

Pursuit excellence and perfection

**LIAONING SHENPENG ELECTRIC POWER
TECHNOLOGY CO.,LTD.**

Address: No. 73, Shendong 4th Road, Shenfu
Demonstration Zone, Liaoning Province

Tel: +86 18842594777

Web:<http://www.ruiyangcable.com/>

E-mail:rygroupzm@rygroupdb.com

**LIAONING SHENPENG ELECTRIC POWER
TECHNOLOGY CO.,LTD.**

QUALIFICATION DOCUMENTS



Contents

• Company Profile	P02
• Plant And Equipment Display	P04
• Executive Standards	P06
• Product Display	P08
• (1) Composite Sleeve Termination	P08
• (2) Porcelain Sleeve Termination	P10
• (3) Integral Prefabricated(Dry) Cable Termination	P12
• (4) Dry Gis (Plug-In) Termination	P14
• (5) Intermediate Joint	P16
• (6) Dry Y-Intermediate Joint	P19
• (7) 35kV Cold Shrink Termination	P20
• (8) 35kV Cold Shrink Intermediate Joint	P22
• (9) 10kV Cold Shrink Termination	P23
• (10) 10kV Cold Shrink Intermediate Joint	P24
• (11) Elbow Type Head	P26
• (12) Welding Splice	P28
• (13) Grouding Box	P29
• (14) Heat-Shrink Cable Accessories	P31
• Contact Us	P32



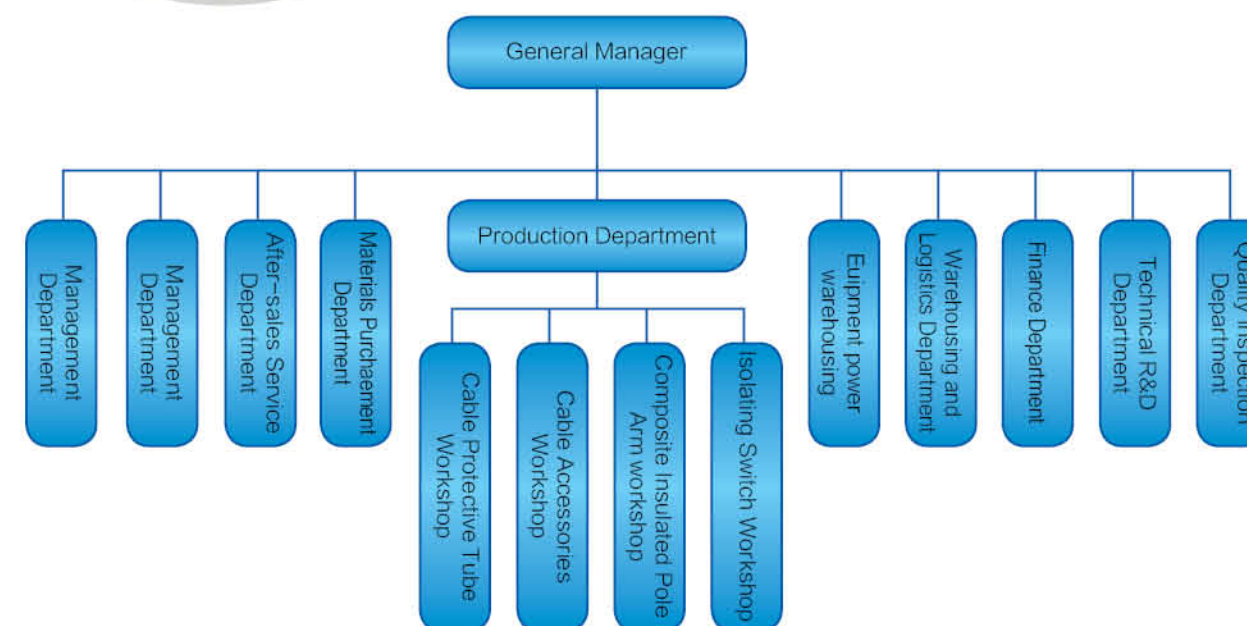
Company Profile

Liaoning Shengpeng Electric Power Technology Co., Ltd. established in April 2014, it is located in Shengfu Demonstration Zone, has 120 employees now, including 26 technical staff. The factory covers an area of 40,000 square meters, with a building area of 38,000 square meters, has a shielded partial discharge test room with an area of 500 square meters and a height of 18 meters, which can carry out up to 500kV AC withstand voltage test and 2,000kV lightning impulse test, has an area of 3,000 square meters of 100,000 grade dust-free cleaning workshop, and it is well-equipped in the production, with nearly 100 kinds of molds.

The main products are 66 kV–220kV indoor termination (GIS termination), 66kV–220kV outdoor termination (porcelain and composite sleeve termination), 66kV–220kV cable joint (straight and insulation joint), 66kV–110kV dry termination, 66kV–110kV dry Y-type joint, 10kV–35kV indoor termination, 10kV–35kV outdoor termination, 10kV–35kV cable joint, composite insulation cross arm and so on. Based on the talents and technological innovation, the company creates the best products and services, and will be awarded the title of "National High-tech Enterprise" in 2020 and the honor of "AAA Grade Credit Rating" in 2021. We will continue to uphold the Group's policy: "Unity, Standardization, Efficiency, Development", uphold the customer as the center, uphold innovation and development, and strive to create value for customers. The company will be based on the long-term development, and cooperation with universities to establish scientific research laboratories, talent training bases and so on. The company will also further develop supporting products, the main research and development direction is UHV, nuclear power, railway and so on. And keep moving forward towards the grand vision of "Create first-class enterprise, Establish a century-old brand".



Organizational Chart





Production Enviroment & Equipment



Executive Standards

NO.	Standard	Name of standard
1	GB 311.1	Insulation Co-ordination for High Voltage Transmission and Distribution Equipment
2	GB/T 468	Copper Wire Bars for Electrical Purposes
3	GB/T 772	Technical Specifications of Porcelain Element for High Voltage Insulators
4	GB/T 2952.1	Protective Coverings for Electric Cables: General
5	GB/T 2952.2	Protective sheath for Electric Cables: General Protective Coverings for Cables with Metallic Sheath
6	GB/T 3953	Round Copper Wire for Electrical Purposes
7	GB/T 3956	Conductors of Insulated Cables
8	GB/T 5582	External Insulation Pollution Classes of High-voltage Electric Power Equipment
9	GB/T 6995.1	Identify the Electric Wires and Cables – Party 1: General Requirements
10	GB/T 6995.3	Markings for Electric Wires and Cables – Party 3: Identifications of Cables and Wires
11	GB/T 3048.12	Partial Discharge Test
12	GB/T 8287	Indoor and Outdoor Post Insulators for Systems with Nominal Voltage Greater than 1kV
13	GB 11032	Metal-oxide Surge Arresters without Gaps for AC Systems
14	GB/T 11604	Testing Procedure of Radio Interference Generated by High Voltage Equipment
15	GB 14315	Compression Type Termination Lugs and Ferrules with Copper or Aluminum for Power Cables Conductors
16	GB/T 18890.1	Power Cables with Cross-linked Polyethylene Insulation and their Accessories for Rated Voltage of 220kV (Um=252kV) – Part 1: Test Methods and Requirements
17	GB/T 18890.2	Power Cables with Cross-linked Polyethylene Insulation and their Accessories for Rated Voltage of 220kV (Um=252kV) – Part 2: Power Cables
18	GB/T 18890.3	Power Cables with Cross-linked Polyethylene Insulation and their Accessories for Rated Voltage of 220kV (Um=252kV) – Part 3: Accessories
19	GB/T 11017.1	Power Cables with Cross-linked Polyethylene Insulation and their Accessories for Rated Voltage of 110kV (Um=126kV) – Part 1: Test Methods and Requirements
20	GB/T 11017.2	Power Cables with Cross-linked Polyethylene Insulation and their Accessories for Rated Voltage of 110kV (Um=126kV) – Part 2: Power Cable

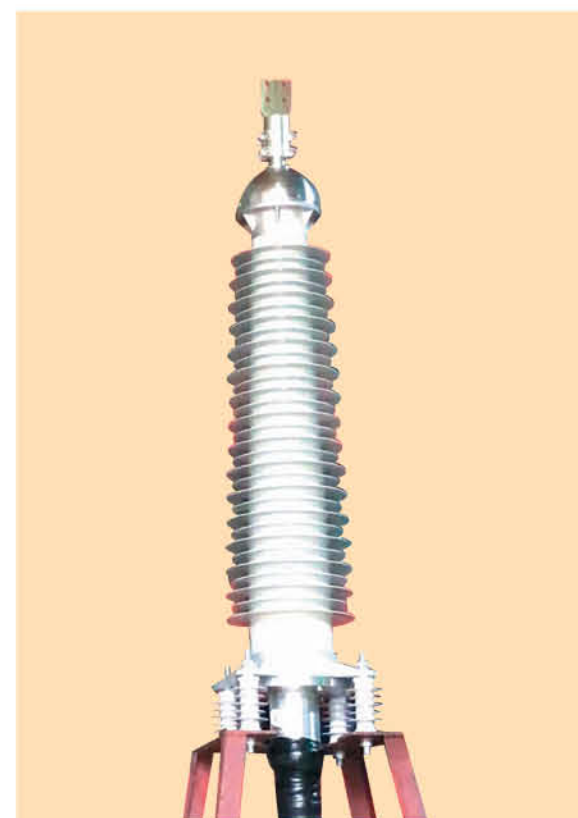
NO.	Standard	Name of standard
21	GB/T 11017.3	Power Cables with Cross-linked Polyethylene Insulation and their Accessories for Rated Voltage of __110kV (Um=126kV) Part 3: Accessories
22	GB/T 19666	General principle of Flame Retardant and Fire Resistant Wire and Cable
23	IEC 60287	Standard for Calculation of Cable Current Rating
24	IEC 62271	Cable Connections for Gas-insulated Metal-enclosed Switchgear for Rated Voltage above 52kV –Fluid-filled and Extruded Insulated Cables – Fluid-filled and Dry-type Cable Terminations
25	GB/T 2951.13	General test method for insulating and sheathing materials for cables and fibre optic cables Part 13: General test methods – Density determination methods – Water absorption test – Shrinkage test
26	GB/T 2951.21	General test methods for insulating and sheathing materials for cables and fibre optic cables Part 21 : Special test methods for elastomeric compounds – Ozone resistance test – Thermal extension test – Mineral oil immersion test
27	IEC 62067	Extruded insulated power cables and accessories thereof for rated voltages above 150kV (Um=170kV) up to 500kV (Um=550kV)
28	IEC 60840	Power Cables with Extruded Insulation and Their Accessories for Rated Voltages above 30kV (Um=36kV) up to 150kV (Um=170kV)
29	GB/T12706.1	Extruded insulated power cables and accessories for rated voltages from 1 kV (Um =1.2 kV) to 35 kV (Um=40.5 kV) Part 1: Cables for rated voltages 1 kV (Um=1.2 kV) and 3 kV (Um=3.6
30	GB/T12706.2	Extruded insulated power cables and accessories for rated voltages from 1 kV (Um =1.2 kV) to 35 kV (Um=40.5 kV) Part 2: Cables for rated voltages from 6 kV (Um=7.2 kV) to 30 kV (Um=36 kV)
31	GB/T12706.3	Power cables and accessories with extruded insulation for rated voltages from 1 kV (Um =1.2 kV) to 35 kV (Um=40.5 kV) Part 3: Cables for rated voltages of 35 kV (Um=40.5 kV)
32	GB/T12706.4	Extruded insulated power cables and accessories for rated voltages from 1kV (Um1.2kV) to 35kV (Um40.5kV) Part 4: Test requirements for accessories for power cables for rated voltages from 6kV (Um7.2kV) to 35kV (Um40.5kV)
33	GB/T 22078.1	Rated voltage 500kV (Um=550kV) cross-linked polyethylene insulated power cables and their accessories Part 1 Test methods and requirements for cross-linked polyethylene insulated power cables and their accessories with rated voltage 500kV (Um=550kV)
34	GB/T 22078.2	Rated voltage 500kV (Um=550kV) cross-linked polyethylene insulated power cables and their accessories Part 2 Rated voltage 500kV (Um= 550kV) cross-linked polyethylene insulated power cables
35	GB/T 22078.3	Rated voltage 500kV (Um=550kV) cross-linked polyethylene insulated power cables and their accessories Part 3 Accessories for cross-linked polyethylene insulated power cables with rated voltage 500kV (Um=550kV)

Product Display

① Composite Sleeve Termination ▶▶

▶ Design Methods

- Pressure-sealed composite insulating sleeves are made of fiberglass reinforced sleeves with extruded silicone rubber sheds molds on the outer layer. The upper end cap and chassis are made of corrosion-resistant alloy material. The metal fitting associated with the termination consists of corrosion-resistant alloy
- Mechanical take-offs for torque-controlled break-off bolts are connected to the cable conductors and sealed with oil-resistant filler rubber and heat-shrink tubing. Silicone rubber stress cones provide electrical stress control.
- Insulating oil is used to fill between the stress cone and the inner wall of the cable and composite sleeve. Different cable fixing and sealing devices are used for different cable sheath and construction
- Support insulators are provided for separate earthing and cross interconnection.



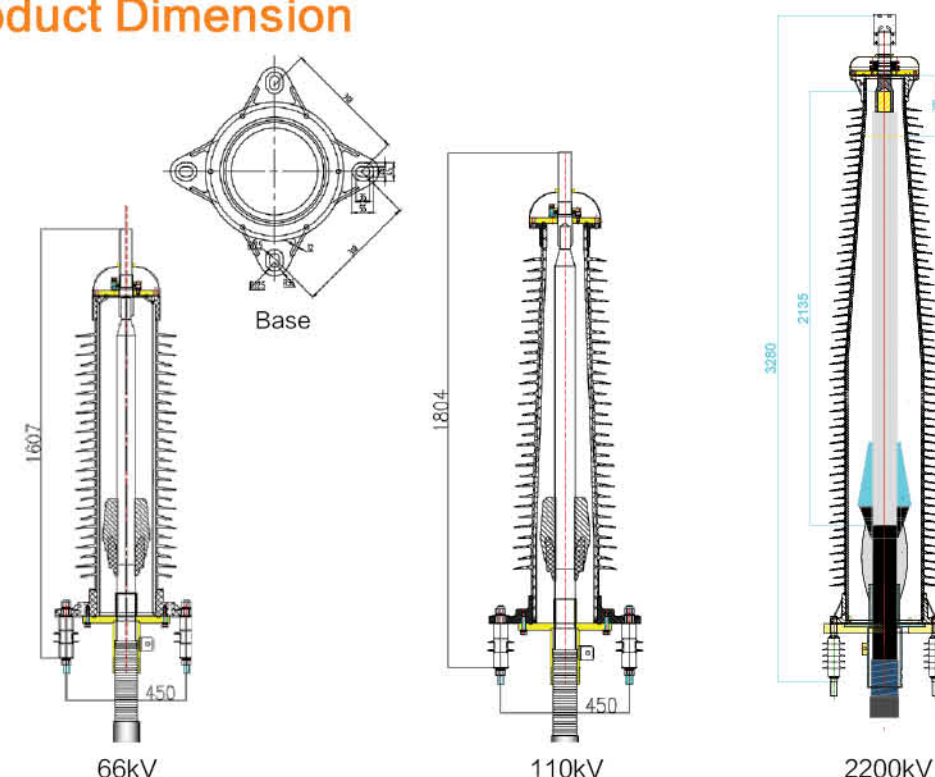
▶ Feature

- Pressure-tight and light weight composite housing
- Lightweight pressure-sealed
- Prefabricated and factory test silicone rubber stress cone
- Higher crimping strength of outgoing line rod
- Sealed with heat shrinkable tube
- No special tools required to install
- Fill the insulating oil at atmospheric pressure (can be injected from the top of Termination)
- Independent insulating base
- Fittings are made of corrosion-resistant alloy material
- Test according to IEC 60840 & IEC 620 67 standards

▶ Technical Parameter

Model	YJZWFY4							
Rated Voltage	45 ~ 47kV	60 ~ 69kV	66kV	110 ~ 115KV	132 ~ 138KV	150 ~ 161KV	220 ~ 230kV	500kV
Phase voltage U ₀	26kV	36kV	50kV	64kV	76kV	87kV	127kV	290kV
Max working voltage	52kV	72.5kV	72.5kV	123 ~ 126kV	145kV	170kV	252kV	550kV
Power	65kV	90kV	125kV	160kV	190kV	218kV	318kV	725kV
Impulse voltage withstand	250kV	325kV	450kV	550kV	650kV	750kV	1050kV	1550kV
Length	900mm	1210mm	1450mm	1840mm	2130mm	2620mm	3010mm	5760mm
Cantilever strength	5kN	5kN	5kN	8kN	8kN	10kN	10.5kN	22kN
Flashover distance	800mm	1020mm	1140mm	1150mm	1250mm	1560mm	3100mm	6200mm
Creepage distance	>1200mm	>1800mm	≥ 2500mm	≥ 4200mm	5320mm	6800mm	8800mm	15000mm
Anti-fouling level	IV	IV	IV	IV	IV	IV	IV	IV
Insulation oil	≈ 7L	≈ 10L	≈ 21L	≈ 27L	≈ 35L	≈ 60L	≈ 120 L	≈ 380 L
Total weight	≈ 50kg	≈ 80kg	≈ 80kg	≈ 130kg	≈ 180kg	≈ 350kg	≈ 450kg	≈ 1500kg
Total weight	630mm ²	1200mm ²	1600mm ²	1600mm ²	1600mm ²	1600mm ²	2500mm ²	2500mm ²
Max outer insulation	52mm	70mm	80mm	84mm	86mm	90mm	119mm	119mm
Standard of implementation	IEC60840	IEC60840	GB/T11017 IEC60840	GB/T11017 IEC60840	IEC60840	IEC60840	IEC 62067、 GB/T18890	GB/T22078

▶ Product Dimension

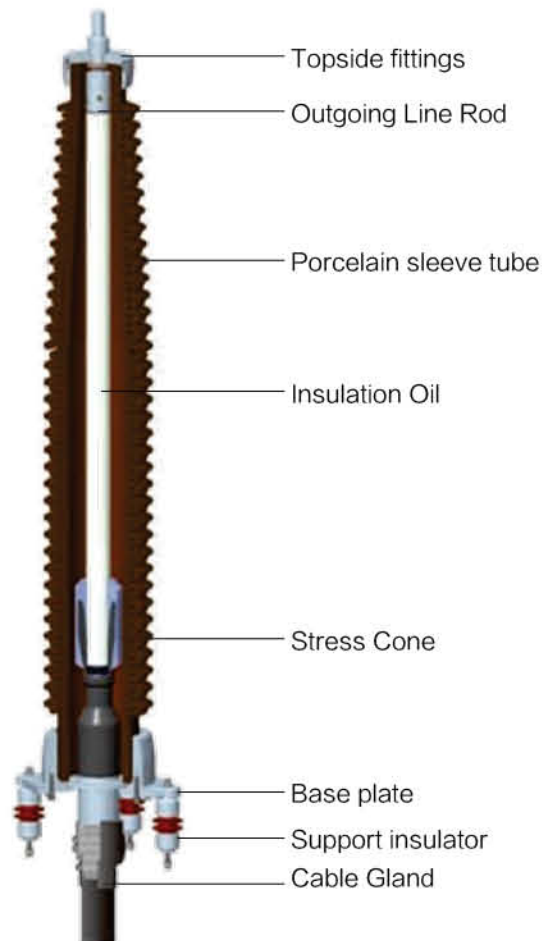


Model	Voltage Level	Name	Applicable cable cross section
YJZWFY4	48/66kV	Liquid-filled insulated porcelain sleeve terminals for cross-linked polyethylene insulated power cables. Outer insulation dirtiness class e	185mm ² ~1600mm ²
	26/45 ~ 47kV		50mm ² ~630mm ²
	36/60 ~ 69kV		95mm ² ~1200mm ²
	64/110 ~ 115KV		240mm ² ~1600mm ²
	76/132 ~ 138KV		240mm ² ~1600mm ²
	87/150 ~ 161KV		300mm ² ~1600mm ²
	127/220 ~ 230kV		400mm ² ~2500mm ²
YJZFY	290/500kV	Liquid-filled insulated rubber stress cone composite termination	800mm ² ~2500mm ²

② Porcelain Sleeve Termination▶▶

▶ Design Methods

- The porcelain sleeve for the pressure seal is made of brown high-strength porcelain. The upper end cap and the chassis are made of a corrosion-resistant alloy.
- Mechanical connectors for the torque control breaker bolts are connected to the cable conductor and sealed with oil-resistant filler and heat shrink tubing.
- Silicone rubber stress cones provide electrical stress control. Insulating oil is used to fill the gap between the stress cone and the inner wall of the cable and the ceramic sleeve.
- Different cable fixing and sealing devices are used depending on the cable sheath and armoring configuration.
- Support insulators are provided for separate earthing and cross interconnection.



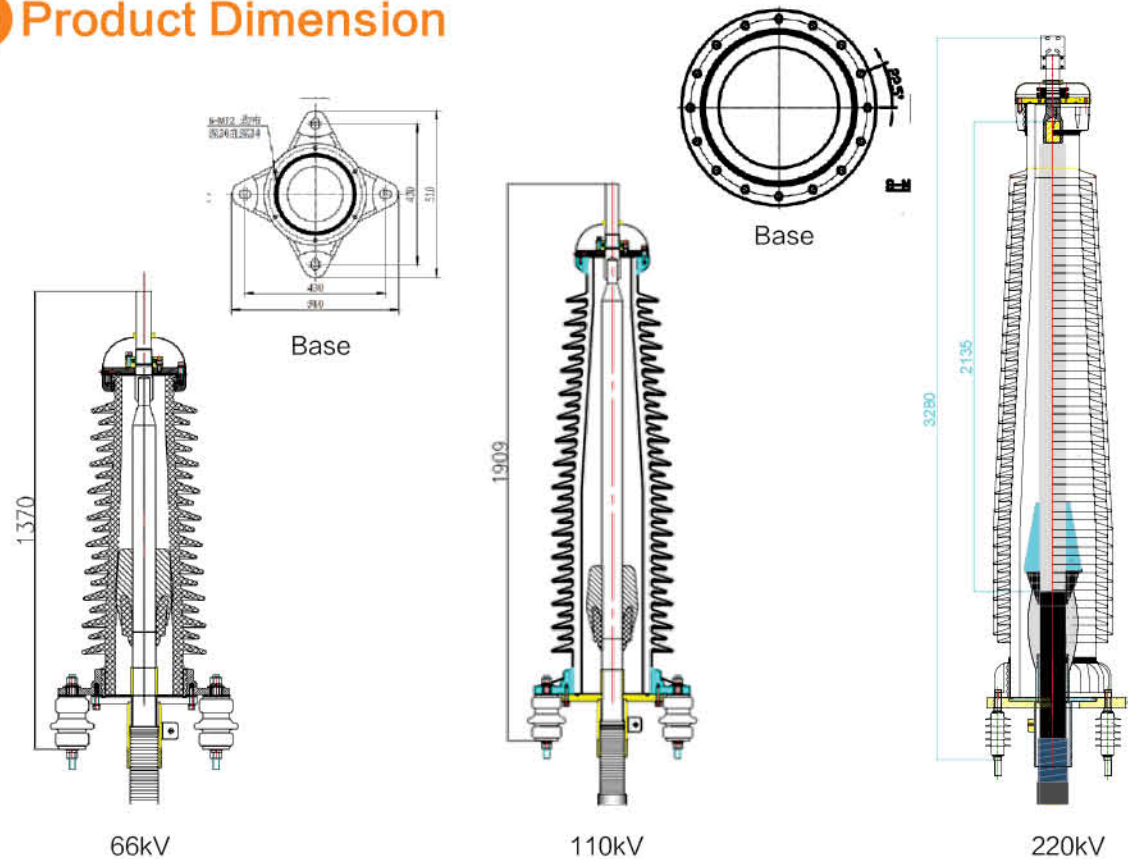
▶ Feature

- Light weight pressure-sealed porcelain sleeve
- Prefabricated and factory-tested silicone rubber stress cones
- Torque-controlled mechanical tubing
- Heat-shrink tubing seals
- No special tools required for installation
- Insulation oil filled at atmospheric pressure (can be injected from the top of the terminal)
- Separate insulating chassis
- Fittings are made of corrosion-resistant alloy materials
- Test according to IEC 60840 & IEC62067 standards

▶ Technical Parameter

Model	YJZWY4							
Rated Voltage	45 ~ 47kV	60 ~ 69kV	66kV	110 ~ 115KV	132 ~ 138KV	150 ~ 161KV	220 ~ 230kV	500kV
Phase voltage U0	26kV	36kV	50kV	64kV	76kV	87kV	127kV	290kV
Max working voltage	52kV	72.5kV	72.5kV	123 ~ 126kV	145kV	170kV	252kV	550kV
Power	65kV	90kV	125kV	160kV	190kV	218kV	318kV	725kV
Impulse voltage withstand	250kV	325kV	450kV	550kV	650kV	750kV	1050kV	1550kV
Length	900mm	1210mm	1450mm	1950mm	2130mm	2620mm	3010mm	5760mm
Cantilever strength	5kN	5kN	5kN	8kN	8kN	10kN	10.5kN	22kN
Flashover distance	800mm	1020mm	1140mm	1150mm	1250mm	1560mm	3100mm	6200mm
Creepage distance	> 1200mm	> 1800mm	2800mm	4640mm	5200mm	6700mm	8449mm	15000mm
Anti-fouling level	IV	IV	IV	IV	IV	IV	IV	IV
Insulation Oil	≈ 7L	≈ 10L	≈ 15L	≈ 30L	≈ 35L	≈ 60 L	≈ 120 L	≈ 380 L
Total weight	≈ 80kg	≈ 100kg	≈ 160kg	≈ 200kg	≈ 260kg	≈ 550kg	≈ 850kg	≈ 2600kg
Max conductor size	630mm ²	1200mm ²	1600mm ²	1600mm ²	1600mm ²	1600mm ²	2500mm ²	2500mm ²
Max outer insulation	52mm	70mm	80mm	84mm	86mm	90mm	119mm	119mm
Standard of implementation	IEC60840	IEC60840	GB/T11017/ IEC60840	GB/T11017/ IEC60840	IEC60840	IEC60840	IEC 62067、GB/T18890	GB/T22078

▶ Product Dimension

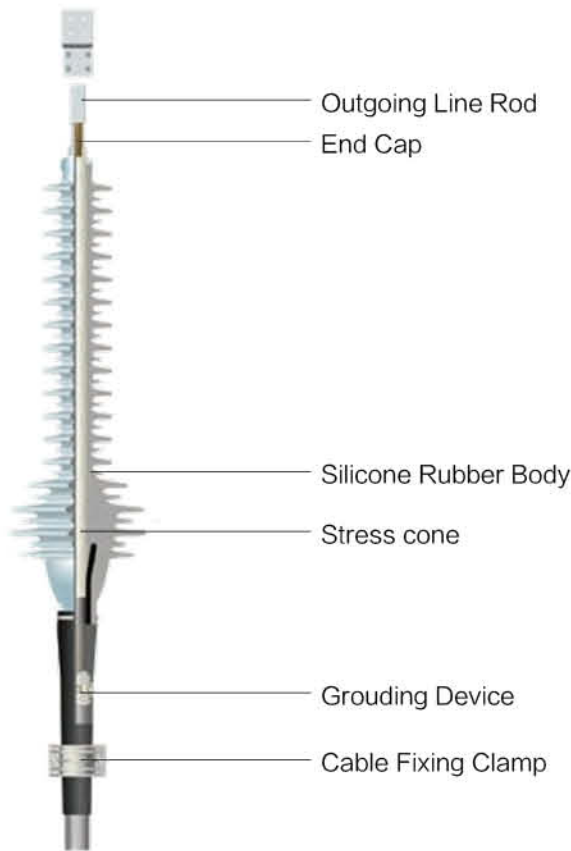


Model	Voltage Level	Name	Applicable cable cross section
YJZWY4	48/66kV 26/45 ~ 47kV 36/60 ~ 69kV 64/110 ~ 115KV 76/132 ~ 138KV 87/150 ~ 161KV 127/220 ~ 230kV	Liquid-filled insulation composite sleeve for cross-linked polyethylene insulated power cables end, outer insulation dirtiness class e	185mm ² –1600mm ² 50mm ² –630mm ² 95mm ² –1200mm ² 240mm ² –1600mm ² 240mm ² –1600mm ² 300mm ² –1600mm ² 400mm ² –2500mm ²
	290/500kV	Liquid insulated rubber stress cone outdoor termination, external insulation filth class IV	800mm ² –2500mm ²

③ Integral Prefabricated (Dry) Cable Termination▶▶

▶ Design Methods

- Integral prefabricated terminations are made of imported liquid silicone rubber, and the stress cone and silicone rubber insulation are prefabricated into a whole.
- It has good weather resistance, resistance to leakage traces, and excellent antifouling performance.
- Dry terminations do not contain filled insulating oil, so there is a lot of freedom of installation, and the installation position and direction can be changed flexibly according to the needs of the site, it can be installed vertically or at an angle.
- The product is made of silicone rubber, which is light in weight and has good anti-explosion and anti-vibration properties. At the same time, the installation of low support requirements, especially suitable for high towers and not convenient for lifting machinery to enter the region.



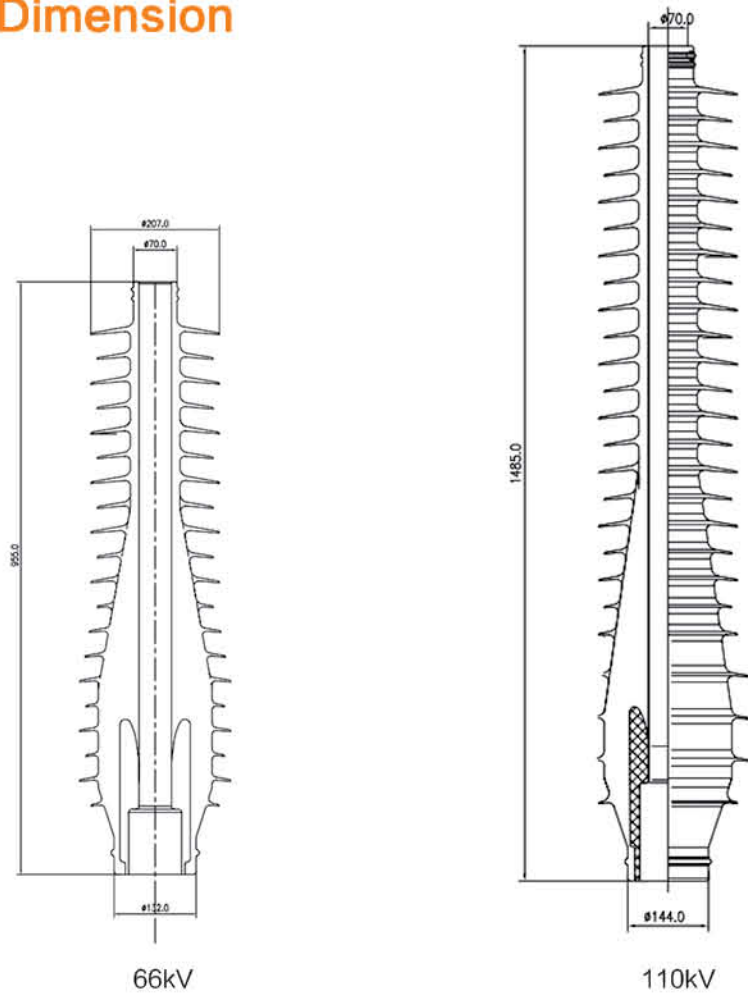
▶ Feature

- Prefabrication of stress cones, insulators, and sheds molds in a clean room at the factory.
- 100% testing of partial discharge of cable accessories, no partial discharge under test voltage. High quality stability and reliability
Silicone rubber prefabricated stress cone
Class IV , 4590mm, (36mm/kV)
- Light weight <35kg
- Easy and quick installation
- Dry type, without any insulant, maintenance-free
- Special non-welded combined grounding process, ensuring no damage to cables

▶ Technical Parameter

Model	YJZWG4	
Rated Voltage	66kV	110kV
Max working voltage	72.5kV	126kV
Impulse withstand voltage	450kV	550kV
Length	4590mm	5090mm
Cantilever strength Flashover	1480mm	1820mm
distanceCreepage	1500mm	1700mm
distance	2450mm	3935mm
Anti-fouling level	IV	IV
Insulation Filling Oil Total weight	35kg	39kg
Max conductor size	1600mm ²	1600mm ²
Max outer insulation diameter	80mm	84mm
Standard of implementation	GB/T11017	GB/T11017

▶ Product Dimension

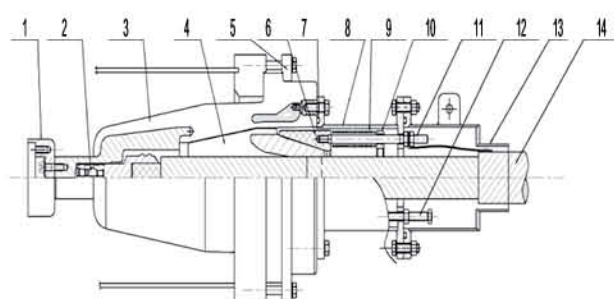


Model	Voltage Level	Name	Applicable cable cross section
YJZWG4	48/66kV	Integral prefabricated terminals for cross-linked polyethylene insulated power cables, outer insulation dirt class e Filth class e	185mm ² –1600mm ²
YJZWG4	64/110kV	Integral prefabricated terminals for cross-linked polyethylene insulated power cables, outer insulation dirt class e Filth class e	240mm ² –1600mm ²

④ Dry Gis (Plug-In) Termination▶▶

▶ Design Methods

- Termination consists of two parts: the epoxy sleeve and the plug. The epoxy sleeve can be sent to the GIS manufacture for pre-installation. Repair or maintenance of equipment or cable runs can be performed without breaking the seal between the epoxy sleeve and the equipment.
- Silicone rubber stress cones provide electrical stress cones stress control.
- Connectors with multi-point contact springs are used to provide
- A metal spring pressure device ensures that the stress cone is always tight against the inside wall of the epoxy sleeve that it is shaped to fit and ensures interface pressure.
- The cable fixing and sealing device at the termination will be connected to the outer sheath of the cable, acting as a fixing and mechanical protection and providing a separate earth connection with No welding.
- In the event that it is necessary to replace an old oil-filled terminal in a transformer or oil-filled insulated switchgear, the termination outlets can be matched by means of optional extension rods and fixing rings.



- | | |
|---------------------|--------------------------|
| 1.Extension Tube | 8.Transition device |
| 2.Contact Electrode | 9.Adjustment spring |
| 3.Epoxy sleeve | 10.Spring-loaded lever |
| 4.Stress cone | 11.Spring-loaded conduit |
| 5.Flange ring | 12.Adjustment bolt |
| 6.Cone lift | 13.Tailpipe |
| 7.O type circle | 14.Cable Body |



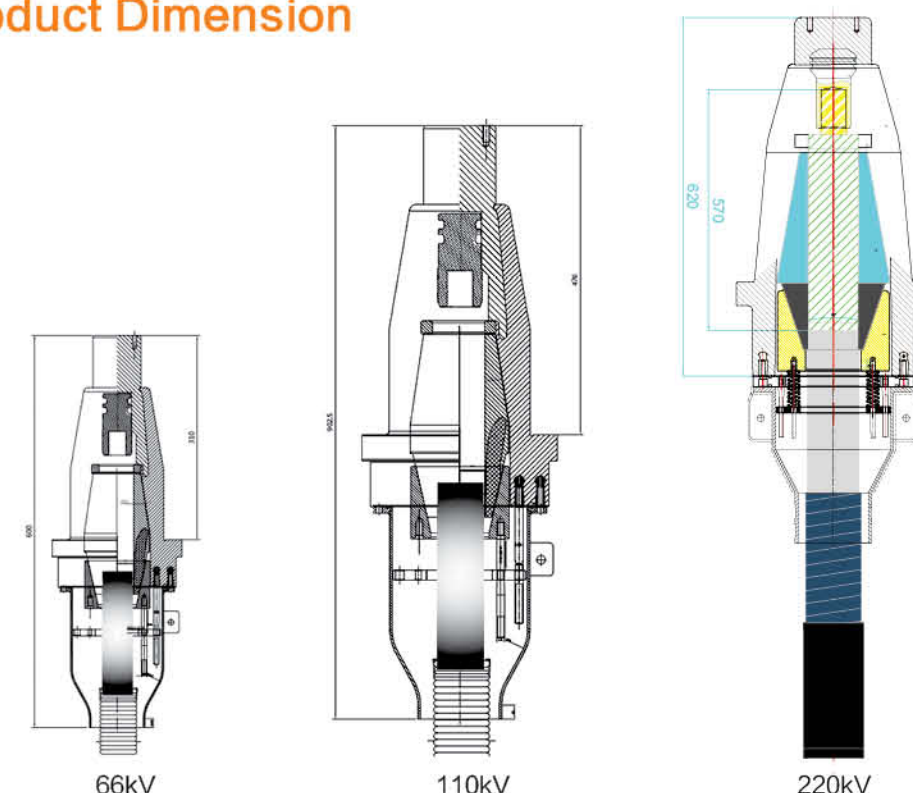
▶ Feature

- Dry interface, no oil filling required
- Dimensions: Available according to IEC62271-209, Different sizes of epoxy sleeves are available according to IEC 62271-209, GB/T2238 1, IEC60859
- Can be operated in SF6 or insulating oil environments.
- Prefabricated silicone rubber stress cones, 100% factory inspected
- Terminations can be installed without special tools or brazing.
- Bottom flange and termination can be grounded separately.

▶ Technical Parameter

Model		YJZGG						
Rated Voltage		45 ~ 47kV	60 ~ 69kV	66kV	110 ~ 115KV	132 ~ 138KV	150 ~ 161KV	220kV、230kV
Phase voltage U0		26kV	36kV	50kV	64kV	76kV	87kV	127kV
Max working voltage		52kV	72.5kV	72.5kV	123 ~ 126kV	145kV	170kV	245 ~ 252kV
Power		65kV	90kV	125kV	160kV	190kV	218kV	318kV
Impulse voltage withstand		250kV	325kV	450kV	550kV	650kV	750kV	1050kV
Length (With Extension Rod)		470mm (757mm)	470mm (757mm)	310mm (583mm)	470mm (757mm)	470mm (757mm)	470mm (757mm)	620 (960)mm
Weight (With Extension Rod)		15kg (18kg)	19kg (23kg)	28kg (32kg)	38kg(42kg)	40kg (45kg)	55kg (65kg)	150(190)kg
SF6 working pressure		0.2 ~ 0.6MPa	0.2 ~ 0.6MPa	0.2 ~ 0.6MPa	0.2 ~ 0.6MPa	0.2 ~ 0.6MPa	0.2 ~ 0.6MPa	0.25 ~ 0.6MPa
Range of application	Conductor insulation diameter	630mm ²	1200mm ²	1600mm ²	1600mm ²	1600mm ²	1600mm ²	2500mm ²
		52mm	70mm	80mm	84mm	86mm	90mm	119mm
Standard of implementation		IEC60840	IEC60840	IEC60840	IEC60840、GB/T11017	IEC60840	IEC60840	IEC 62067、GB/T18890

▶ Product Dimension

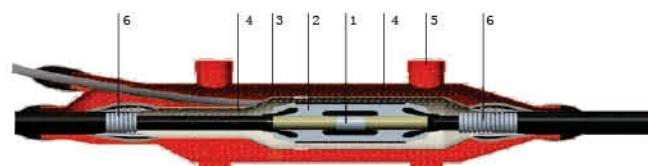


Model	Voltage Level	Name	Applicable cable cross section
YJZGG-S	48/66kV 26/45 ~ 47kV 36/60 ~ 69kV	Dry GIS termination for cross-linked polyethylene insulated power cables (short type)	185mm ² ~1600mm ² 50mm ² ~630mm ² 95mm ² ~1200mm ²
	64/110 ~ 115KV 76/132 ~ 138KV 87/150 ~ 161KV 127/220 ~ 230kV		240mm ² ~1600mm ² 240mm ² ~1600mm ² 300mm ² ~1600mm ² 400mm ² ~2500mm ²
YJZGG-L	48/66kV 26/45 ~ 47kV 36/60 ~ 69kV	Dry GIS termination for cross-linked polyethylene insulated power cables (long type)	185mm ² ~1600mm ² 50mm ² ~630mm ² 95mm ² ~1200mm ²
	64/110 ~ 115KV 76/132 ~ 138KV 87/150 ~ 161KV 127/220 ~ 230kV		240mm ² ~1600mm ² 240mm ² ~1600mm ² 300mm ² ~1600mm ² 400mm ² ~2500mm ²

⑤ Intermediate Joint ▶▶

▶ Design Methods

- High reliability, quick and easy installation, realizing the simplicity of on-site installation process;
- Prefabricated rubber coupling includes stress cone, high-pressure shielding tube and outer thick-walled tube, which are injected and pressed into one piece; the use of high-quality silicone rubber ensures excellent electrical reliability and mechanical properties;
- Long stress cone and high pressure shielding tube improves the problem of stress concentration and prolongs the product life
- Screwed mechanical or compression tubing ensures good mechanical and electrical properties;
- Cold connection (solderless) grounding avoids heat generated during the soldering process that could cause damage to the cable;



1. Unscrewing bolted mechanical or compression tubes
2. Prefabricated rubber body (silicone rubber)
3. Copper shells (two main types: for straight-through joints or insulated joints, respectively)
4. Filler (polyurethane type)
5. Glass fiber reinforced plastic shell (optional)
6. Power cable (corrugated aluminum sheath, shielded copper wire, etc.)



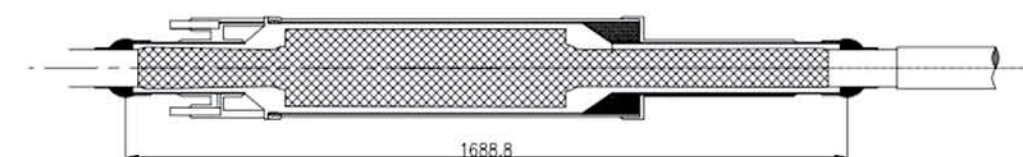
▶ Feature

- Prefabrication of stress cones, insulators, and sheds molds in a clean room at the factory.
- 100% testing of partial discharge of cable accessories, no partial discharge under test voltage.
- High quality stability and reliability
- Silicone rubber prefabricated stress cones
- Highly dirt-proof, Class IV, 4590mm, (36mm/kV)
- Light weight <35kg
- Easy and quick installation
- Dry type, without any insulant, maintenance-free
- Special non-welded combined grounding process, ensuring no risk of damage to cable insulation
- Can be installed in any position
- Voltage level: 66kV~110kV
- Applicable cross section 185mm²~1600mm²
- Designed and tested according to GB11017

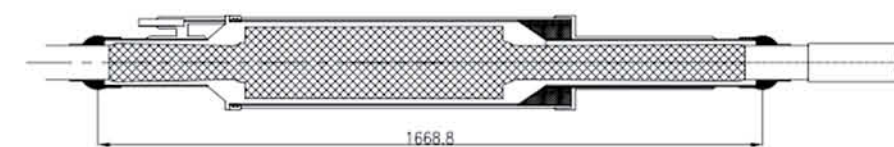
▶ Technical Parameter

Model	YJJJ12 / YJJT12	YJJJ11 / YJJT11	YJJJ12 / YJJT12	YJJJ11 / YJJT11	YJJJ12 / YJJT12	YJJJ11 / YJJT11	YJJJ12 / YJJT12	YJJJ11 / YJJT11
Rated Voltage	110 ~ 115kV	110 ~ 115kV	132 ~ 138kV	132 ~ 138kV	150 ~ 161kV	150 ~ 161kV	220kV, 230kV	220kV, 230kV
Phase voltage U ₀	64kV	64kV	76kV	76kV	87kV	87kV	245 ~ 252kV	245 ~ 252kV
Max working voltage	126kV	126kV	145kV	145kV	170kV	170kV	252kV	252kV
Industrial frequency withstand voltage	160kV	160kV	190kV	190kV	218kV	218kV	318kV	318kV
Shock withstand voltage level	550kV	550kV	650kV	650kV	750kV	750kV	1050kV	1050kV
Length	1850mm	2200mm	1900mm	2400mm	1900mm	2400mm	2560mm	3170mm
Insulation stress cone diameter approx	170 ~ 190mm	170 ~ 190mm	180 ~ 200mm	180 ~ 200mm	190 ~ 205mm	190 ~ 205mm	238mm	238mm
Insulation stress cone length approx	710mm	710mm	750mm	750mm	790mm	790mm	900mm	900mm
Gross weight approx	80kg	133kg	95kg	155kg	110kg	185kg	150kg	240kg
Max conductor size	1600mm ²	1600mm ²	1600mm ²	1600mm ²	1600mm ²	1600mm ²	2500mm ²	2500mm ²
Max outer insulation diameter	≤ 84mm	≤ 84mm	≤ 88mm	≤ 88mm	≤ 96mm	≤ 96mm	≤ 119mm	≤ 119mm
conductor sheath diameter	≤ 110mm	≤ 110mm	≤ 120mm	≤ 120mm	≤ 130mm	≤ 130mm	≤ 160mm	≤ 160mm
Implementation standards	IEC60840、GB/T11017	IEC60840、GB/T11017	IEC60840	IEC60840	IEC60840	IEC60840	IEC 62067、GB/T18890	IEC 62067、GB/T18890

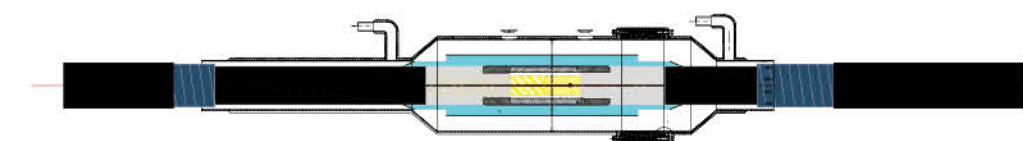
▶ Product Dimension



110kV insulation intermediate joint



110kV straight through intermediate joint



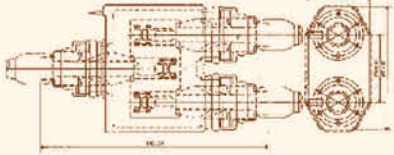
220kV insulation intermediate joint

Model	Voltage Level	Name	Applicable cable cross section
YJJJ12	48/66kV	Integral prefabricated rubber insulation for cross-linked polyethylene insulated cables Insulated joints, insulated copper shell protection box	185mm ² –1600mm ²
	26/45 ~ 47kV		50mm ² –630mm ²
	36/60 ~ 69kV		95mm ² –1200mm ²
	64/110 ~ 115KV		240mm ² –1600mm ²
	76/132 ~ 138KV		240mm ² –1600mm ²
	87/150 ~ 161KV		300mm ² –1600mm ²
YJJT12	127/220 ~ 230kV	Integral prefabricated rubber insulation for cross-linked polyethylene insulated cables Straight-through connectors, insulated copper-shell protective boxes	400mm ² –2500mm ²
	48/66kV		185mm ² –1600mm ²
	26/45 ~ 47kV		50mm ² –630mm ²
	36/60 ~ 69kV		95mm ² –1200mm ²
	64/110 ~ 115KV		240mm ² –1600mm ²
	76/132 ~ 138KV		240mm ² –1600mm ²
YJJJ11	87/150 ~ 161KV	Integral prefabricated rubber insulation for cross-linked polyethylene insulated cables Insulated joints, fiberglass reinforced plastic protective box with waterproofing potting compound	300mm ² –1600mm ²
	127/220 ~ 230kV		400mm ² –2500mm ²
	48/66kV		185mm ² –1600mm ²
	26/45 ~ 47kV		50mm ² –630mm ²
	36/60 ~ 69kV		95mm ² –1200mm ²
	64/110 ~ 115KV		240mm ² –1600mm ²
YJJT11	76/132 ~ 138KV	Integral prefabricated rubber insulation for cross-linked polyethylene insulated cables Straight through joints, FRP protective box with waterproof potting compound	240mm ² –1600mm ²
	87/150 ~ 161KV		240mm ² –1600mm ²
	127/220 ~ 230kV		300mm ² –1600mm ²
	48/66kV		400mm ² –2500mm ²
	26/45 ~ 47kV		185mm ² –1600mm ²
	36/60 ~ 69kV		50mm ² –630mm ²

⑥ Dry Y-Intermediate Joint▶▶

➤ Design Methods

- The joint body is cast in epoxy resin, and the three-phase dry plug-in terminals are connected to the body to complete the Y-connection of the line.
- Adoption of compact design of spring pressure stress cone design, short cable stripping distance, shorter preparation time, and the whole joint installation time and staffing are the same as ordinary joints.
- Adoption of prefabricated body, users can choose to run the main line after plugging the branch line portion with a plug (separately required). If necessary, the plug can be removed and the branch line inserted.If necessary, the plug can be removed and the branch line can be inserted for operation.
- Since the grounding of the three phases , the connector is not connected to each other, the other two phases are allowed to continue to operate after a fault in one of the phases off the line.

Model	Y2
structural drawing	
Rated voltage	110kV
Max working voltage	126kV
Dimension	L: 900mm W: 495mm H: 250mm
Weight(body)	86kg
Range of cable using	240mm ² –1600mm ²
Connecting type of cable	Plug-and pull type
Insulation type	Prefabricated stress cone
sheath sleeve	All three ports available
Partial Discharge Characteristics	114kV , < 5pC
Industrial frequency voltage	AC190kV 30min
Impulse voltage	± 550kV 10 times
Long-term thermal cycle test	AC 126kV Temperature 95℃ ~ 100℃ 30 times
Implementation standards	IEC 60840 GB/T11017



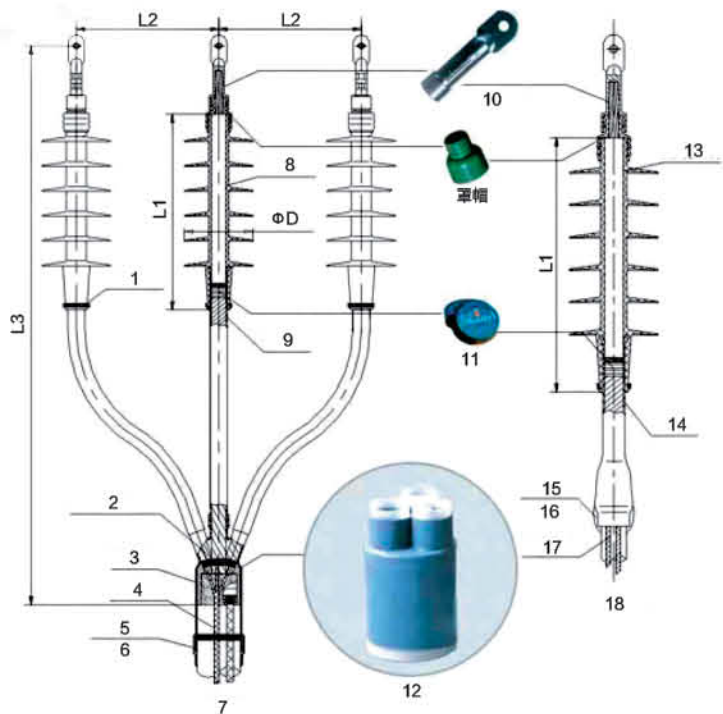
➤ Feature

- Fully dry, reduced Y-joint, small size
- Use of cross sections from 240 mm² to 1600 mm²
- Prefabricated stress cone structure
- Plug-in design for easy testing and operational requirements,One-piece cast epoxy body with copper shell encapsulated in body and insulating material cover the body
- The metal layer is separated from the body to provide a variety of grounding options
- Stress cone plugs, single line operation option available
- Optional cast protective housing Underwater operation is permitted, taking into account the possibility of water ingress into the coupling's operating environment, the product has been designed and tested to withstand 1 meter of water pressure.
- The insulation sleeve of each phase and the shielding layer between the cables are insulated, making the measurement of insulation resistance, etc. during periodic inspections reliable and easy.

7 35kV Cold Shrink Termination

Product Description

- This product is made of liquid silicone rubber , which is more flexible and reliable than solid silicone rubber.
- All metal parts are tin-plated.
- Factory withstand voltage test 117kV, 5min
- This product implements the national standard GB/T12706.4.



- | | | |
|----------------------------|---------------------------------------|------------------------|
| 1.Nylon Ties | 7.Three cores cable | 13.Sheds molds |
| 2.Constant force | 8.Sheds molds | 14.Insulation tube |
| 3.spring hoop | 9.Insulation tube | 15.Insulation tape |
| 4.filler glue | 10.Prefabricated term inals | 16.PVC tape |
| 5.Copper braided tape | 11.Semi-Conductive Self-Adhesive Tape | 17.Copper braided tape |
| 6.PVC Tape Insulation Tape | 12.Cold Shrink Three Sleeves | 18.Single core cable |

Parameters	Indoor/ (mm)	Outdoor/ (mm)	Note
L1	370	455	Insulation pipe length 450mm user can arrange the according to the situation
L2	≥ 300	≥ 400	
L3	800	1000	



NO.	Product Name	Model	Recommended cross section (mm ²)
1	35kV indoor cold shrink termination	26/35kV-NLS-1,3	50-150
2			185-400
3			500-630
1	35kV outdoor cold shrink termination	26/35kV-WLS-1,3	50-150
2			185-400
3			500-630

⑧ 35kV Cold Shrink Intermediate Joint ▶▶

➤ Product Description

- This product is made of liquid silicone rubber, compared with solid silicone rubber elasticity is better, better reliability
- Waterproof shell is made of fiberglass, waterproof glue AB components
- The shielding lap is made of wrapped copper mesh and copper braid and has passed the shielding short-circuit test.
- Factory withstand voltage test 117kV, 5min
- This product implements the national standard GB/T12706.4.

No.	Intermediate joint/(mm)	Note
L1	1100	Three-core cables are recommended to be stripped no Less than 2
L2	500	
L3	2200	

1. Prefabricated insulators

2. Core insulation

3. Heat shrink tubing

4. Rubber self-adhesive tape

5. Armor

6. Inner sheath

7. Copper screen

8. Semi-Conductive Tape

9. Copper net
10. Connect tube

11. Core outer

12. Semi-conductive layer

13. Copper net

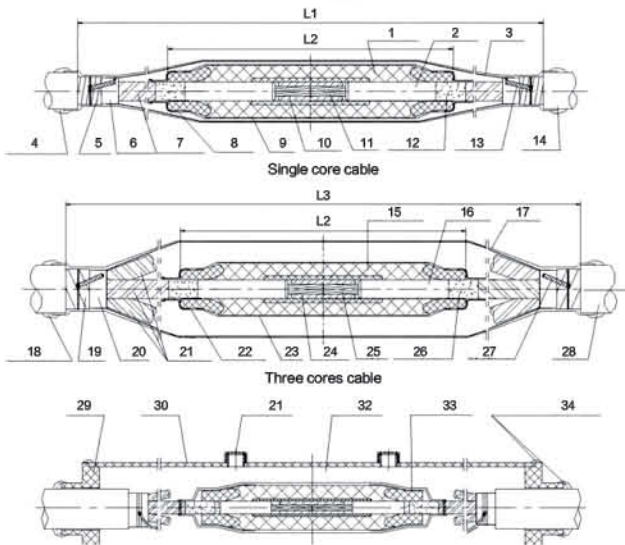
14. Outer sheath

15. Prefabricated insulators

16. Core insulation

17. Heat shrink tubing

18. Rubber self-adhesive tape



19. Armor

20. Inner sheath

21. Three-phase shielding

22. Semi-Conductive Tape

23. Copper net

24. Connect tube

25. Core Outer

26. Semi-conductive layer

27. Copper net
28. Outer sheath

29. End shell

30. Middle shell

31. Sprue

32. Insulation tap

33. Joint body

34. PVC tap, anti-water tap epoxy paste



1. Constant force spring

2. Anti-water tap

3. Copper mesh

4. Transparent PVC tape

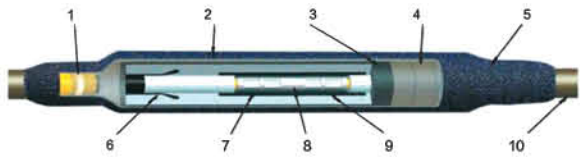
5. Armor bands
6. Stress cone

7. Semi Conductive Tape

8. Connect tube

9. Shielding tube

10. Cable outer sheath



26/35kV Fully Cold Shrinkable Intermediate Joint Installation Profile

NO.	Name	Model	Recommended cross section (mm ²)
1	35kV Intermediate joint	26/35kV-JLS-1,3	50-150
2			185-400
3			500-630

⑨ 10Kv Cold Shrink Termination ▶▶

➤ Product Description

- This product is made of liquid silicone rubber, which is more flexible and reliable than solid silicone rubber.
- All metal parts are tin-plated.
- Factory withstand voltage test 39kV, 5min
- This product implements the national standard GB/T12706.4.

Name	Indoor/(mm)	Outdoor/(mm)	Note
L1	235	265	The length of the insulated tube is 400, can be changed according to the actual situation
L2	≥ 120	≥ 200	
L3	700	700	

1. Troika

2. Filler glue

3. Copper tap

4. Insulation tap

5. PVC tap

6. Three cores cable

7. Wiring terminal

8. PVC tap Shed molds

9. Termination

10. Body

11. Insulation tube

12. Semi-Conductive Self-Adhesive Tape

13. Cold shrink troika

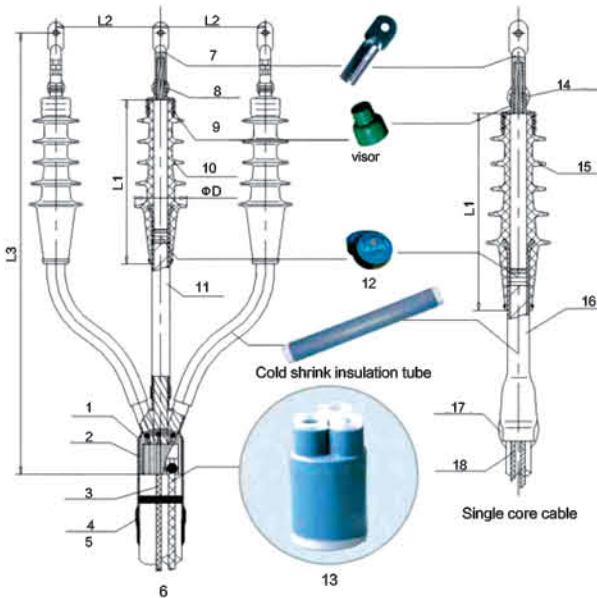
14. PVC tape Insulation tape

15. Sheds molds

16. Insulation tube

17. Insulation tap PVC tap

18. Copper tap



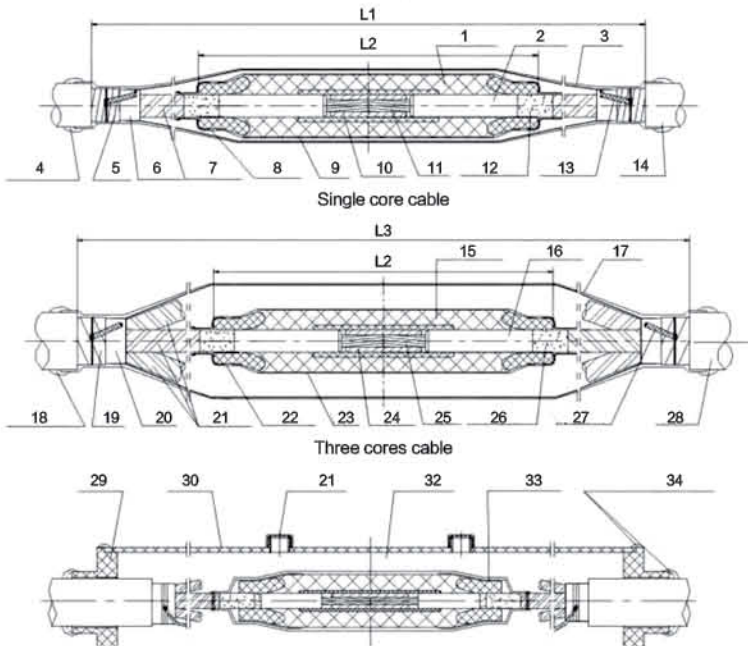
NO	Name	Model	Recommended cross section (mm ²)
1	10kV indoor termination	8.7/15kV-NLS-1,3	25-50
2			70-120
3			150-240
4			300-400
1	10kV indoor termination	8.7/15kV-WLS-1,3	25-50
2			70-120
3			150-240
4			300-400

10 10kV Cold Shrink Intermediate Joint ▶▶

Product Description

- This product is made of liquid silicone rubber, compared with solid silicone rubber elasticity is better, better reliability
- Waterproof shell is made of fiberglass, waterproof glue AB components
- The shielding lap is made of twisted copper mesh and copper braid and has passed the shielding short-circuit test.
- The factory withstand voltage test 39kV, 5min
- The product implements is the national standard GB/T12706.4.

NO	Joint/ (mm)	Note
L1	800	Wire stripping for three-core needed ≥ 2m
L2	370	
L3	1800	



- | | | | |
|-----------------------------|------------------------------|--------------------------|---------------------------|
| 1.Prefabricated insulators | 10.Connect tube | 19.Armor | 28.Outer sheath |
| 2.Core insulation | 11.Core Outer | 20.Inner sheath | 29.End shell |
| 3.Heat shrink tubing | 12.Semi-conductive layer | 21.Three-phase shielding | 30.Middle shell |
| 4.Rubber self-adhesive tape | 13.Copper net | 22.Semi-Conductive Tape | 31.Sprue |
| 5.Armor | 14.Outer sheath | 23.Copper net | 32.Insulation tap |
| 6.Inner sheath | 15.Prefabricated insulators | 24.Connect tube | 33.Joint body |
| 7.Copper screen | 16.Core insulation | 25.Core Outer | 34.PVC tap、anti-water tap |
| 8.Semi-Conductive Tape | 17.Heat shrink tubing | 26.Semi-conductive layer | epoxy paste |
| 9.Copper net | 18.Rubber self-adhesive tape | 27.Copper net | |



8.1/15kV Fully Cold Shrinkable Intermediate Joint Installation Profile

- 1.Armor
- 2.Body of intermediate joint
- 3.Copper mesh
- 4.Anti-watertap
- 5.Stress cone
- 6.Outer sheath
- 7.Connect tube
- 8.Shield ding tube
- 9.Steel-coated
- 10.Constant spring Stress cone

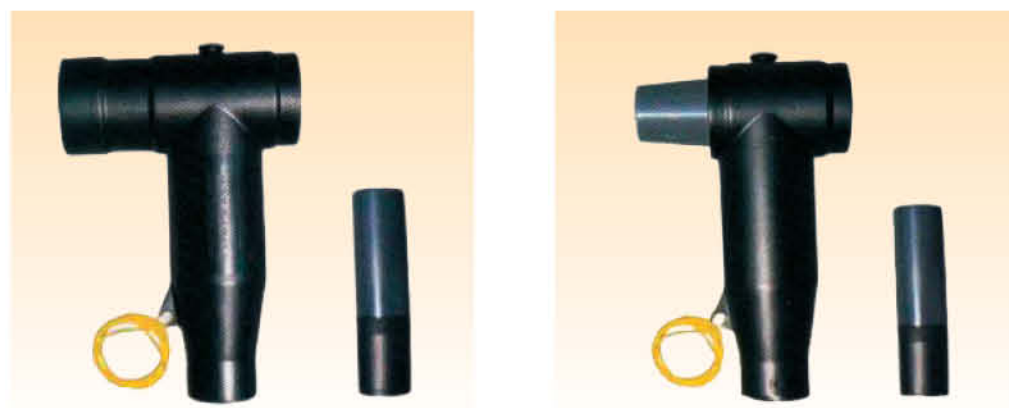
No.	Name	Model	Recommended cross section (mm ²)
1	10kV intermediate joint	8.7/15kV-JLS-1,3	25-50
2			70-120
3			150-240
4			300-400

Elbow Type Head ▶▶

IEC European Cable Accessory Series 15–36kV Shielded Front/rear Connectors

▶ Product Description

Shielded front/rear connectors are used in cable branch boxes, RMU, box substation, etc. to ensure that this product can realize multi-branch power supply. It is used for $\phi 46/\phi 56/91.5/M16$ casing fully sealed connection, and is suitable for cable cross-section 25~400mm².



15–24kV Elbow/Inline Connectors

▶ Product Description

Elbow and inline connectors are suitable for 24kV and 15kV electrical systems, for use on Euro RMU



European 250A Straight Plu

European 250A Elbow Plug

EEE American Cable Accessory Series 15kV Elbow Plugs

▶ Product description

American Elbow Heads are used for high voltage electrical connections to American box transformers, RMU, cable branch boxes, buried transformers and other electrical equipment. Interface composite IEEE386, 200A bushing design standard.



15kV Elbow Plug

25kV Elbow Plug

15kV PT plug

▶ Product Description

The PT plug is used to provide the fully insulated, fully shielded, and fully sealed connection for high voltage end of transducer which provides power supply to an electric operating mechanism or a metering protection device (the primary winding has a fuse protection device and is equipped with a cable plug socket; the bushing socket size conforms to the 25kV 200A bushing size standard of IEEE Std 386).

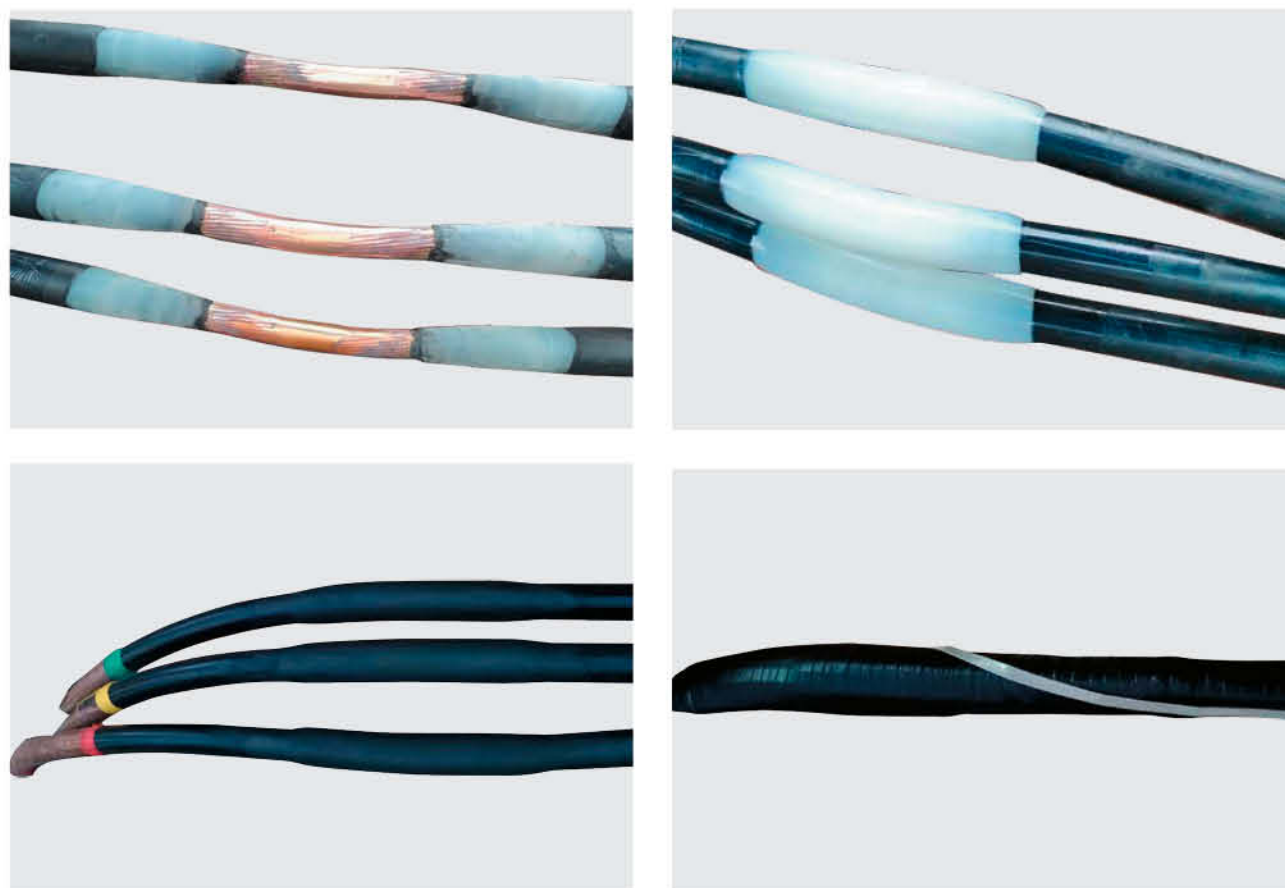


15kV PT Plug

12 Welding Splice ▶▶

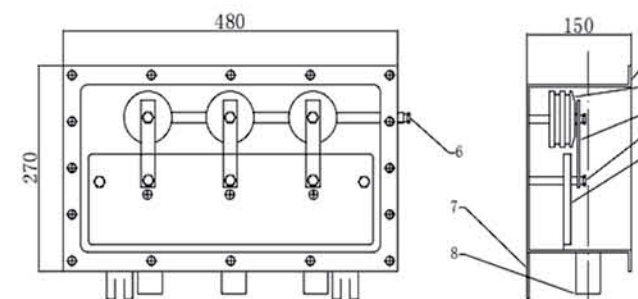
▶ Product Description

- As the name suggests, the conductor is melted at high temperature so that the ends of the conductor are fused into one, compared with crimping, there is no change in structural dimensions, higher tensile strength and other advantages. Suitable for 10–35kV cables.
- When the splice welding is completed, using the form of winding through high temperature vulcanization in order to restore the cable's inner semiconducting shield, insulation, outer semi conducting shield; metal shielding, steel tape, sheath in accordance with the installation of the ordinary way to restore.
- The welding splice can nearly restore the cable size in terms of dimensions and performs better in terms of waterproof performance, which is suitable for environments with relatively harsh conditions of humidity.



13 Grounding Box ▶▶

▶ Protective Grouding Box



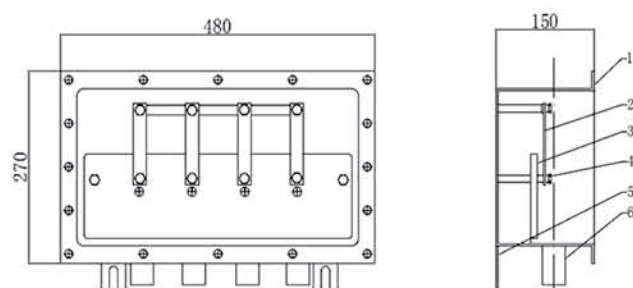
- 1、 Sealing gasket
- 2、 Protector
- 3、 Earthing body connecting plate
- 4、 Core connectors
- 5、 Insulation plate
- 6、 Ground connectors
- 7、 Mounting bracket
- 8、 Inlet pipe



▶ Feature

- 110kV protective earthing boxes are used in high voltage power systems to protect the outer sheath insulation of three-phase high voltage cables from over voltage damage.
- The product internal main protector BHQ-2 cable sheath protector, the overall structure of the product is simple, sealed and reliable.
- The product shell and internal main structure are stainless steel welded, and the insulating parts are treated with moisture-proof.
- Conductor connectors are all tin-plated and crimped with bolts, which is simple to install and easy to disengage between the metal sheath of the cable and the protector during the preventive test.
- The box can be installed outdoor and is not affected by unusual weather

Direct Grounding Box



1. Sealing gasket
2. Conductor connection plate
3. Insulation board
4. Wire core connectors
5. Mounting bracket
6. Inlet pipe



Feature

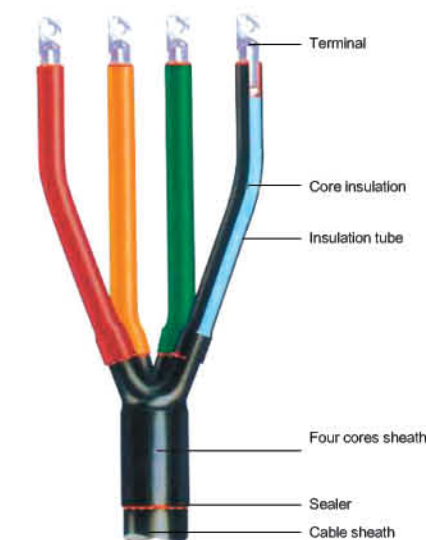
- 110kV cable sheath 3-phase 3-wire direct earthing box is suitable for direct earthing connection of metal sheath of 3-phase single-circuit high-voltage cables.
- The product internal main protector BHQ-2 cable sheath protector, the overall structure of the product is simple, reliable sealing.
- The product shell and internal main structure is welded stainless steel, and the insulating parts are treated with moisture-proof.
- Conductor connectors are all tinned and crimped with bolts, which is simple to install and easy to disengage between the metal sheath of the cable and the protector during the preventive test.
- The protective earthing box can be installed in outdoor operation and is not affected by Unusual Weather

Heat-Shrinkable Cable Accessories

0.6/1kV Heat Shrinkable Cable Accessories Products

Product Description

- This product is made of rubber-plastic composite material.
- When installing, it can be sprayed by flame or heat gun and it can be shrunk by utilizing the elastic memory property of polymer;
- Low-voltage thermoplastic accessories are tested with reference to cable standard GBT12706.1;
- The products are divided into 1 core to 5 cores, applicable cross section 25-500mm².

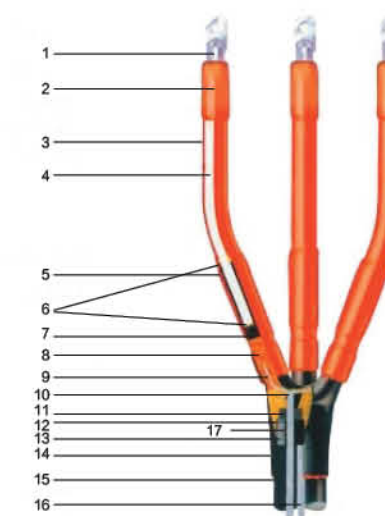


3.6/6-8.7/15kV Heat Shrinkable Cable Accessories Products

Product Description

- This product is made of rubber-plastic composite material.
- When installing, you can use flame or heat gun to spray baking, that is, you can utilize the elastic memory performance of polymer contraction;
- Industrial frequency withstand voltage test refer to GB/712706.4 39kV, 5min;
- The product consists of insulating pipe, semi-conducting pipe, stress pipe, sheath pipe, branch sleeve, sheds and so on.

- | | |
|-------------------------------|--------------------------|
| 1.Terminal | 10.Padded cone |
| 2.Sealing tube | 11.Inner shielding |
| 3.Insulation tube | 12.Filler gel |
| 4.Core Insulation | 13.Copper armor |
| 5.Stress control tube | 14.Three cores ferrule |
| 6.Stress relief gel | 15.Outer sheath |
| 7.Peninsular layer | 16.Copper armor earthing |
| 8.Copper shield | 17.Heat shrink ring |
| 9.Copper Shielded Ground Wire | |



8.7/15kV three-core termination structure diagram

12/20-26/35kv Heat Shrinkable Cable Accessories Products



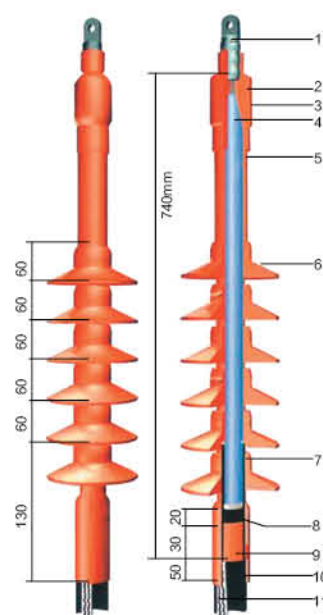
26/35kV single-core intermediate connection supporting materials

- 1.Semiconductor
- 2.Sheath tube
- 3.Insulation tube
- 4.Silicone paste
- 5.J-30 self-adhesive tape
- 6.Stress control tapes
- 7.Semi-conductor tape
- 8.Filler glue seal
- 9.Subsidiary material
- 10.Copper mesh
- 11.Earthing line



26/35kV single-core outdoor termination supporting materials

- 1.Insulation tube
- 2.Sealing tube
- 3.Standpipe
- 4.Subsidiary material
- 5.Single hole shed
- 6.Sealing glue
- 7.Earthing line
- 8.Stress control tapes
- 9.Silicone paste



26/35kV single-core outdoor termination in stallion drawing

- 1.Terminal
- 2.Sealing glue
- 3.Sealing tube
- 4.Core insulation
- 5.Insulation tube
- 6.Sheds molds
- 7.Stress control tap
- 8.Semi-conducting layer
- 9.Copper shielding
- 10.Cable sheath
- 11.Earthing line

Heat Shrink Climbing Distance Grower

Product Description

- Insulated environmentally friendly heat-shrinkable sheds molds resistant to electro-carbon traces of polyolefin materials made of, coated with anti-electro-carbon traces, weather-resistant sealant.
- Suitable for switchgear and other high-voltage power equipment;
- For all kinds of outdoor rod-type pillar insulators and insulating bushings;
- For outdoor termination of high voltage cables to increase creepage distance;
- With high leakage starting trace index, it can effectively avoid the occurrence of dirty flash and creepage of outdoor cable termination

