

 **HS INDIA**







HS INDIA

HS India has an ethic inculcated foundation that enormously helped us in crafting top-quality products and services for the last many years. As we are among the prominent manufacturers of power cable accessories which are used for distribution and transmission of electricity in power cables. We have been delivering power to millions of people all across the globe.

Being recognized for the things delivered by us, HS India has been engaged in developing, manufacturing, and marketing power cables jointing accessories. The comprehensive portfolio and terminating & jointing solutions include a finely tuned product range of cable connection systems in cold shrink, A cast resin, heat shrink, and slip-on along with hybrid technologies for screened & unscreened polymeric cables which include paper insulated cables also.

The crafting of top-quality products and services in the industry of power cable accessories by HS India is being done from last many years. As HS India is the leading manufacturer of MV power cable accessories, so it performs the designing and production of molded components, tubing, and cable terminations that are designed for LV and MV connection systems. Due to the perfect blend of our resources, technologies, and expertise, we have been able to offer a full range of customized solutions in application equipment and power cable accessories for simplifying installation and protecting the electrical systems.

We assure the trustworthiness of your electrical connectivity by connecting, insulating, and protecting your valuable equipment systems and assets. This is the reliability and trust that our customers have in us and due to which we can solve even the toughest challenge for our customers and this begins from being specialized in application engineering and materials technology.

HS India has always been efficient in adopting and implementing the latest technological trends in our products. We have been using instinctive designs, robust materials, and state of the art technology for creating the solutions for cable jointing so that they are durable, straightforward in using, and effortless service. For meeting the requirements of our customers and the needs of national & international standards, we make huge investments in research and development so that the final product that you get should always be the best.

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Cable Termination Kits & Joints.

Cable Termination is the connection of a fiber or a wire to a device like panels, equipment, or a wall outlet, which allows the connection of cables with each other or to devices

Cable Terminations are appropriate for all environments, areas, and climates which includes heavily polluted and unpredictable areas where issuance of hot-working permits is not possible. The stress control connections that are non-tracking in nature are provided by the cable terminations for MV-HV cables with corrosion, UV, erosion, and water-resistant performance.

For doing terminations of cables properly, special termination cables are required. As the name suggests these kits are used for terminating cables by using heat and cold shrink technology. The **cable termination kits** are used for the connection of 11kV/12kV power cables to MV-HV switchgear terminal, transformer terminal, motor & cable boxes, and poles. The termination can be a single core or 3 core /3.5 core depending on the configuration of the cables.

The termination kits are available in two variants indoor and outdoor. In simple words, indoor termination kits are used for terminating those cables that don't have constant exposure to direct UV light and direct exposure to the elements. There are many products available in heat and **Cold shrink cable terminations** kits such as:

- Heat-shrinkable Low voltage terminators
- Heat-shrinkable LV straight through joints
- Heat-shrinkable Terminations 11 KV
- Heat-shrinkable Terminations 36 KV
- Heat-shrinkable Terminations Single core up to 36 KV
- Heat-shrinkable LV straight through joints up to 36 KV
- Heat-shrinkable Terminations PILC 11 KV
- Heat-shrinkable Terminations PILC 36 KV
- Cold shrinkable straight through joints
- Cable terminations for Polymeric cables up to 1.2 KV—
- Cable terminations for 1 core Polymeric insulated cables
- Cable terminations for 3 core Polymeric insulated cables
- All are tested with both national and international standards
- User-friendly and cost-effective kits
- Comes with very effortless installation



Polymeric Composite Silicone Insulators

Composite **Polymeric insulators** made up of silicone give a magnificent performance in all working conditions including harsh conditions. For providing housing over the insulator a pultruded fiberglass rod is used. All the ends of the glass rod have the security of galvanized steel or aluminum fittings. Though Silicone or Ethylene Vinyl Acetate (EVA) is also used for providing housing to the insulators as per the requirements.

These composite **Polymeric insulators** were introduced when the demand for better technology as compared to glass or ceramic insulators arise. The manufacturing of these **Silicone rubber insulators** started with various combinations of top-quality silicone materials and their end fitting is made up of metal like SG iron casting or forged steel.

There are many types of composite insulators and their type is dependent on the requirement of bending, suspension, and tension. The different types of composite insulators include **Disc Insulator, Pin insulator, Polymer strain insulator, cross arm Silicone rubber insulator, station Post polymer insulator,** and suspension long rod silicone rubber insulator the usage of composite insulators has increased for preventing the line flash over triggered by the pollution.

Here are some of the common features of composite silicone insulators:

- These insulators are recommended for use in highly polluted areas.
- The transportation and installation of these **Polymeric insulators** are economical and very easy.
- These are lighter in weight as compared to porcelain insulators by almost seventy to eighty percent.
- Hydrophobicity is provided by these insulators due to the usage of top-quality silicone rubber.
- **Polymeric insulators** come with excellent anti-tracking properties.
- Less labor is required for handling these insulators.
- These insulators come with resistance to vandalism and breakage.
- These insulators provide low leakage current in long term aging.
- For sheathing, an especially formulated top quality high tracking resistance silicone rubber have been used.
- Other properties of these **Polymeric insulators** include highly resistant to weather and UV.
- Due to advanced technology, there is no need for zero value checks.



Polymeric GOAB Switch and Polymeric DO Fuse

The manufacturing of a gang operating air brake switch with a polymeric insulator is done by using top graded raw material. These are three-phase switches and are used outdoor only. This product is used for separating the transformer from the distribution network.

Polymeric GOAB switches are manufactured by using the highly conductive copper alloy that helps in providing high continuity to electricity. Many in-house tests are being performed by various companies on these GOAB switches for meeting the required standards. These tests include the following:

- Power Frequency Voltage Dry Test
- Measurement of resistance of the main circuit
- Test to prove satisfactory operation
- Dimensional Check
- Galvanization test
- Temperature Rise test
- High Voltage Dry and Wet Power Frequency Withstand Test
- Lightning Impulse voltage withstand the test
- Short time and peak withstand current test set
- Temperature rise test
- contact resistance test
- Mechanical Endurance test



The **Polymer Drop out fuse (DO)** is used in the distribution system for protecting transformer centers tap lines and H T lines from over-load, breaking/making load current, and short circuit. Silicone rubber is used for designing fuse circuits due to which these switches can withstand the extremely stressful & cold environment along highly heated conditions in highly polluted locations or sea coasts.

This **Polymer Drop out fuse** is used in stopping the faults and they are very useful in using as the secondary backup unit for proving protection and security to the system. These switches must of type D or explosion type and outdoor lift-off type and perfect for operations that are done manually by an operating rod from the ground level. These switches are perfectly suitable for the distribution system from 11 KV to 33 KV.

Following are the features of these switches:

- The installation of polymer drop out fuse is quick and effortless.
- There is no need for any maintenance in these switches.
- The certified plants for manufacturing these switches are ISO 9001 and 14001.



Polymeric Isolators

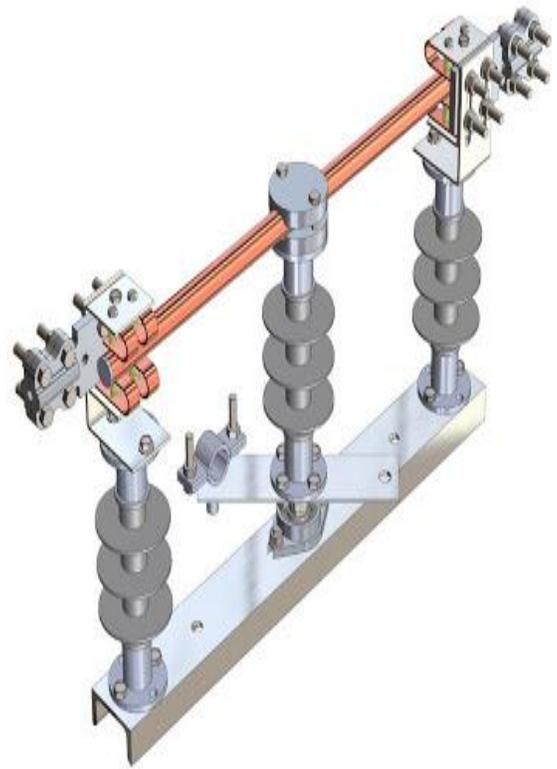
A Polymeric Isolator is a device used for Isolating a circuit or equipment from a source of power. A Polymeric isolator is a mechanical switching device that, in the open position, allows for isolation of the input and output of a device. 11 & 33 KV Polymeric Isolator shall be outdoor type, three phase, double break, center rotating type suitable for manual operation. 3 Moving contacts of all isolators shall rotate through 90 degree from their "Fully Closed Position" to "fully open position" so that the break is distinct and clearly visible from ground level.

Types of Isolators: -

- Single Break Isolator.
- Double Break Isolator.
- Pantograph Isolator.
- MCB Isolator

Application: -

The triple pole double break isolator is rotating type gang operated and designed for outdoor application. The isolator is designed to suit overhead systems used in high density urban situations or high load centers, where the load is much higher and the need of improved and steady quality power supply is much greater. Main function of this product is to isolate the Transformer, Overhead lines, System or Cables from distribution network.



Features :-

- Low Contact resistance through the life of switch.
- Sturdy design of current carrying parts.
- Smooth and trouble-free operation.
- Helping to isolate flow of current.
- Long lasting life of isolation reduce the costing area.

Polymeric Lightning Arresters

A device that is used for protecting the conductors and **Polymeric insulators** that are used on telecommunications systems and electrical power systems; from dangerous effects of lightning is a polymeric lightning arrester. These have been manufactured to offer the optimum protection or security to the distribution equipment like transformers and like products from the overvoltage transients caused due to external lightning and internal switching events.

A **Lightning arrester** comes with a ground terminal and a high voltage terminal. It never absorbs lightning. When a lightning or switching surge travels simultaneously with the power line to the arrester, in most cases the current from the surge is diverted to the earth through the arrester. There are two types of surges, one that comes directly from atmosphere lightning and the other comes from the electrical system like switching surges. At normal voltage, this arrester is like an insulator, but at the high voltage which is caused by lightning it acts as a conductor and helps in passing the voltage to the earth through the ground terminal. The arresters have been designed to perform their tasks with fidelity and high-end improvements towards the surge medium and switching voltage networks.

These lightning arresters are made using silicone rubber, which is of a new type and has been examined & tested by different weathering tests. After this, this silicone rubber has been applied to the shed material of the **Lightning arrester**. These tests confirmed the excellent resistance properties of the silicone rubber against the harsh weather and high water repellence in the longer term. The new type of silicone rubber also showed a wonderful performance in the pressure relief tests. Going through such kind of precision tests made these arresters more reliable and durable. The range of the arresters is usually from 11KV to 36KV. There are two types of surge arresters available:

- Distribution Type Surge Arrester Class I
 - Station class surge arrester Class I, II, III
- Here are some of the main features of the **Lightning arresters**:
- These arresters come with direct molded housing which helps in preventing moisture ingress.
 - With the surge arresters, you will get only excellent cantilever performance.
 - These have been designed in such a way that they are maintenance-free.
 - The **Lightning arrester** comes with a hydrophobic silicone housing.
 - With surge arrester comes low residual voltage.
 - The surge arresters come with a high-quality design and their manufacturing meets all the necessary international standards.



Screened separable Connectors (Touch proof Joints)

Screened separable connectors or Touch proof joints or terminators have been designed for connecting single-core and three core polymeric cables to RMU, equipment using bushing types "C" that have been specified for 630A, 250A, & 400A up to 24KV, and switchgear. They are used for providing a touch-safe termination for polymeric cables along with the option of disconnection. The separable connectors are mainly used for doing **power cable terminations** on circuits and power systems that distribute HV-MV electricity at 66KV, 33KV, 22KV, 11KV, and 6.6KV.

The Screened separable connectors are made up of top quality silicone or EPDM rubber and the protection of touch proof outer conductive screen which is connected to earth have also been provided. This design supports a broad application range of touch proof terminations along with incorporating steel cone and one body adaptors for covering all the cross-section from 25-300 sq mm.

Here are some of the main features of these separable connectors:

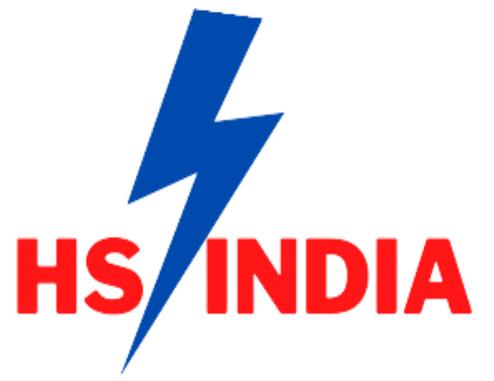
- The connection provided by these separable connectors are submersible separable and fully screened.
- These connectors come with a very compact design, lesser installation time, and fewer chances of errors.
- These touch-proof joints come with unlimited shelf life if storage temperature remains normal.
- With these touch-proof joints, there is no need for any minimum phase clearance.
- These screened separable connectors come with an outer layer that is semi-conductive along with the molded body of EPDM.
- These connectors are especially factory tested for AC withstand and partial discharge for ensuring the reliability rate of 100 percent.
- This **cable jointing kit** uses a voltage class of 11KV, 15KV, and 24KV.
- The separable connectors are easy to disconnect and reuse and there will be no need of moving MV-HV electrical equipment and all this is possible without the need for re-termination.
- These connectors are weatherproof and safe to touch.
- These joints are perfect for use on all polymeric screened cable types up to 42KV.
- These connectors are perfect for connecting almost all types of **polymeric insulators** and insulated cables to equipment with C type plugs and bushings complying with EN 50180 and EN 50181.
- These are perfect to merge or join with type A plugs and bushings complying with EN 50180 and EN 50181.



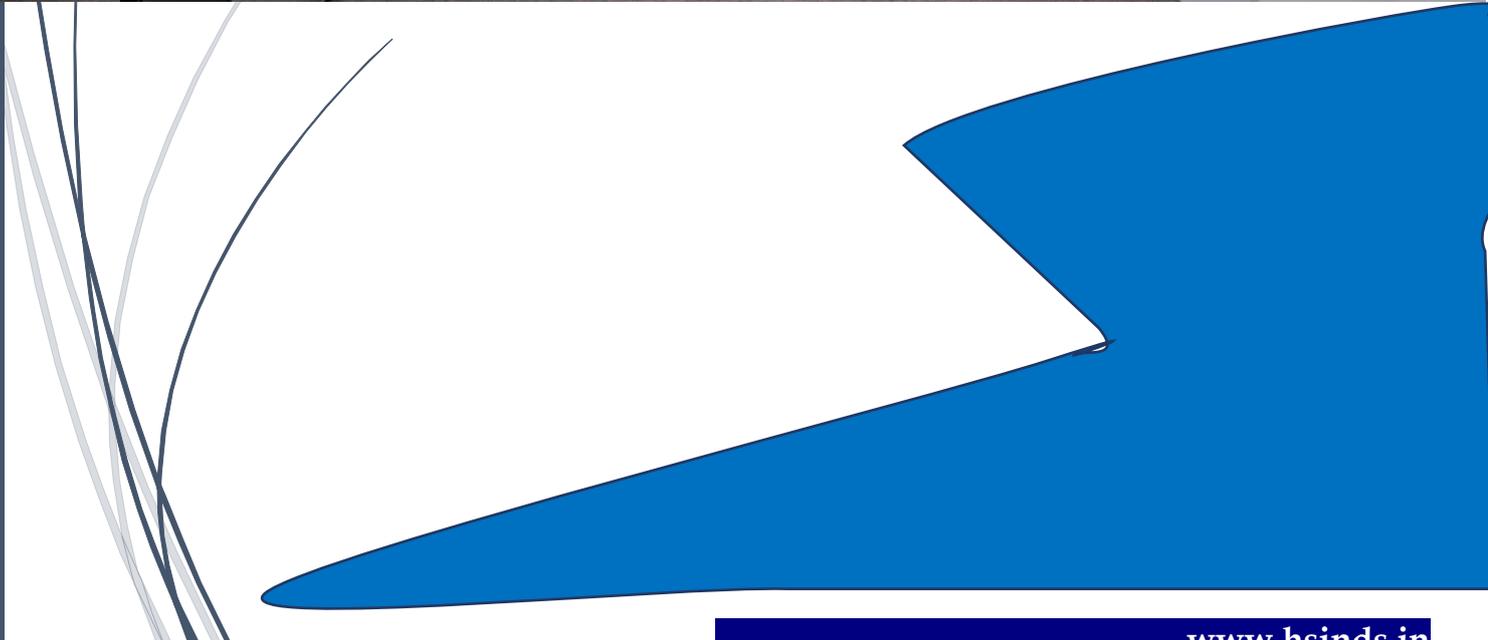
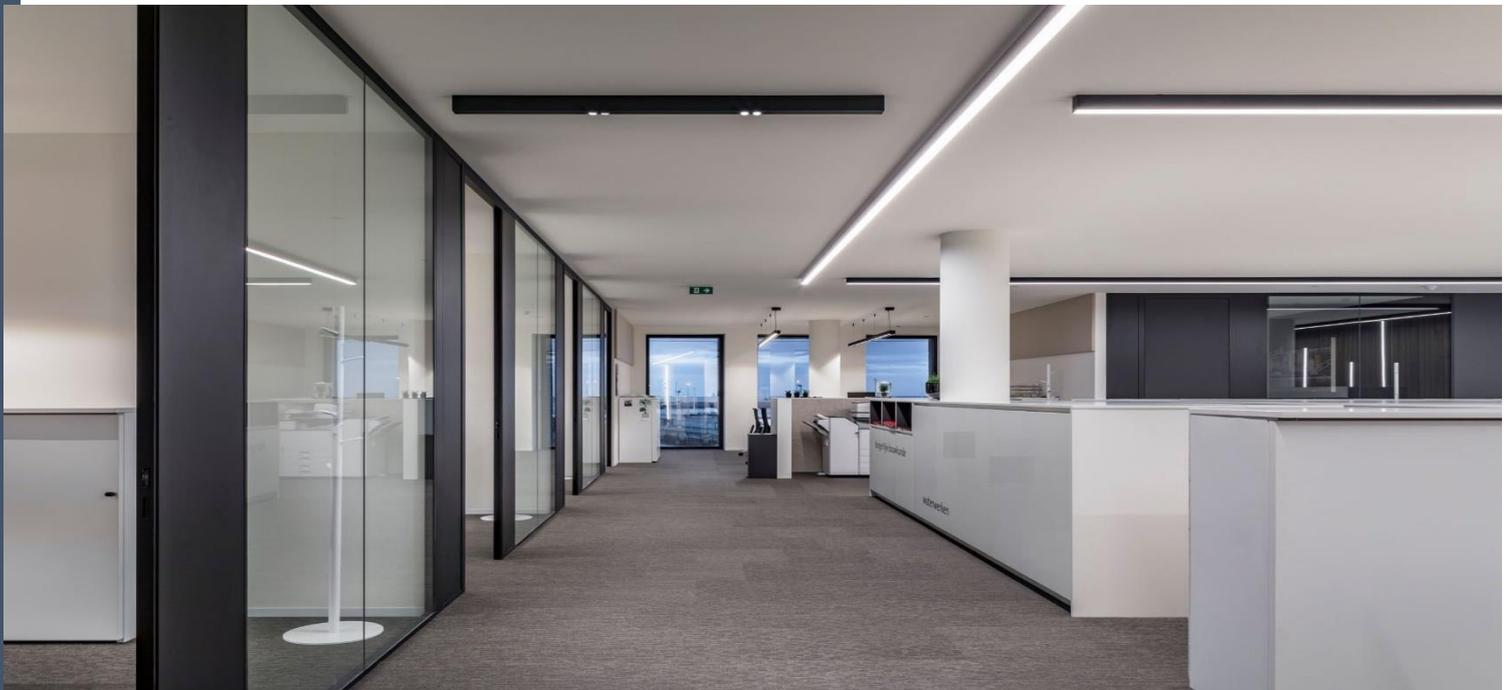


HS India Components & Fittings





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