011 and BS EN 61643 21/22
- DIN rail mounting for modular installation
- Panel mounting screw holes for permanent installation
- Negligible effect on normal line operation
- Earthing kits and enclosures for multiple modules available
- Low let-through voltages

Part Number	WSP06D	WSP15D	WSP30D	WSP50D
Type	Data, Type 2			
Nominal V	6	15	30	50
Operating V Range	7.5 Max	16.5 Max	36.5 Max	58 Max
Max. current rating	0.33A (Signal)			
Nominal Surge Current 8/20µs (I_n)	5kA			
Max. Surge current 8/20µs (I_{max})	10kA			
Let-through V (U_p)	11V	27V	45V	75V
	@ 5kV (10/700µs), 125A pk			
Location	LPZ 1-2			
Dimensions	mm			

BS EN 61643-21







WSP06E / WSP15E / WSP30E / WSP50E

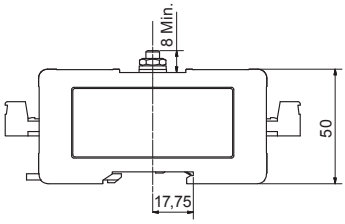
Designed for business and industrial applications, these products provide protection for local area networks, CCTV/video equipment, computer communication interfaces and process control systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

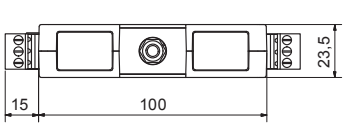
Features and Benefits:

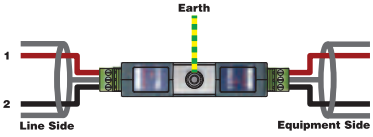
- Meets the requirements of BS EN 62305-4:2011 and BS EN 61643 21/22
- DIN rail mounting for modular installation
- Panel mounting screw holes for permanent installation
- Negligible effect on normal line operation
- Earthing kits and enclosures for multiple modules available
- Low let-through voltages

Part Number	WSP06E	WSP15E	WSP30E	WSP50E
Type	Data, Type 2			
Nominal V	6	15	30	50
Operating V Range	7.5 Max	16.5 Max	36.5 Max	58 Max
Max. current rating	0.33A (Signal)			
Nominal Surge Current 8/20µs (I_n)	5kA			
Max. Surge current 8/20µs (I_{max})	10kA			
Let-through V (U_p)	11V	27V	45V	75V
	@ 5kV (10/700µs), 125A pk			
Location	LPZ 1-2			
Dimensions	mm			

BS EN 61643-21







WSP-DBP/RJ45/ADSL

The WSP-DBP-RJ45/ADSL is a complex range of surge protection devices designed for the protection of data, communication, measuring and control lines against surge effects.

These surge protection devices are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ $0_{A(B)}$-1 according to EN 62305. All types provide effective protection of connected equipment against common mode and differential mode surge effects according to IEC 61643-21. The nominal current of individual protected lines IN <0.1A.

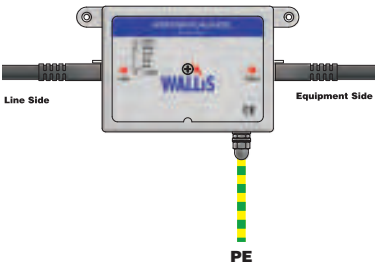
This device consists of gas discharge tubes, series impedance and transils, offering 2 pair protection. Produced for a nominal voltage of 170V, designed for the protection of equipment using DSL technology. The connection of protected lines is carried out by RJ45 connectors.

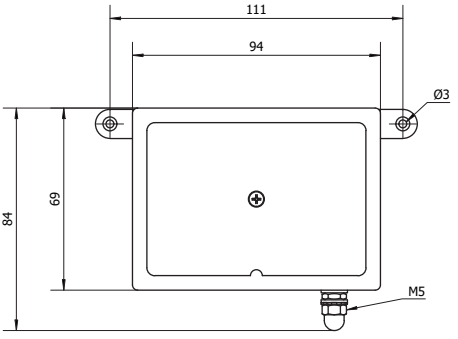
Features and Benefits:

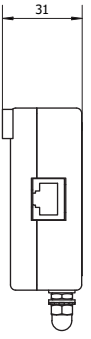
- Simple to install
- Response time (t_A) <30ns
- Operating temperature between -40°C - +80°C

Part Number	WSP-DBP/RJ45/ADSL
No. of Protected Pairs	2
Nominal Voltage (U_N)	170 V
Max. Continuous Operating Voltage (U_C)	204 V
Nominal Current (I_N)	100mA
Data Rate	10 Mbit/s
Series Impedance per Line	1.5 – 10 Ω
Dimensions	mm

BS EN 61643-21







WSP-DBP-24/6

The WSP-DBP-24/6 is a complex range of surge protection devices designed for the protection of data, communication, measuring and control lines against surge effects.

These surge protection devices are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 0A(B)-1 according to EN 62305. All types provide effective protection of connected equipment against common mode and differential mode surge effects according to IEC 61643-21. The nominal current of individual protected lines IN <0.1A.

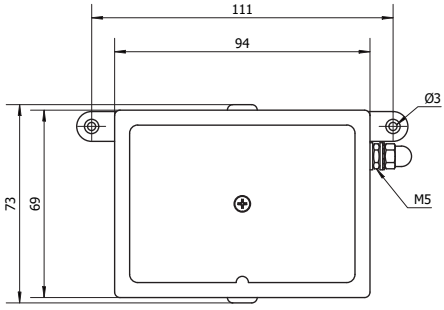
This device consists of gas discharge tubes, series impedance and transils, offering 3 pair protection. Produced for a nominal voltage of 24V. The maximum discharge current is 10kA (8/20) and the connection of the protected lines is carried out by screw terminals.

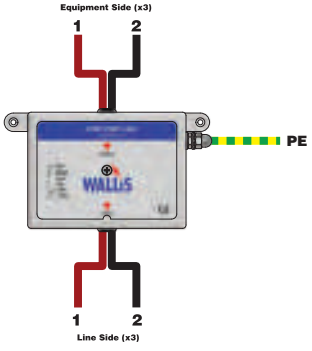
Features and Benefits:

- Simple to install
- Response time (t_A) <30n
- Operating temperature between -40°C - +80°C

Part Number	WSP-DBP-24/6
No. of Protected Pairs	3
Nominal Voltage (U_N)	24 V
Max. Continuous Operating Voltage (U_C)	28.6 V
Nominal Current (I_N)	100mA
Data Rate	1 Mbit/s
Series Impedance per Line	1.5 – 10 Ω
Dimensions	mm

BS EN 61643-21





WSPLN

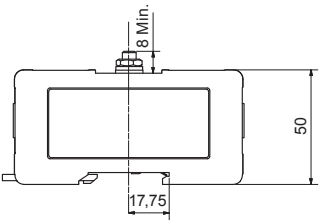
Designed for business and industrial applications, these products provide protection for local area networks, CCTV/video equipment, computer communication interfaces and process control systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

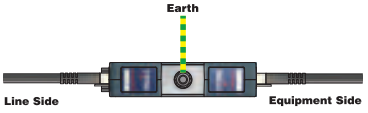
Features and Benefits:

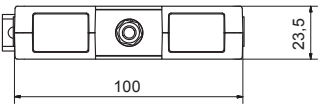
- Meets the requirements of BS EN 62305-4:2011 and BS EN 61643 21/22
- DIN rail mounting for modular installation
- Panel mounting screw holes for permanent installation
- Negligible effect on normal line operation
- Earthing kits and enclosures for multiple modules available
- Low let-through voltages

Part Number	WSPLN
Type	Data, Type 2
Nominal V	4
Operating V Range	4 Max
Max. current rating	0.33A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	25V
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-21







WSPCCTV/B

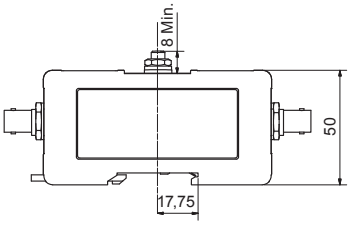
Designed for business and industrial applications, these products provide protection for local area networks, CCTV/video equipment, computer communication interfaces and process control systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

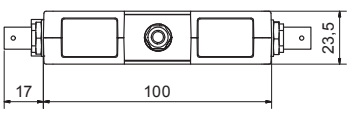
Features and Benefits:

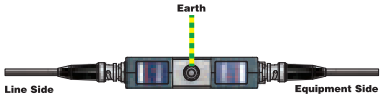
- Meets the requirements of BS EN 62305-4:2011 and BS EN 61643 21/22
- DIN rail mounting for modular installation
- Panel mounting screw holes for permanent installation
- Negligible effect on normal line operation
- Earthing kits and enclosures for multiple modules available
- Low let-through voltages

Part Number	WSPCCTV/B
Type	Data, Type 2
Nominal V	2
Operating V Range	6.5 Max
Max. current rating	0.33A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	17V
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-21







WSPCCTV/T

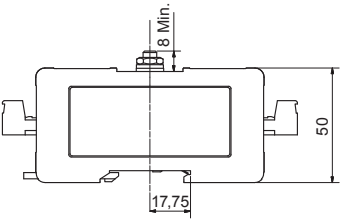
Designed for business and industrial applications, these products provide protection for local area networks, CCTV/video equipment, computer communication interfaces and process control systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

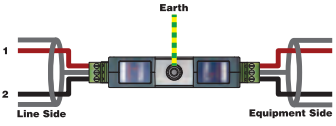
Features and Benefits:

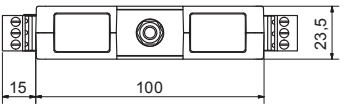
- Meets the requirements of BS EN 62305-4:2011 and BS EN 61643 21/22
- DIN rail mounting for modular installation
- Panel mounting screw holes for permanent installation
- Negligible effect on normal line operation
- Earthing kits and enclosures for multiple modules available
- Low let-through voltages

Part Number	WSPCCTV/T
Type	Data, Type 2
Nominal V	2
Operating V Range	6.5 Max
Max. current rating	0.33A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	17V
Location	LPZ 1-2
Dimensions	mm

TESTED **BS EN 61643-21**







WSPTHINNET

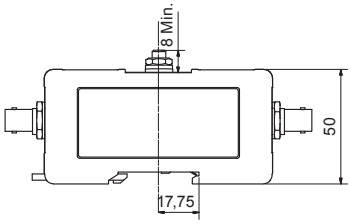
Designed for business and industrial applications, these products provide protection for local area networks, CCTV/video equipment, computer communication interfaces and process control systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

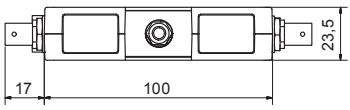
Features and Benefits:

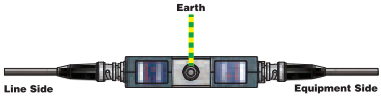
- Meets the requirements of BS EN 62305-4:2011 and BS EN 61643 21/22
- DIN rail mounting for modular installation
- Panel mounting screw holes for permanent installation
- Negligible effect on normal line operation
- Earthing kits and enclosures for multiple modules available
- Low let-through voltages

Part Number	WSPTHINNET
Type	Data, Type 2
Nominal V	-2.05
Operating V Range	6.5 Max
Max. current rating	0.33A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA
Max. Surge current 8/20µs (I_{max})	10kA
Let-through V (U_p)	20V
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-21







WSP-RFN72/10FF / WSP-RFN72/10FM

High-frequency protection range designed for equipment connected to an aerial system by means of coaxial cables. Special gas discharge tubes with maximum discharge current (I_{max}) of 10kA (8/20µs) ensure reliable protection of receiving and transmitting systems even against a lightning strike nearby.

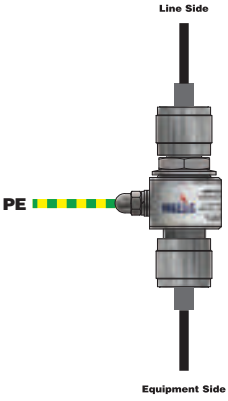
A. N. Wallis offer a wide range of coaxial protectors for various connector types and transmission power grades enabling use in many applications. These coaxial protectors are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 0A(B)-1 and higher according to EN 62305.

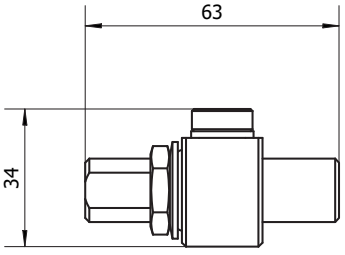
Features and Benefits:

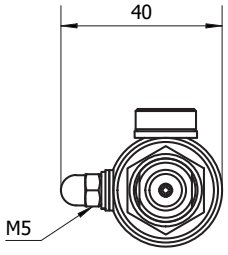
- Simple to install
- Frequency range 0-3GHz

Part Number	WSP-RFN72/10FF (F-F)	WSP-RFN72/10FM (F-M)
Maximum Continuous Operating Voltage (U_c)	90V	
Nominal Current (I_N)	5A	
Max Transmission Power	50W	
Insertion Loss	<1.5dB	
Return Loss	>20dB	
Characteristic Impedance	50Ω	
Dimensions	mm	

TESTED **BS EN 61643-21**







WSP135/10FM

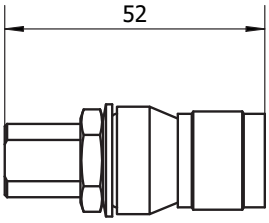
High-frequency protection range designed for equipment connected to an aerial system by means of coaxial cables. Special gas discharge tubes with maximum discharge current (I_{max}) of 10kA (8/20µs) ensure reliable protection of receiving and transmitting systems even against a lightning strike nearby.

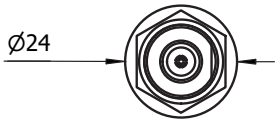
A. N. Wallis offer a wide range of coaxial protectors for various connector types and transmission power grades enabling use in many applications. These coaxial protectors are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 0A(B)-1 and higher according to EN 62305.

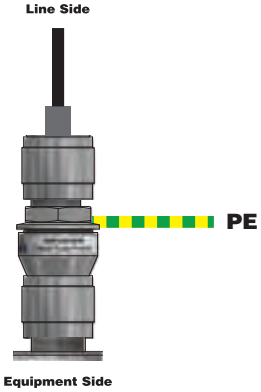
Features and Benefits:
- Simple to install
- Frequency range 0-5.8GHz

Part Number	WSP135/10FM
Maximum Continuous Operating Voltage (U_c)	135V
Nominal Current (I_N)	5A
Max Transmission Power	50W
Insertion Loss	<0.2dB
Return Loss	>20dB
Characteristic Impedance	50Ω
Dimensions	mm

TESTED **BS EN 61643-21**







WSP/TLP1/PRI

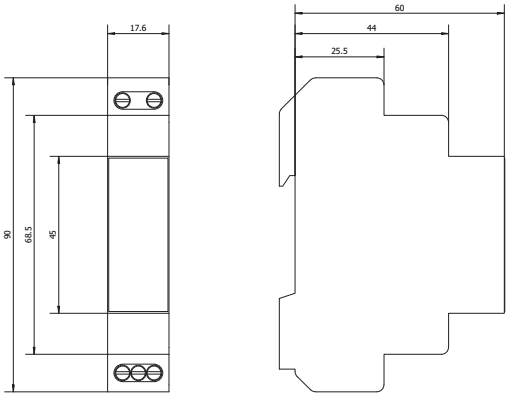
This series is designed to protect 1 telephone circuit (pair). Suitable for use at LPZ0 to 1 according to EN 62305. The device protects connected equipment from the effects of common and differential mode surges, according to IEC 61643-21.

Features and Benefits:

- Simple to install
- Response time (t_A) <30ns
- Operating temperature -40 to +80°C

Part Number	WSP/TLP1/PRI
Nominal Voltage (U_N)	170V
Max. Continuous Operating Voltage (U_C)	204V
Nominal Current (I_N)	0.1A
Nominal Discharge Current (8/20µs) (I_n)	1kA
Voltage Protection Level at I_n (U_P)	500V
Voltage Protection Level at 1kV/µs	260V
Dimensions	mm

BS EN 61643-21



WSPKT1

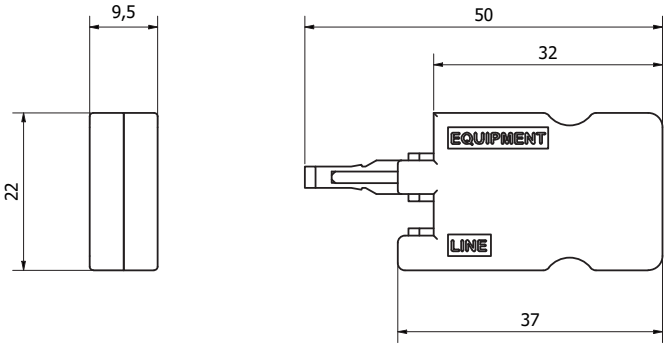
Designed for business and industrial applications, these products provide protection for telecoms systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

Features and Benefits:

- Low let through voltage
- Protects against transient overvoltages without interruption of service
- Negligible effect on normal line operation
- Various mounting methods available – Din rail, Hardwired and LSA Plus™
- Earthing kits and enclosures for multiple modules available

Part Number	WSPKT1
Max. Working Voltage	190V
Current Rating (Signal)	300mA
Rated Impulse Discharge 8/20µs, Per Line (2 Wires)	10kA
Minimum DC Breakover	220V
Impulse Voltage Performance 10/700µs (125A Peak)	<265V All Modes
Typical Loop Resistance	9.4Ω
Response Time	10ns
Dimensions	mm

BS EN 61643-21



WSPTLP/6BT

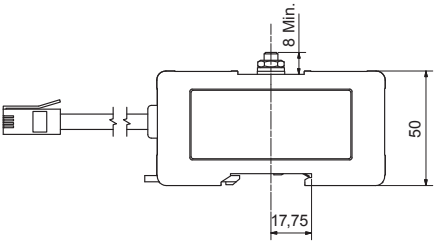
Designed for business and industrial applications, these products provide protection for telecoms systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

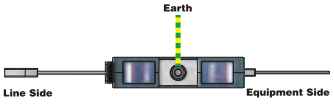
Features and Benefits:

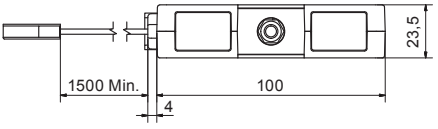
- Low let through voltage
- Protects against transient overvoltages without interruption of service
- Negligible effect on normal line operation
- Various mounting methods available – Din rail, Hardwired and LSA Plus™
- Earthing kits and enclosures for multiple modules available

Part Number	WSPTLP/6BT
Type	Data, Type 2
Nominal V	190 Max
Operating V Range	190 Max
Max. current rating	0.3A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA per pair
Max. Surge current 8/20µs (I_{max})	10kA per pair
Let-through V (U_p)	<265V
Location	LPZ 1-2
Dimensions	mm

BS EN 61643-21







WSPTLP/4

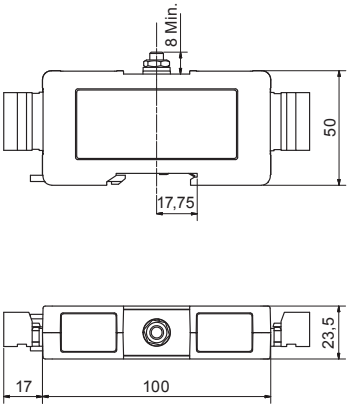
Designed for business and industrial applications, these products provide protection for telecoms systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically "noisy" sources.

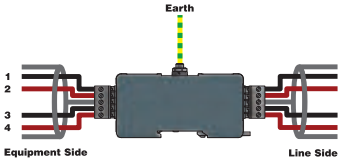
Features and Benefits:

- Low let through voltage
- Protects against transient overvoltages without interruption of service
- Negligible effect on normal line operation
- Various mounting methods available – Din rail, Hardwired and LSA Plus™
- Earthing kits and enclosures for multiple modules available

Part Number	WSPTLP/4
Type	Data, Type 2
Nominal V	190 Max
Operating V Range	190 Max
Max. current rating	0.3A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA per pair
Max. Surge current 8/20µs (I_{max})	10kA per pair
Let-through V (U_p)	<265V
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-21





WSPTLP/2RJ11, WSPTLP/4RJ11, WSPTLP/6RJ11

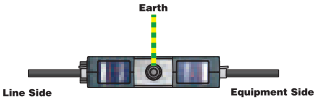
Designed for business and industrial applications, these products provide protection for telecoms systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

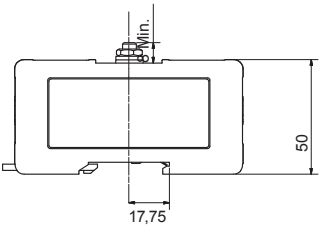
Features and Benefits:

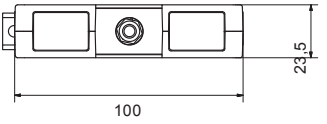
- Low let through voltage
- Protects against transient overvoltages without interruption of service
- Negligible effect on normal line operation
- Various mounting methods available – Din rail, Hardwired and LSA Plus™
- Earthing kits and enclosures for multiple modules available

Part Number	WSPTLP/2RJ11	WSPTLP/4RJ11	WSPTLP/6RJ11
Type	Data, Type 2		
Nominal V	190 Max		
Operating V Range	190 Max		
Max. current rating	0.3A (Signal)		
Nominal Surge Current 8/20µs (I_n)	5kA per pair		
Max. Surge current 8/20µs (I_{max})	10kA per pair		
Let-through V (U_p)	<265V		
Location	LPZ 1-2		
Dimensions	mm		

BS EN 61643-21







WSPTLP/1PA

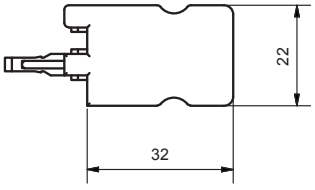
Designed for business and industrial applications, these products provide protection for telecoms systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

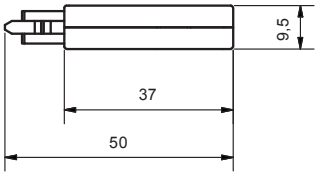
Features and Benefits:

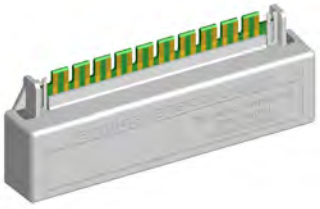
- Low let through voltage
- Protects against transient overvoltages without interruption of service
- Negligible effect on normal line operation
- Various mounting methods available – Din rail, Hardwired and LSA Plus™
- Earthing kits and enclosures for multiple modules available

Part Number	WSPTLP/1PA
Type	Data, Type 2
Nominal V	190 Max
Operating V Range	190 Max
Max. current rating	0.3A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA per pair
Max. Surge current 8/20µs (I_{max})	10kA per pair
Let-through V (U_p)	<247V
Location	LPZ 1 - 2
Dimensions	mm

BS EN 61643-21







WSPTLP/10LR

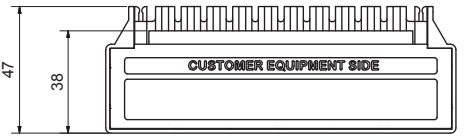
Designed for business and industrial applications, these products provide protection for telecoms systems against the damaging effects of transient overvoltages caused by lightning, AC power systems and other electrically “noisy” sources.

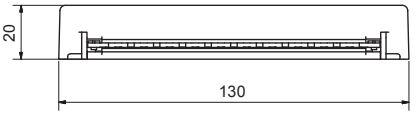
Features and Benefits:

- Low let through voltage
- Protects against transient overvoltages without interruption of service
- Negligible effect on normal line operation
- Various mounting methods available – Din rail, Hardwired and LSA Plus™
- Earthing kits and enclosures for multiple modules available

Part Number	WSPTLP/10LR
Type	Data, Type 2
Nominal V	190 Max
Operating V Range	190 Max
Max. current rating	0.3A (Signal)
Nominal Surge Current 8/20µs (I_n)	5kA per pair
Max. Surge current 8/20µs (I_{max})	10kA per pair
Let-through V (U_p)	<265V
Location	LPZ 1-2
Dimensions	mm

BS EN 61643-21





WSP-T1PV2/12.5/1000R

The WSP-T1PV2/12.5/1000R is a lightning arrester type 1 + 2 according to EN 61643-11. It is designed to be connected to the positive and negative busbars of photovoltaic systems to protect panels and inverters against surge effects.

These arresters are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 0-1 (according to IEC 1312-1 and EN 62305). Particular varistor sectors connected between terminals L+, L- and PE are equipped with fitted internal disconnectors which are activated when varistors fail (overheat).

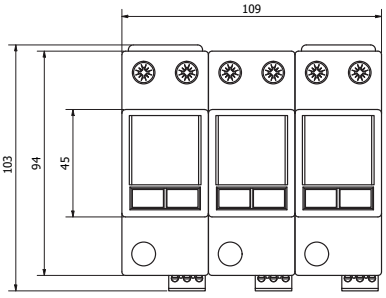
Failure indication is both mechanical (by red pop-out flags) and via remote monitoring (by potential free switching contacts).

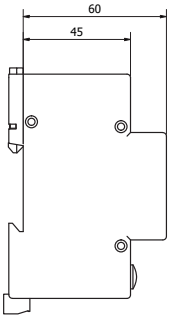
Features and Benefits:

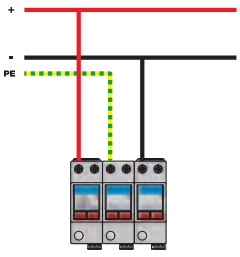
- Simple to install
- 2 methods of failure indication
- Response time (t_A) < 25 ns

Part Number	WSP-T1PV2/12.5/1000R
Max. Continuous Operating Voltage DC (U_{CPV})	1000 V
Lightning Impulse Current (10/350) (I_{imp})	12.5 kA
Nominal Impulse Discharge Current (8/20) (I_n)	25 kA
Voltage Protection Level (U_P)	< 3.4 kV
Short Circuit Withstand (I_{SCWPV})	25 A
Dimensions	mm

BS EN 61643-21







WSP-T2PV2/40/600

The WSP-T2PV2/40/600 is a surge arrester type 2 according to EN 61643-11. The complete device consists of a base part and pluggable modules. These arresters are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 1-2 (according to IEC 1312-1 and EN 62305) for equipotential bonding of positive and negative busbars of photovoltaic systems and elimination of transient overvoltage that originate during atmospheric discharges or switching processes.

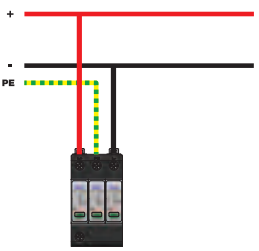
The failure indication of these disconnectors is partly visual (discoloration of the signal field).

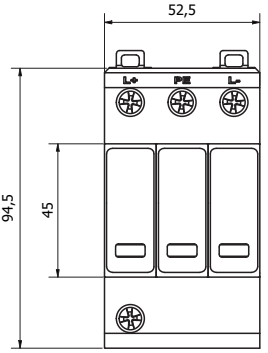
Features and Benefits:

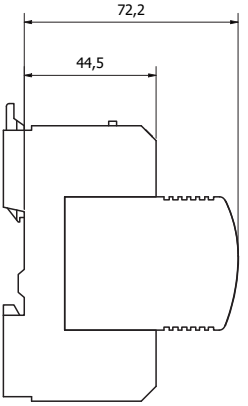
- Simple to install
- A response time (t_A) of <25 ns
- Minimum life of 100,000 hours

Part Number	WSP-T2PV2/40/600
Max. Continuous Operating Voltage DC (U_C)	600 V DC
Short-Circuit Withstand Capability (I_{SCWPV})	100 kA
Max. Discharge Current (8/20) (I_{max})	40 kA
Nominal Impulse Discharge Current (8/20) (I_n)	20 kA
Voltage Protection Level at I_n (U_P)	<2.6kV
Dimensions	mm

BS EN 61643-21







WSP-T2PV2/40/1000

The WSP-T2PV2/40/1000 is a surge arrester type 2 according to EN 61643-11. The complete device consists of a base part and pluggable modules. These arresters are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 1-2 (according to IEC 1312-1 and EN 62305) for equipotential bonding of positive and negative busbars of photovoltaic systems and elimination of transient overvoltage that originate during atmospheric discharges or switching processes.

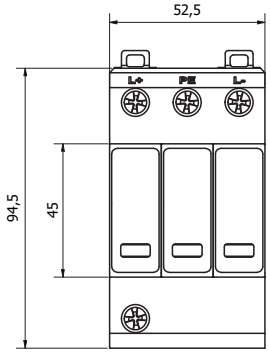
The failure indication of these disconnectors is partly visual (discoloration of the signal field).

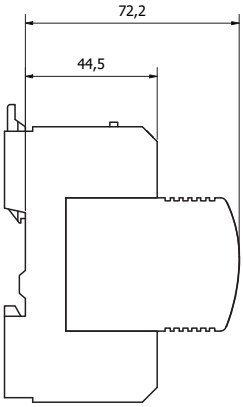
Features and Benefits:

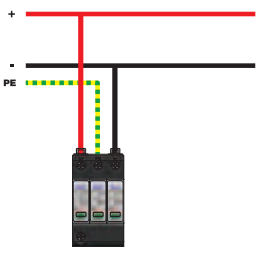
- Simple to install
- A response time (t_A) of <25 ns
- Minimum life of 100,000 hours

Part Number	WSP-T2PV2/40/1000
Max. Continuous Operating Voltage DC (U_c)	1050 V DC
Short-Circuit Withstand Capability (I_{SCWPV})	100 kA
Max. Discharge Current (8/20) (I_{max})	40 kA
Nominal Impulse Discharge Current (8/20) (I_n)	15 kA
Voltage Protection Level at I_n (U_P)	<3.8kV
Dimensions	mm

BS EN 61643-21







WSPTEC

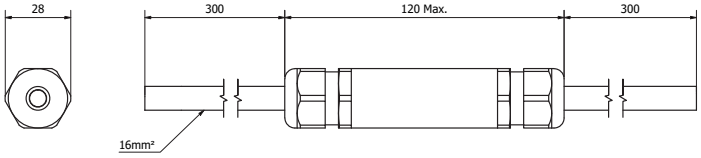
The WSPTEC is designed for the equipotential bonding of earthing systems that cannot be directly connected under normal conditions. During normal operation the device is effectively open circuit, maintaining isolation between the two earth systems. During fault conditions that generate a large enough potential between the two earth systems, the device switches to a short circuit condition, connecting the two for the duration of the fault before automatically re-setting to an open circuit state.

Features and Benefits:

- Simple to install
- Impulse life is 500 A, 10/1000 µs >400 Operations
- Operating temperature -30 to +85^{O}C

Part Number	WSPTEC
Rated DC Sparkover Voltage at 100V/s	350V
Tolerance	±20%
Impulse Sparkover Voltage at 1000V/µs	<900V
Arc Voltage at 1A	10V
Insulation Resistance at 250 Vdc	>1GΩ
Capacitance at 1MHz	10pF
Nominal Alternating Discharge Current	60 A, 50 Hz, 1 Second, 1 Operation 300 A, 9 Cycles, 1 Operation
Impulse Discharge Current	100kA 8/20µs, 1 Operation 60kA 8/20µs, 5 Operations 10kA 10/350µs, 1 Operation
Dimensions	mm

BS EN 61643-21



WSPGDT

The WSPGDT is a high power isolating Gas Discharge Tube (GDT), intended for equipotential bonding of structures or components that cannot be directly bonded to earth during normal operation (for example pipelines with cathodic protection systems). In the event of a potential difference developing between parts connected with a WSPGDT, the GDT breaks over and connects the parts for the duration of the overvoltage (Typical resistance at initial breakover is 0.001 to 0.002Ω). After the overvoltage has been cleared, the device returns to its high resistance state.

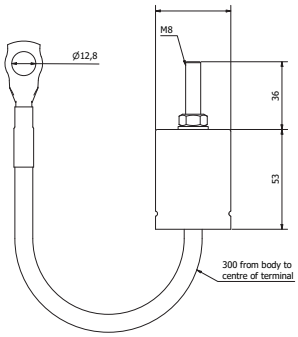
The device is IP66 rated, allowing for installation both indoors and outdoors, as well as in damp or subterranean areas.

Features and Benefits:

- Simple to install
- Minimum life of 100,000 hours
- Lightweight item weighing 320g

Part Number	WSPGDT
DC Sparkover voltage	400 to 750 V DC
Max. Impulse Discharge Current (8/20) (I_{max})	100 kA
Nominal Impulse Discharge Current (8/20) (I_n)	75 kA
Max. Lightning Impulse Current (10/350) (I_{imp})	100 kA
• Charge (Q)	50 As
• Specific Energy (W/R)	2500 kJ/Ω
Voltage Protection Level at I_{imp} (U_P)	< 1kV
Insulation Resistance at 100 V DC (R_i)	>1 GΩ
Capacitance at 1 MHz (C)	5 pF
Dimensions	mm

BS EN 61643-21



WSP-A1SPM/20/30R

The WSP-A1SPM/20/30R is a type 2 surge arrester according to EN 61643-11. The device consists of a base part and pluggable module.

These arresters are recommended for use in the Lightning Protection Zones Concept at the boundaries of LPZ 1-2 (according to IEC 1312-1 and EN 62305) for equipotential bonding and elimination of transient overvoltage's that originate during atmospheric discharges or switching processes.

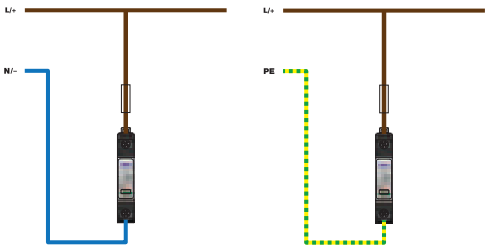
The main use of the WSP-A1SPM/20/30R arrester is in all kinds of industry, residential and administration buildings. They are to be placed into the secondary switchboards or into the control box.

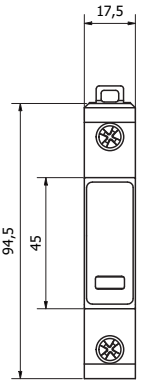
Features and Benefits:

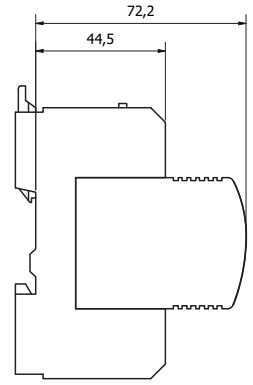
- A response time (tA) of <25 ns
- Minimum life of 100,000 hours
- Lightweight item weighing 80g

Part Number	WSP-A1SPM/20/30R
Nominal Operating Voltage (U_N)	24 V DC
Max. Continuous Operating Voltage (AC) (U_C)	30 V
Max. Continuous Operating Voltage (DC) (U_C)	38 V
Max. Discharge Current (8/20) (I_{max})	20kA
Nominal Discharge Current (8/20) (I_n)	10kA
Voltage Protection Level at (I_n)	<300V
Dimensions	mm

BS EN 61643-21







WSPLVL100G

In an overvoltage 'fault' condition, the GDT (Gas Discharge Tube) presents itself as a virtual short circuit. This effectively diverts the resultant surge current to the referenced ground plane.

The voltage time curve (shown in the image on the right) illustrates the key operating areas of the GDT, with the prospective current that will flow through the device largely dependant on the source impedance.

With the voltage increasing across the GDT terminals, at a critical point it will begin to conduct. It has entered the Glow Region. Here the gas within the device begins to rapidly ionise, lowering the internal impedance. Surge 'fault' current will now flow, limiting the voltage imposed on downstream equipment.

Typically the voltage now across the device, the Arc Voltage, can be a few 10's of volts depending on the rating. When the energy within the fault condition falls to a level that cannot maintain the Arc condition, the LVL will recover to its original 'no fault' condition. That is a high impedance, non-conducting state.

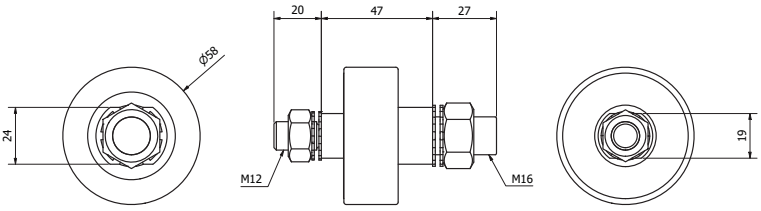
The above is the typical operating characteristics of the Gas Discharge Tube component used in the WSPLVL100G.

Features and Benefits:

- Simple to install
- Maximum withstand Voltage (U_W) 60Vdc

Part Number	WSPLVL100G
Reference Voltage (U_{ref})	80V – 120V at 1mA dc
Max. Continuous Operating Voltage (U_c)	60Vdc
Rated Voltage (U_r)	60Vdc
Short Circuit Energy Integral	2 x 0.5 x 10^6A^2s 2 x 60 x 10^6A^2s
Maximum Leakage current at 60VDC	<10µA
Maximum Discharge Current 8/20µs	1 x 25kA 10 x 10kA
Tightening Torque for M12 fitting	33Nm max
Tightening Torque for M16 fitting	80Nm max
Dimensions	mm

BS EN 61643-21



WSPMC

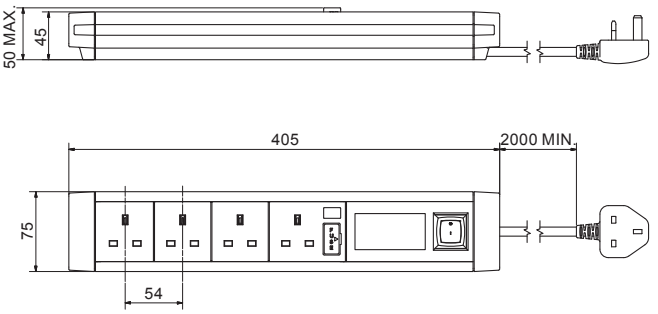
Single Phase Surge and RFI protected 4 way 13A BS 1363 socket strip (Supplied fitted with 7A fuse), Type 3 according to BS EN 61643. For protecting equipment from both transient overvoltages and radio frequency interference, this socket strip is housed in a rugged Aluminium and ABS resin case for a long working life in harsh environments.

Features and Benefits:

- Full mode (All mode) protection
- Low let through voltage
- Protects against transient overvoltages without interruption of supply
- Thermal overload protection
- Neon to indicate Mains Power/Fuse OK
- Heavy duty power switch
- Mounting Kit Available
- Earthing kits and enclosures for multiple modules available

Part Number	WSPMC
Type	Mains, Type 3
Nominal V	240
Operating V Range	240 ±10%
Max. current rating	13A (supplied fused @ 7A)
Nominal Surge Current 8/20µs (I_n)	3kA
Max. Surge current 8/20µs (I_{max})	19.5 kA
Let-through V (U_p)	<900V @ In
Dimensions	mm

BS EN 61643-11



WSP-SC100

The WSP-SC100 is a DIN mountable stand-alone Surge event monitoring device. It is designed to incrementally log events detected above a 100A pk threshold providing valuable information on location exposure to current surge and overvoltage activity.

It uses a clip-on current sense transducer that can be located to monitor activity in any return path from a Surge Protection Device and can be used as a guide to SPD durability.

The count can be reset to accommodate any protection system modifications or upgrades allowing monitor continuity.

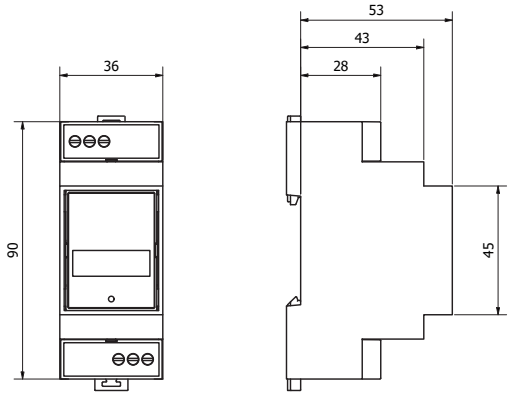
Conveniently the WSP-SC100 can be either mains supply powered with battery back-up, or directly battery powered if appropriate

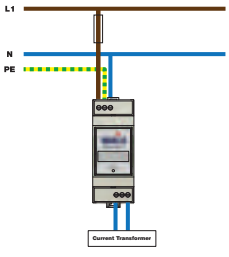
Features and Benefits:

- Simple to install
- Easy to reset
- Battery life typically >5 years

Part Number	WSP-SC100
Current Sense Threshold	>100A 8/20µs Impulse
Count Limit	9999 – resettable
Display	LED
Sensor Lead Length	500mm
Maximum Supply Operating Voltage	275Vac
Dimensions	mm

BS EN 61643-11





WSP-AVI-010 + WSP-AVI-011

This audio-visual indicator is DIN rail mountable and permits a clear warning that the metal oxide varistor components within a Surge Protection Device (SPD) have failed.

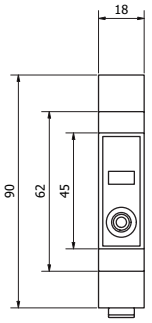
The device connects to the remote monitor outputs of the SPD, where provided, and can be powered by the mains supply where locate or battery, whichever is appropriate.

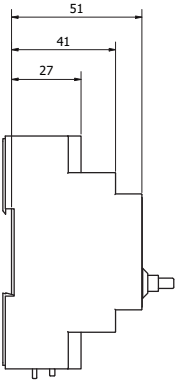
Fitted with an on-board Mute button which allows the audio to be switched off for convenience during maintenance.

Features and Benefits:
- Simple to install
- On-board mute button
- Battery life typically >5 years

Part Number	WSP-AVI-010 (Battery)	WSP-AVI-011 (Mains)
Enclosure + Base	UL94 V-O	
Enclosure Material	PC – Light Grey RAL 7035	
Base Material	PPO – Black	
Visual Indication	Red LED through clear lens	
Max Operating Voltage	275Vac	
Cable Requirement	0.5mm^2	
Dimensions	mm	

BS EN 61643-21





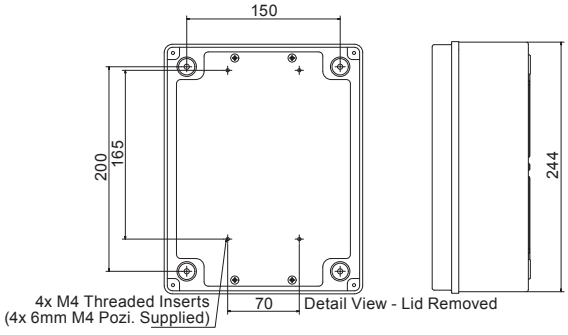
WBX003

IP 55 rated polycarbonate enclosure with transparent smoked lid for installation of WSP415M1 or WSP415M1R in damp and/or dusty environments.

Features and Benefits:

- Allows installation in damp or dusty environments
- Allows surge protection status to be read without opening enclosure
- Polycarbonate construction for high impact and temperature resistance
- Pre-prepared and fitted mounting plate and fixings to suit WSP415M1 or WSP415M1R

Part Number	WBX003
Dimensions	mm



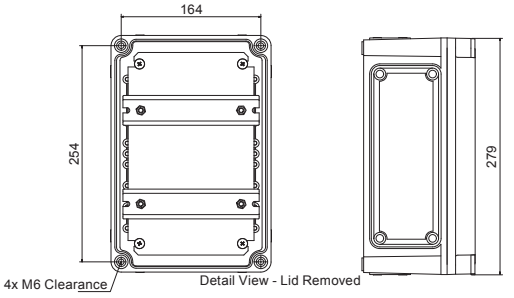
ENC103

IP 67 rated polycarbonate enclosure with transparent lid, pre-fitted with two 160mm long 35mm DIN rails for installation of WSP 415/I/TT or WSP 415/III/TT plus an MCB in damp and/or dusty environments.

Features and Benefits:

- Allows installation in damp or dusty environments
- Allows surge protection status to be read without opening enclosure
- Polycarbonate construction for high impact and temperature resistance
- Removable gland plate (supplied) for easy installation of cable glands

Part Number	ENC103
Dimensions	mm



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