

Jonsson OVERHEAD LINE EQUIPMENT

- COMPOSITE INSULATOR
- SURGE ARRESTER
- SURGE PROTECTIVE DEVICE
- FUSE CUTOUT
- FUSE LINKS
- HIGH VOLTAGE HRC FUSE
- LOW VOLTAGE FUSE
- DISCONNECTOR SWITCH
- POLYESTER RESIN INSULATOR
- PORCELAIN INSULATOR
- DISTRIBUTION TRANSFORMER
- GUY GRIP & DEAD END GRIP
- EARTH ROD & LUGS
- INSULATION PIERCING CONNECTORS&CABLE GLAND
- PARALLEL-GROOVE CLAMP
- STRAIN & SUSPENSION CLAMP
- OVERHEAD LINE EQUIPMENT
- LIGHTING

SARAH
MANUFACTURED BY SARAH ELECTRIC

Jonsson

SARAH



Company introduction

Yueqing Sarah Electric Technology Co Ltd, Jonsson Overhead Line Equipment Specializes in the design and manufacture of Surge Arrestors, Drop Out Fuse Units (Fuse Cutout), Composite Insulators, Porcelain Insulators, Surge Protection Devices (SPD), Disconnect Switches, Fuse and Fuse gear, metal enclosures and a complete range of low and medium voltage equipment.

Sarah Electric Technology Co Ltd, Jonsson Overhead Line Equipment is approved by China National Test Centre for quality supervision and testing of insulators and surge arrestors. Tested by China National High Voltage Apparatus Quality Supervision Testing Centre.

Sarah Electric Technology Co Ltd, Jonsson Overhead Line Equipment together with the management of the company recognizes the importance of having a proactive Quality Management System in order for the company to have satisfied customers allowing for continuous growth and improvement. Therefore, we are committed to the implementation and maintenance of Quality Systems in accordance with the requirements of our customers and the ISO 9001:2000 Quality Standards, which will be reviewed periodically to ensure continuing suitability.

Sarah Electric Technology Co Ltd, Jonsson Overhead Line Equipment provides high quality products where customer satisfaction can be ensured by adherence to the performance criteria in accordance with our customers' specifications, technical and delivery requirements. Our Quality Policy is thus directed towards achievement of these objectives.

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国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: FZSW-12/10
产品名称: Line post composite insulator
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Type tests
检验类别: Type tests

中国西安 2008 年 12 月 28 日
XIAN P.R.CHINA 28 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: FZSW-24/8
产品名称: Line post composite insulator
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Type tests
检验类别: Type tests

中国西安 2008 年 12 月 28 日
XIAN P.R.CHINA 28 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: FZSW-36/6
产品名称: Line post composite insulator
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Type tests
检验类别: Type tests

中国西安 2008 年 12 月 27 日
XIAN P.R.CHINA 27 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: FZSW-66/10
产品名称: Line post composite insulator
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Type tests
检验类别: Type tests

中国西安 2008 年 12 月 29 日
XIAN P.R.CHINA 29 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: YH10W-12 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
产品名称: YH10W-12 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
Client: Yueqing Sarah Electric Technology Co., Ltd
客户名称: Yueqing Sarah Electric Technology Co., Ltd
Classification: Type Test
检验类别: Type Test

中国西安 2007 年 11 月 28 日
XIAN P.R.CHINA 28 Nov. 2007

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: YH10W-15 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
产品名称: YH10W-15 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
Client: Yueqing Sarah Electric Technology Co., Ltd
客户名称: Yueqing Sarah Electric Technology Co., Ltd
Classification: Type Test
检验类别: Type Test

中国西安 2007 年 11 月 28 日
XIAN P.R.CHINA 28 Nov. 2007

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: YH10W-24 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
产品名称: YH10W-24 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
Client: Yueqing Sarah Electric Technology Co., Ltd
客户名称: Yueqing Sarah Electric Technology Co., Ltd
Classification: Type Test
检验类别: Type Test

中国西安 2007 年 12 月 28 日
XIAN P.R.CHINA 28 Dec. 2007

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: YH10W-33 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
产品名称: YH10W-33 Polymeric Housed Metal Oxide Surge Arrester Without Gaps
Client: Yueqing Sarah Electric Technology Co., Ltd
客户名称: Yueqing Sarah Electric Technology Co., Ltd
Classification: Type Test
检验类别: Type Test

中国西安 2007 年 12 月 28 日
XIAN P.R.CHINA 28 Dec. 2007

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: CS 100 S16 B16-110/500 CS 70 S16 B16-110/500 Composite insulator for high voltage overhead lines
产品名称: CS 100 S16 B16-110/500 CS 70 S16 B16-110/500 Composite insulator for high voltage overhead lines
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Prototype test
检验类别: Prototype test

中国西安 2008 年 12 月 28 日
XIAN P.R.CHINA 28 Dec. 2008

Jonsson

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国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: CS 100 S16 B16-130/1000 CS 70 S16 B16-130/1000 Composite insulator for high voltage overhead lines
产品名称: CS 100 S16 B16-130/1000 CS 70 S16 B16-130/1000 Composite insulator for high voltage overhead lines
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Prototype test
检验类别: Prototype test

中国西安 2008 年 12 月 28 日
XIAN P.R.CHINA 28 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: CS 100 S16 B16-230/1200 CS 70 S16 B16-230/1200 Composite insulator for high voltage overhead lines
产品名称: CS 100 S16 B16-230/1200 CS 70 S16 B16-230/1200 Composite insulator for high voltage overhead lines
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Prototype test
检验类别: Prototype test

中国西安 2008 年 12 月 27 日
XIAN P.R.CHINA 27 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: CS 100 S16 B16-410/2000 CS 70 S16 B16-410/2000 Composite insulator for high voltage overhead lines
产品名称: CS 100 S16 B16-410/2000 CS 70 S16 B16-410/2000 Composite insulator for high voltage overhead lines
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Prototype test
检验类别: Prototype test

中国西安 2008 年 12 月 23 日
XIAN P.R.CHINA 23 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: CS 100 S16 B16-600/3200 CS 70 S16 B16-600/3200 Composite insulator for high voltage overhead lines
产品名称: CS 100 S16 B16-600/3200 CS 70 S16 B16-600/3200 Composite insulator for high voltage overhead lines
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Prototype test
检验类别: Prototype test

中国西安 2008 年 12 月 23 日
XIAN P.R.CHINA 23 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: CS 100 S16 B16-600/4600 CS 70 S16 B16-600/4600 Composite insulator for high voltage overhead lines
产品名称: CS 100 S16 B16-600/4600 CS 70 S16 B16-600/4600 Composite insulator for high voltage overhead lines
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Prototype test
检验类别: Prototype test

中国西安 2008 年 12 月 23 日
XIAN P.R.CHINA 23 Dec. 2008

国家绝缘子避雷器质量监督检验中心
CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告
TEST REPORT

Object: YH10W-12 Oxide Zone Zinc Lightning Arrester
产品名称: YH10W-12 Oxide Zone Zinc Lightning Arrester
Client: YUEQING SARAH
客户名称: ELECTRIC TECHNOLOGY CO., LTD
Classification: Type Test
检验类别: Type Test

中国西安 2008 年 12 月 23 日
XIAN P.R.CHINA 23 Dec. 2008

TEST REPORT

APPARATUS: SJG-12/100-8
OUTDOOR ALTERNATING-CURRENT HIGH-VOLTAGE DROP-OUT FUSES
CLIENT: YUEQING SARAH ELECTRIC TECHNOLOGY CO., LTD
TEST TYPE: TYPE TEST

CHINA NATIONAL HIGH VOLTAGE APPARATUS QUALITY SUPERVISION TESTING CENTER
XI'AN HIGH VOLTAGE APPARATUS RESEARCH INSTITUTE
HIGH VOLTAGE APPARATUS TESTING LABORATORY

TEST REPORT

APPARATUS: SJG-24/100-6.3
OUTDOOR ALTERNATING-CURRENT HIGH-VOLTAGE DROP-OUT FUSES
CLIENT: YUEQING SARAH ELECTRIC TECHNOLOGY CO., LTD
TEST TYPE: TYPE TEST

CHINA NATIONAL HIGH VOLTAGE APPARATUS QUALITY SUPERVISION TESTING CENTER
XI'AN HIGH VOLTAGE APPARATUS RESEARCH INSTITUTE
HIGH VOLTAGE APPARATUS TESTING LABORATORY

TEST REPORT

REPORT NO.: QY 10-1137
NAME OF SAMPLE: Fuse-Switch Disconnecter
CLIENT: Yueqing Sarah Electric Technology Co., Ltd
TEST CATEGORY: Fused Test

Inspection Center of Products' Quality of Low Voltage Electrical Apparatus in Zhejiang Province



COMPOSITE INSULATOR
01-11



SURGE ARRESTER
12-22



SURGE PROTECTIVE DEVICE
23



FUSE CUTOUT
24-33



FUSE LINKS
34



HIGH VOLTAGE HRC FUSE
35



LOW VOLTAGE FUSE
36



DISCONNECTOR SWITCH
37-38



POLYESTER RESIN INSULATOR
39-41



PORCELAIN INSULATOR
42-47



DISTRIBUTION TRANSFORMER
48-49



GUY GRIP & DEAD END GRIP
50-52



EARTH ROD & LUGS
53-54



INSULATION PIERCING CONNECTORS
CABLE GLAND
55-57



PARALLEL-GROOVE CLAMP
58-59



STRAIN & SUSPENSION CLAMP
60-65



OVERHEAD LINE EQUIPMENT
66-80



LIGHTING
81

COMPOSITE INSULATOR

Manufactured By Sarah Electric



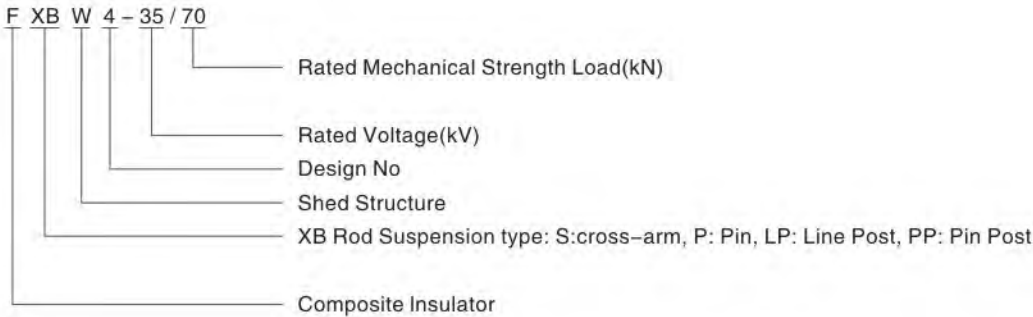
Product Introduction

SARAH/JONSSON HV insulators are manufactured from fibreglass rod core, to which the end fittings (socket, ball, clevis etc according to IEC 120 and ANSI C 29.2 standards, in zinc hot dip forged steel) are fixed and later applied to set the insulating covered in silicone rubber, obtaining a high quality insulator: compact, light, with great mechanical and environmental resistance and excellent closing (immune to moisture penetration to the core).

The main advantages with the use of the HV polymeric insulator Balestro, SARAH/JONSSON series are:

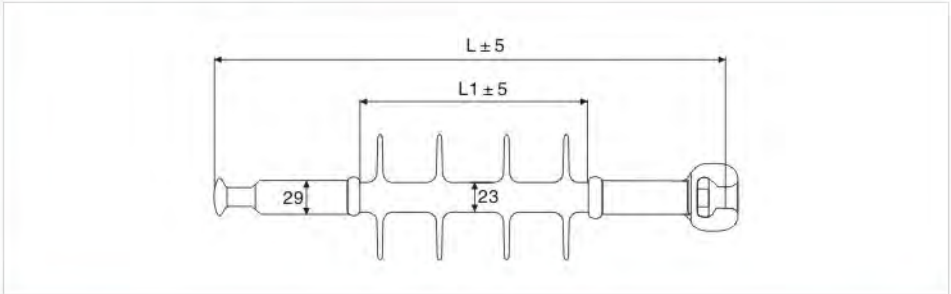
- Compact sizes, resulting in lighter insulators than the conventional (it reduces the weight up to 90%), reducing the cost of the structures, the transportation and storage, the handling of installation etc.
- Immunity to vandalism. The compression of the fitting to the fibreglass core gives a high lasting tensile strength without significant changes.
- Excellent environmental performance, mainly in places with a high pollution rate due to the silicone rubber covering performance characteristics. The hydrophobicity gives high superficial resistance and even in rainy conditions, the formation of continuous layers of water, dry channels and arcs in the surface of the insulator are prevented. This reduces the risk of flashover and tracking. Another important property of silicone rubber is its ability to transfer its hydrophobicity to pollution deposits on the surface of the covering, keeping the same in polluted conditions.
- High resistance to tracking, erosion and also to growth of fungus.
- High thermal stability, not affected even under high temperature conditions, keeping its electric characteristics.
- Low toxicity.
- The silicone rubber properties maintain its characteristics for a long time. This does not happen with the other polymeric composite.

Mode and Implication

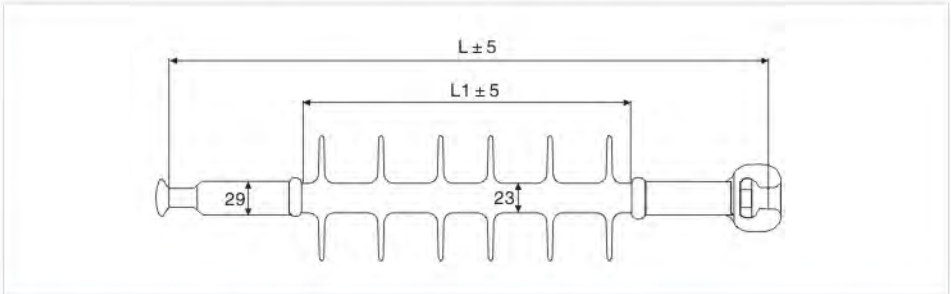




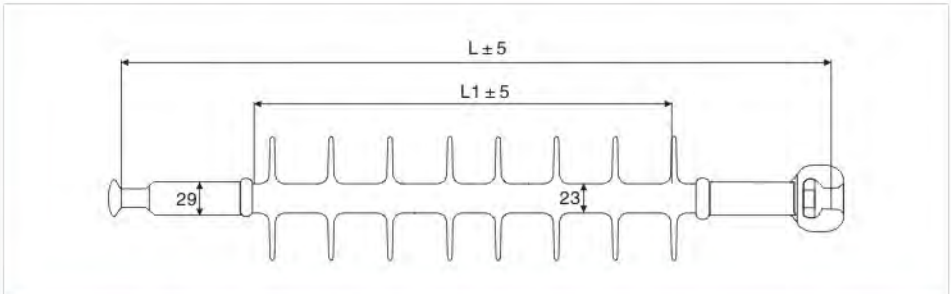
(Long Rod) Suspension Composite Insulator



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ11-12 | 12-15 | 70/100 | 355 | 169 | 440 | 95 | 45 |
| SJ16-12 | 12-15 | 70/100 | 345 | 169 | 440 | 95 | 45 |



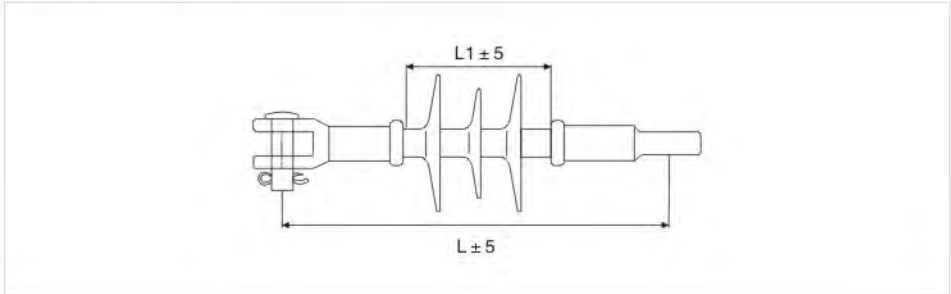
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ12-24 | 24-27 | 70/100 | 446 | 261 | 690 | 185 | 95 |
| SJ15-24 | 24-27 | 70/100 | 436 | 261 | 690 | 185 | 95 |



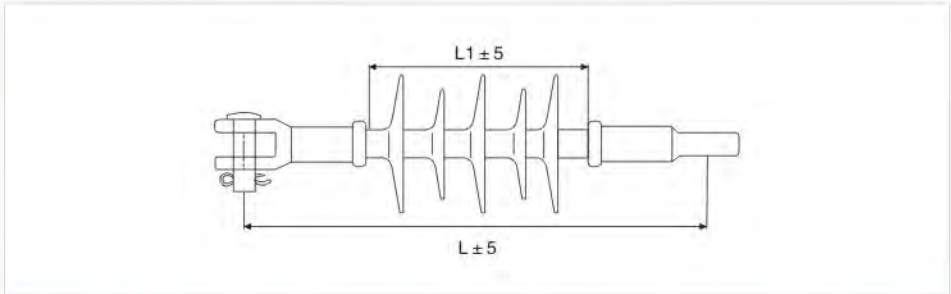
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ13-35 | 33-38 | 70/100 | 538 | 353 | 900 | 230 | 105 |
| SJ14-35 | 33-38 | 70/100 | 528 | 353 | 900 | 230 | 105 |



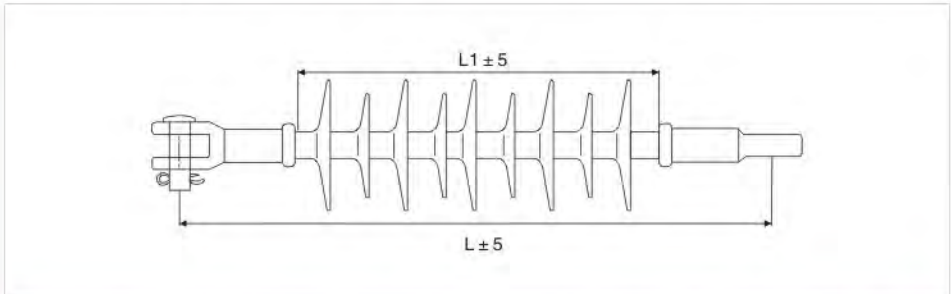
(Long Rod) Suspension Composite Insulator



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ17-12 | 12-15 | 70/100/120 | 345 | 155 | 465 | 95 | 45 |
| SJ12-12 | 12-15 | 70/100/120 | 355 | 155 | 465 | 95 | 45 |



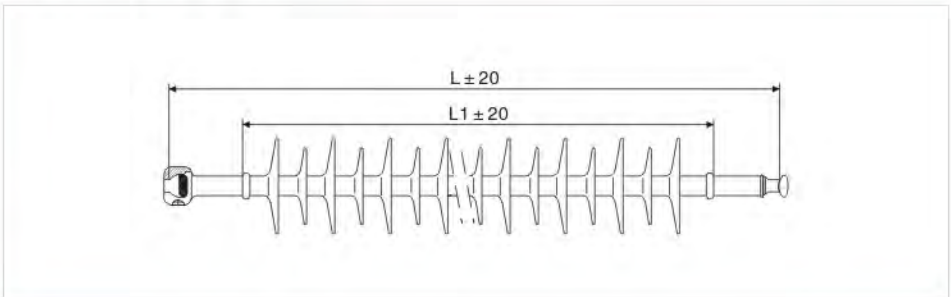
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ18-24 | 24-28 | 70/100/120 | 435 | 245 | 755 | 185 | 95 |
| SJ11-24 | 24-28 | 70/100/120 | 445 | 245 | 755 | 185 | 95 |



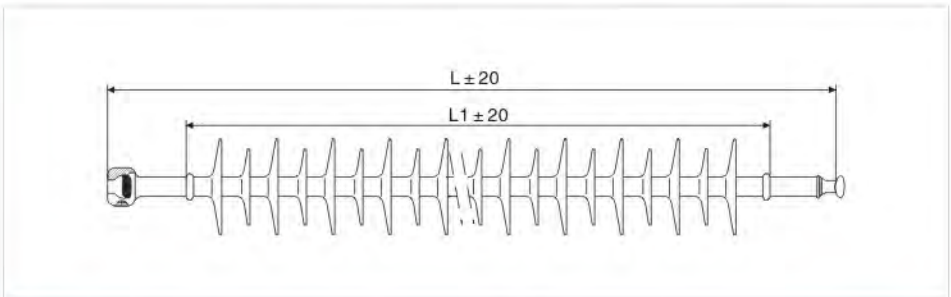
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ19-35 | 33-38 | 70/100/120 | 615 | 425 | 1300 | 230 | 105 |
| SJ10-35 | 33-38 | 70/100/120 | 625 | 425 | 1300 | 230 | 105 |



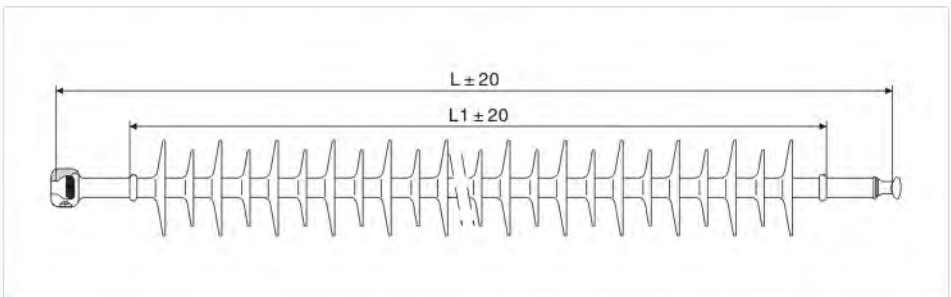
(Long Rod) Suspension Composite Insulator



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ119-66 | 66-72 | 100/120/160 | 900 | 680 | 2200 | 410 | 185 |
| SJ120-110 | 110-132 | 100/120/160 | 1240 | 1012 | 3200 | 550 | 230 |



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ121-145 | 132-145 | 100/120/160 | 1660 | 1440 | 4600 | 600 | 260 |
| SJ122-220 | 220-240 | 120/160/210 | 2160 | 1930 | 6300 | 1000 | 395 |



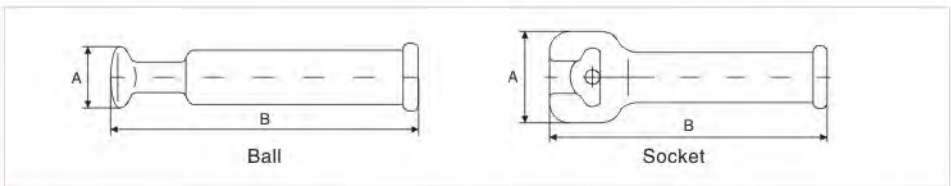
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ123-330 | 310-350 | 120/160/210 | 2990 | 2600 | 8600 | 1425 | 570 |
| SJ124-500 | 500-550 | 120/160/210 | 4080 | 3730 | 12250 | 2250 | 740 |



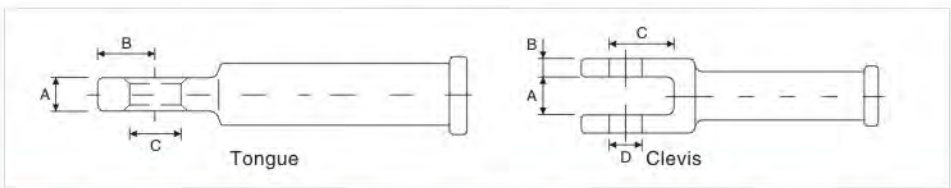
Insulator End Fitting



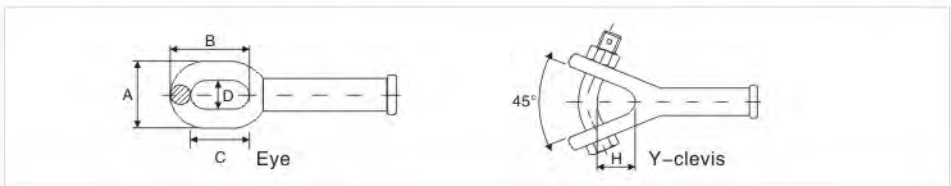
| Rated Voltage | Dimensions(mm) | | Weight(kg) |
|---------------|----------------|----------|------------|
| | D | A | |
| 220KV | 260 | Φ44(Φ29) | 0.70 |
| 330KV | 330 | Φ44(Φ29) | 0.95 |
| 500KV | 400 | Φ44(Φ29) | 1.4 |



| Code | 70kN | 120kN | 160kN | 210kN |
|------------|-------------------|-------------------|-------------------|-------------------|
| BALL (B) | Size 16 IEC 60120 | Size 16 IEC 60120 | Size 20 IEC 60120 | Size 20 IEC 60120 |
| SOCKET (S) | Size 16 IEC 60120 | Size 16 IEC 60120 | Size 20 IEC 60120 | Size 20 IEC 60120 |



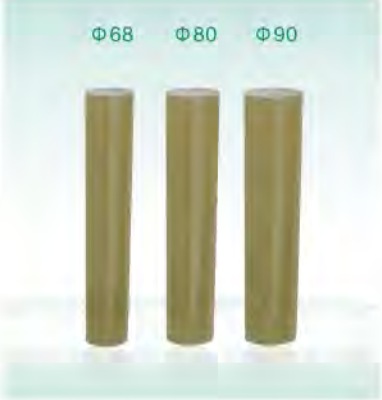
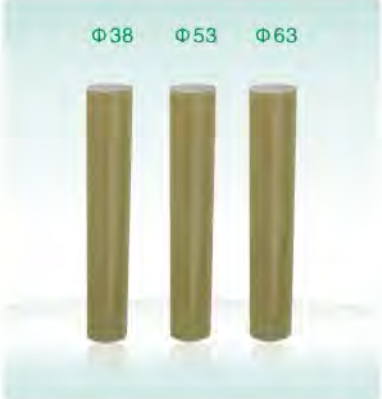
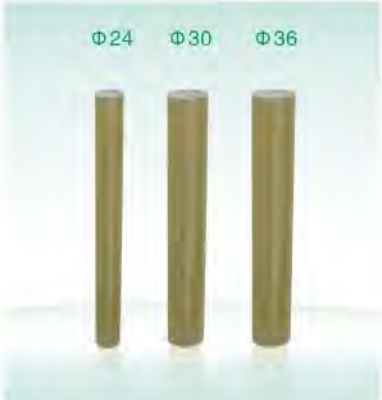
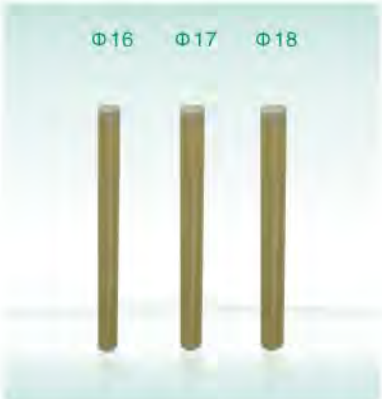
| Code | 70kN | 120kN | 160kN | 210kN |
|------------|---------------------------|--------------------------|--------------------------|------------------------|
| TONGUE (T) | A=17 B=20 C=17.5 | A=16 B=27 C=24 | A=16 B=27 C=24 | A=22 B=26 C=24 |
| CLEVIS (C) | A=18,B=8 C=34.8,D=17.5 | A=23,B=11.5 C=38,D=20 | A=23,B=11.5 C=38,D=20 | A=26,B=15 C=43,D=22 |



| Code | 70kN | 120kN | 160kN | 210kN |
|--------------|------------------------|------------------------|------------------------|------------------------|
| EYE (E) | A=44,B=45 C=31,D=20 | A=62,B=70 C=52,D=26 | A=62,B=70 C=52,D=26 | A=70,B=74 C=52,D=26 |
| Y-CLEVIS (Y) | H=40 | H=40 | H=40 | H=40 |



Insulator Rod



E-Glass Rod (Vacuum Pull-Extruded Resin Reinforced Fiber Glass Rod)

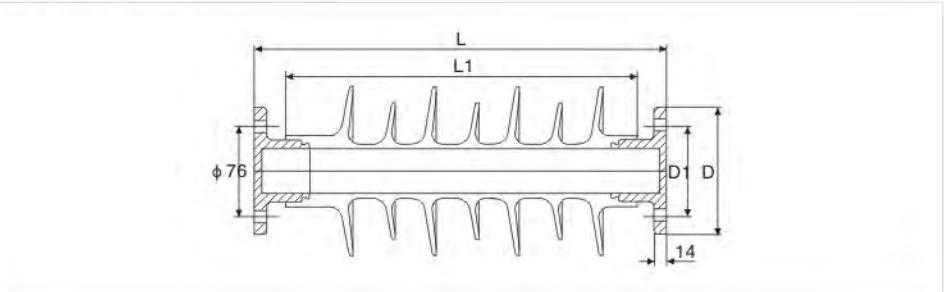
| No | Parameter | Unit | Specification |
|----|---|--|---------------|
| 1 | (20 ± 2°C) Density At (20 ± 2°C) | g/cm3 | ≥ 2.0 |
| 2 | (20 ± 2°C, 24h) Water Absorbion Rate At (20 ± 2°C, 24h) | % | ≤ 0.05 |
| 3 | Tensile Strength | Mpa | ≥ 1690 |
| 4 | Bending Strength | Mpa | ≥ 1100 |
| 5 | Dry Penetration Test | Min | ≥ 50 |
| 6 | Water Difussion Test (1%Nacl,Boiling For 100h 12kv/1 Min) | μ A | < 10 |
| 7 | Shearing Strength Along Laminals | Mpa | ≥ 50 |
| 8 | Volume Resistivity(140°C,96h) | Ω · M | ≥ 1010 |
| 9 | DC Withstand Voltage(10 Mins) | KV | ≥ 50 |
| 10 | Lightning Surge Withstand Voltage(100kV,10mm) | Times | ≥ 5 |
| 11 | Bending Strength At Heating Conditions | Mpa/150°C | ≥ 350 |
| 12 | Stress Corrosion(1Mol/1HN3,at 67% Stress) | h | ≥ 7200h |
| 13 | Torsion Strength | Mpa | ≥ 800 |
| 14 | Dimension | Φ 16, Φ 17, Φ 18, Φ 24, Φ 30 Φ 36, Φ 38, Φ 53, Φ 63, Φ 68 Φ 80, Φ 90 | |

ECR Rod (Vacuum Pull-Extruded Thermo-Resistant Acid-Resistant Glass Rod)

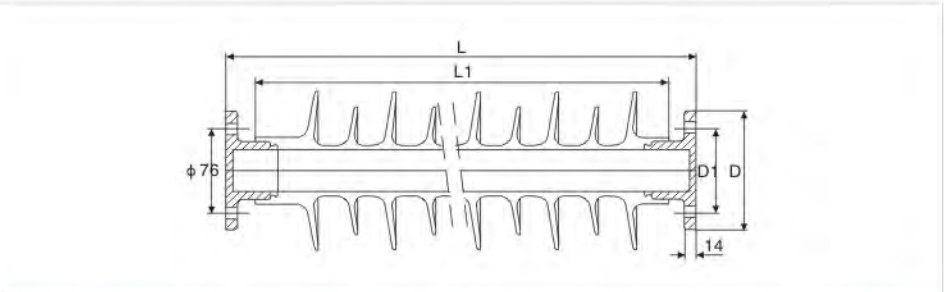
| No | Parameter | Unit | Specification |
|----|---|--|---------------|
| 1 | (20 ± 2°C) Density At (20 ± 2°C) | g/cm3 | ≥ 2.0 |
| 2 | (20 ± 2°C, 24h) Water Absorbion Rate At (20 ± 2°C, 24h) | % | ≤ 0.05 |
| 3 | Tensile Strength | Mpa | ≥ 1690 |
| 4 | Bending Strength | Mpa | ≥ 1100 |
| 5 | Dry Penetration Test | Min | ≥ 50 |
| 6 | Water Difussion Test (1%Nacl,Boiling For 100h 12kv/1 Min) | μ A | < 10 |
| 7 | Shearing Strength Along Laminals | Mpa | ≥ 50 |
| 8 | Volume Resistivity(140°C,96h) | Ω · M | ≥ 1010 |
| 9 | DC Withstand Voltage(10 Mins) | KV | ≥ 50 |
| 10 | Lightning Surge Withstand Voltage(100kV,10mm) | Times | ≥ 5 |
| 11 | Bending Strength At Heating Conditions | Mpa/150°C | ≥ 350 |
| 12 | Stress Corrosion(1Mol/1HN3,at 67% Stress) | h | ≥ 7200h |
| 13 | Torsion Strength | Mpa | ≥ 800 |
| 14 | Dimension | Φ 16, Φ 17, Φ 18, Φ 24, Φ 30 Φ 36, Φ 38, Φ 53, Φ 63, Φ 68 Φ 80, Φ 90 | |



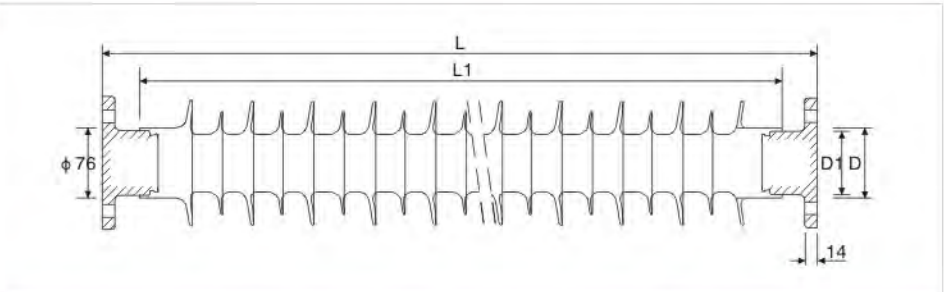
Vertical Line Post Composite Insulator



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Flanges Plate(mm) | | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------|----|-------------------------------------|-------------------------------------|
| | | | | | | D | D1 | | |
| SJI25-12 | 10-15 | 8/10/12.5 | 205 | 125 | 360 | 100 | 76 | 75 | 42 |
| SJI26-24 | 24-27 | 8/10/12.5 | 340 | 250 | 850 | 100 | 76 | 150 | 65 |



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Flanges Plate(mm) | | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------|-----|-------------------------------------|-------------------------------------|
| | | | | | | D | D1 | | |
| SJI27-36 | 35-38 | 8/10/12.5 | 415 | 370 | 1050 | 100 | 76 | 185 | 95 |
| SJI28-66 | 66-72 | 8/10/12.5 | 795 | 620 | 2500 | 160 | 127 | 410 | 185 |



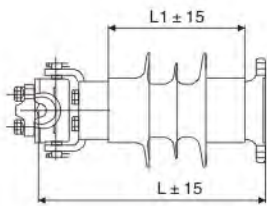
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Flanges Plate(mm) | | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------|-----|-------------------------------------|-------------------------------------|
| | | | | | | D | D1 | | |
| SJI29-110 | 110-145 | 8/10/12.5 | 1200 | 1020 | 2800 | 160 | 127 | 500 | 230 |
| SJI30-220 | 220-240 | 8/10 | 2400 | 2040 | 7600 | 160 | 127 | 1000 | 395 |



Vertical Line Post Composite Insulator



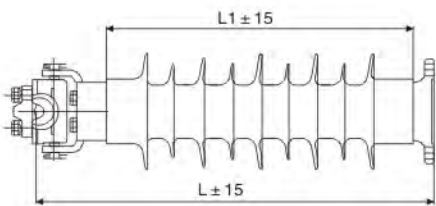
SJ159-12 SJ160-24



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ159-12 | 10-15 | 12.5 | 283 | 148 | 355 | 75 | 42 |
| SJ160-24 | 24-27 | 8/12 | 435 | 300 | 850 | 150 | 65 |



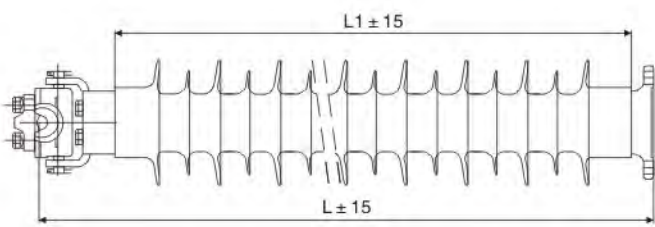
SJ161-35 SJ162-66



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ161-35 | 35-38 | 6/8/12 | 505 | 369 | 1050 | 185 | 95 |
| SJ162-66 | 66-72 | 6/8/12 | 845 | 710 | 1720 | 410 | 185 |



SJ163-132 SJ164-230



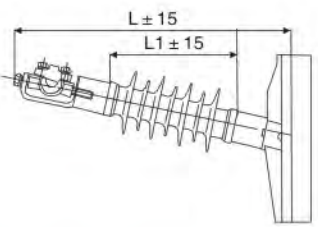
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ163-132 | 110-145 | 6/8/12 | 1345 | 1210 | 3210 | 600 | 300 |
| SJ164-230 | 220-245 | 3 | 2500 | 2310 | 6200 | 1000 | 395 |



Horizontal Line Post Composite Insulator



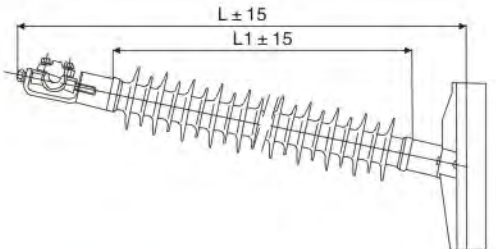
SJ143-12 SJ144-24



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ143-12 | 10-15 | 12.5 | 380 | 148 | 355 | 75 | 42 |
| SJ144-24 | 24-27 | 8/12 | 485 | 300 | 850 | 150 | 65 |



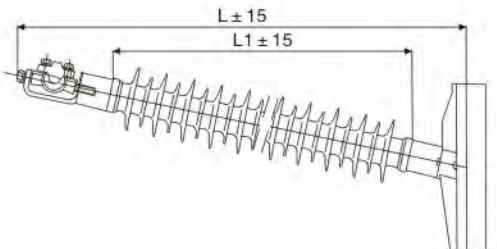
SJ145-35 SJ146-66



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ145-35 | 35-38 | 6/8/12 | 555 | 369 | 1050 | 185 | 95 |
| SJ146-66 | 66-72 | 6/8/12 | 960 | 650 | 1800 | 410 | 165 |



SJ147-132 SJ148-230



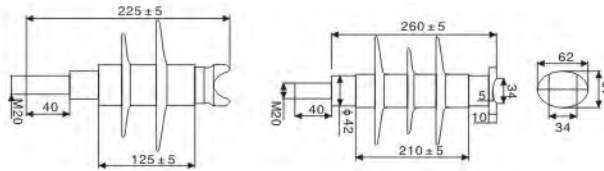
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length L(mm) | Min Arc Distance L1(mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|----------------------|-------------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ147-132 | 110-145 | 6/8/12 | 1450 | 1210 | 3210 | 600 | 300 |
| SJ148-230 | 220-245 | 3/6/8 | 2525 | 2285 | 6200 | 1260 | 650 |



Pin Composite Insulator



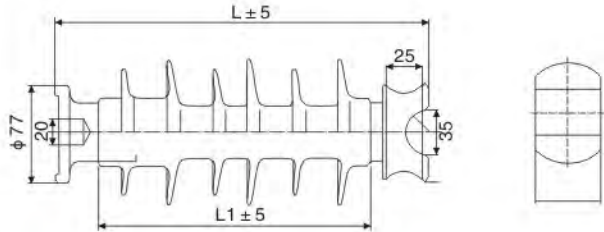
SJ131-12 SJ132-12



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length (mm) | Min Arc Distance (mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|---------------------|-----------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ131-12 | 12 | 8 | 225 | 125 | 305 | 75 | 42 |
| SJ132-12 | 12 | 8 | 260 | 210 | 400 | 105 | 42 |



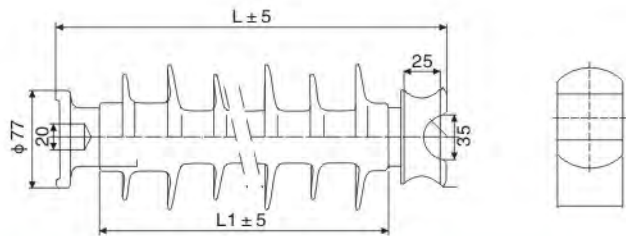
SJ133-15 SJ134-24



| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length (mm) | Min Arc Distance (mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|---------------------|-----------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ133-15 | 15 | 5 | 300 | 218 | 500 | 105 | 42 |
| SJ134-24 | 24 | 12.5 | 325 | 218 | 550 | 150 | 95 |



SJ135-36 SJ136-36



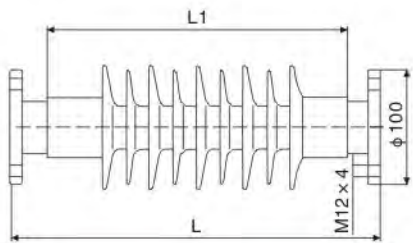
| Catalogue No | Rated Voltage (kV) | Specified Mechanical Load(kN) | Section Length (mm) | Min Arc Distance (mm) | Leakage Distance (mm) | Lightning Impulse Withstand BIL(kV) | Power Frequency Withstand (Wet)(kV) |
|--------------|--------------------|-------------------------------|---------------------|-----------------------|-----------------------|-------------------------------------|-------------------------------------|
| SJ135-36 | 36 | 10 | 370 | 288 | 740 | 185 | 110 |
| SJ136-36 | 36 | 10 | 440 | 370 | 1050 | 185 | 110 |



Standoff Insulator



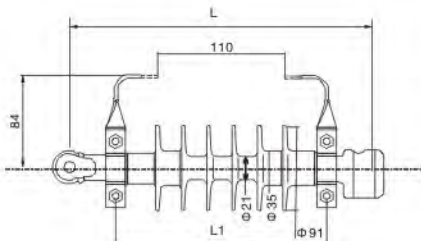
SJ160-15KV SJ154-24KV



| Model No | Bending Withstand Load(kN) | Minimum Nominal Creepage Distance (mm) | Section Length (mm) | Min Arc Distance (mm) | Power Frequency Voltage (Wet) (kV) | Lightning Impulse Withstand Voltage (kV) |
|------------|----------------------------|--|---------------------|-----------------------|------------------------------------|--|
| | | | L | L1 | | |
| SJ160-15kV | 6 | 465 | 215 | 177 | 42 | 75 |
| SJ154-24kV | 6 | 795 | 305 | 245 | 65 | 125 |



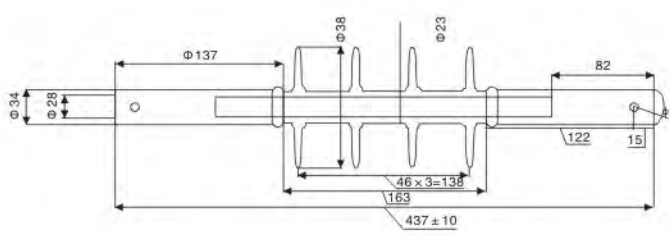
SJ153-24KV SJ159-36KV



| Model No | Bending Withstand Load(kN) | Minimum Nominal Creepage Distance (mm) | Section Length (mm) | Min Arc Distance (mm) | Power Frequency Voltage (Wet) (kV) | Lightning Impulse Withstand Voltage (kV) |
|------------|----------------------------|--|---------------------|-----------------------|------------------------------------|--|
| | | | L | L1 | | |
| SJ153-24kV | 70 | 540 | 310 | 216 | 65 | 125 |
| SJ159-36kV | 70 | 900 | 570 | 353 | 95 | 180 |



SJ156-24KV SJ158-24KV



| Model NO. | Rod Dia (mm) | Nominal System Voltage (kV) | Creepage Distance (mm) | Dry Lightning Impulse Withstand Voltage (kV) | Wet Power Frequency Withstand Voltage (kV) | Torsion (kNm) | Tensile Strength (kN) | Impulse Flashover Voltage (kV) | Flashover Distance (mm) | Radio Interference At 1kHz |
|------------|--------------|-----------------------------|------------------------|--|--|---------------|-----------------------|--------------------------------|-------------------------|----------------------------|
| SJ156-24kV | 17 | 24 | - | - | - | 0.5 | 70 | - | 190 | < 1 uV at 10kHz |
| SJ158-24kV | 17 | 24 | 420 | 90 | 70 | 0.5 | 4 | 145 | 190 | |



Application

The ZnO restorer is mainly used to protect distribution transformers, cable connectors and electrical equipment from being damaged by lightning, impulse voltage and operating over-voltage.

Normal service conditions

Ambient air temperature of -40°C to $+40^{\circ}\text{C}$.

Altitude above sea level 1000–2000m (the altitude should be indicated when ordered).

AC system frequency 50Hz or 60Hz.

The power frequency voltage of the arrester does not exceed arrester's continuous operating voltage.

Maximum wind speed does not exceed 35m/s.

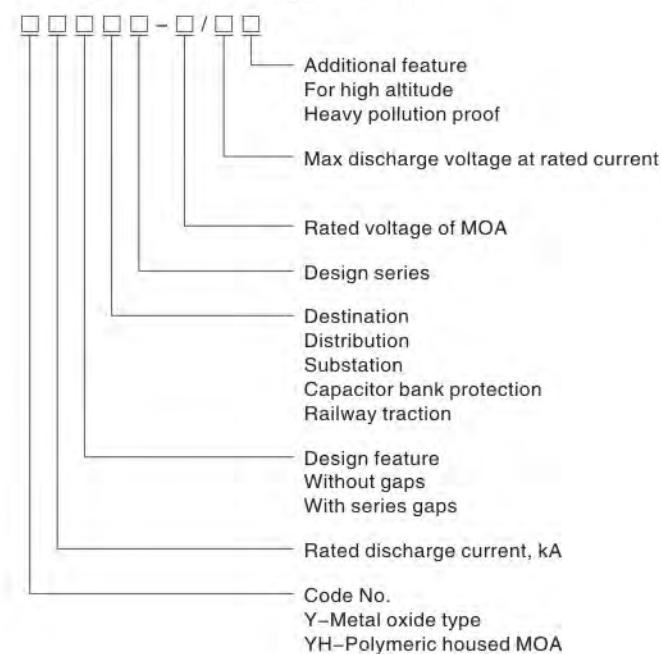
The earthquake intensity does not exceed 7 degrees.

The pollution levels should be indicated.

Technical performance

The technical performance of the product conforms to GB 11032-2000, IEC60099-4, EC37-199/CDV, standard technical requirements.

Designation Of Type Letters



注: 1、Metric systems used for dimensions.
2、Conversion metric system and British system.
1 in=2.5400cm 1ft=0.3048m 1yd=0.9144m



Surge Arrester Polymer Type



| Model No. | Rated Voltage | Rated Current | Current Impulse Residual Voltage | | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|----------------------------------|-------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | MCOV | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | | | kV(rms) | kA(rms) | kV(rms) | kV(crest) | | |
| JYH5W-3 | 3 | 5kA | 2.55 | 11.3 | 9 | 8.9 | 150 | 65 |
| JYH10W-3 | 3 | 10kA | 2.55 | 11.3 | 9 | 8.9 | 250 | 100 |

| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μs High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|-----------------------------------|------------------------------------|--|--|
| | | | | 1/4 μs Steep Current Impulse | 8/20 μs Lightning Current impulse | 30/60 μs Switching Current Impulse | | |
| | | | | kV(crest) | kV(crest) | kV(crest) | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-6 | 6 | 5kA | 5.1 | 22.6 | 18 | 16.8 | 150 | 65 |
| JYH10W-6 | 6 | 10kA | 5.1 | 22.6 | 18 | 16.8 | 250 | 100 |

| Model No. | Rated Voltage | Rated Current | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand | |
|-----------|---------------|---------------|----------------------------------|------------------------------------|-------------------------------------|--|---|-----------|
| | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | | |
| | | | | | | | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-9 | 9 | 5kA | 7.65 | 33.7 | 27 | 23.8 | 150 | 65 |
| JYH10W-9 | 9 | 10kA | 7.65 | 33.7 | 27 | 23.8 | 250 | 100 |

| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | | | | | | | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-12 | 12 | 5kA | 10.2 | 42.2 | 36 | 27 | 150 | 65 |
| JYH10W-12 | 12 | 10kA | 10.2 | 42.2 | 36 | 27 | 250 | 100 |



Surge Arrester Polymer Type



| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-15 | 15 | 5kA | 12.7 | 51 | 45 | 38.5 | 150 | 65 |
| JYH10W-15 | 15 | 10kA | 12.7 | 51 | 45 | 38.5 | 250 | 100 |



| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-18 | 18 | 5kA | 15.3 | 61.5 | 54 | 46.2 | 150 | 65 |
| JYH10W-18 | 18 | 10kA | 15.3 | 61.5 | 54 | 46.2 | 250 | 100 |



| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-21 | 21 | 5kA | 17.0 | 71.8 | 63 | 54.2 | 150 | 65 |
| JYH10W-21 | 21 | 10kA | 17.0 | 71.8 | 63 | 54.2 | 250 | 100 |



| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-24 | 24 | 5kA | 19.5 | 82 | 72 | 62 | 150 | 65 |
| JYH10W-24 | 24 | 10kA | 19.5 | 82 | 72 | 62 | 250 | 100 |



Surge Arrester Polymer Type



| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-27 | 27 | 5kA | 22.0 | 92 | 81 | 69.8 | 150 | 65 |
| JYH10W-27 | 27 | 10kA | 22.0 | 92 | 81 | 69.8 | 250 | 100 |



| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-30 | 30 | 5kA | 24.4 | 102 | 90 | 79 | 150 | 65 |
| JYH10W-30 | 30 | 10kA | 24.4 | 102 | 90 | 79 | 250 | 100 |



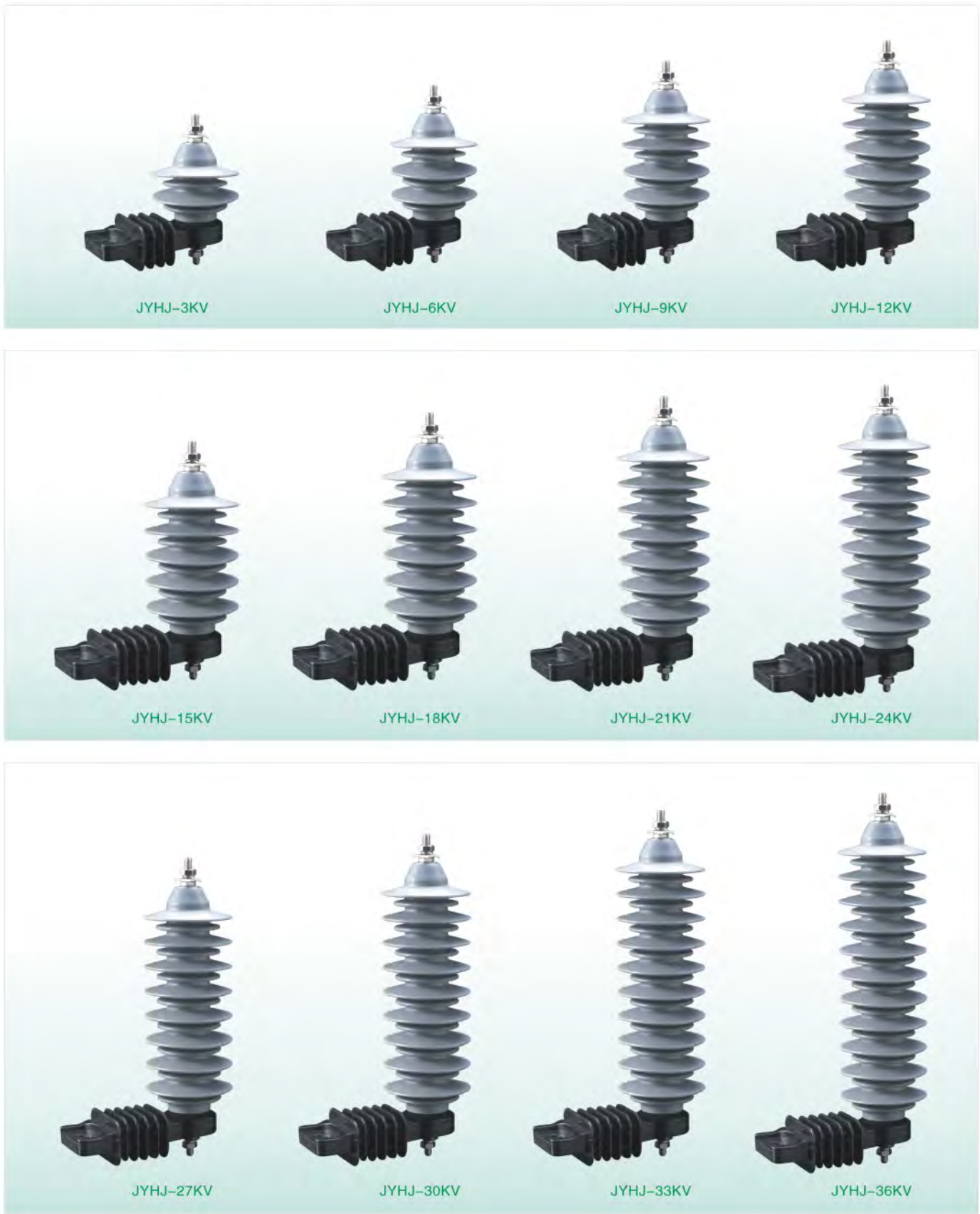
| Model No. | Rated Voltage | Rated Current | MCOV | Current Impulse Residual Voltage | | | Long Impulse Withstand Current 2000 us | 4/10 μ s High Current Impulse Withstand |
|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-33 | 33 | 5kA | 27.5 | 112 | 99 | 86.7 | 150 | 65 |
| JYH10W-33 | 33 | 10kA | 27.5 | 112 | 99 | 86.7 | 250 | 100 |



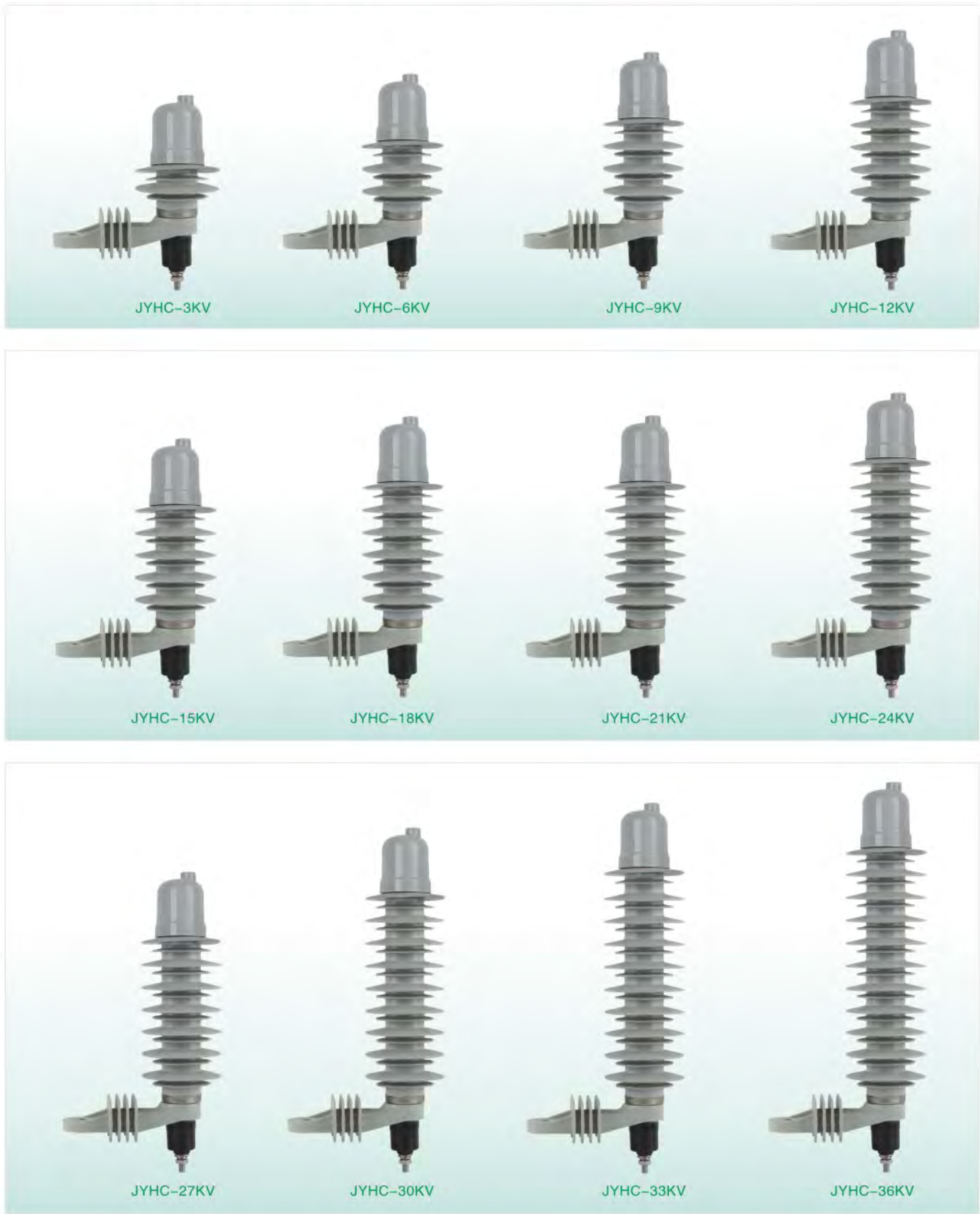
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|-----------|---------------|---------------|---------|----------------------------------|------------------------------------|-------------------------------------|--|---|
| | | | | 1/4 μ s Steep Current Impulse | 8/20 μ s Lightning Current impulse | 30/60 μ s Switching Current Impulse | | |
| | kV(rms) | kA(rms) | kV(rms) | kV(crest) | kV(crest) | kV(crest) | kA(crest) | kA(crest) |
| JYH5W-36 | 36 | 5kA | 29.0 | 117 | 103 | 92.4 | 150 | 65 |
| JYH10W-36 | 36 | 10kA | 29.0 | 117 | 103 | 92.4 | 250 | 100 |



Surge Arrester Polymer Type

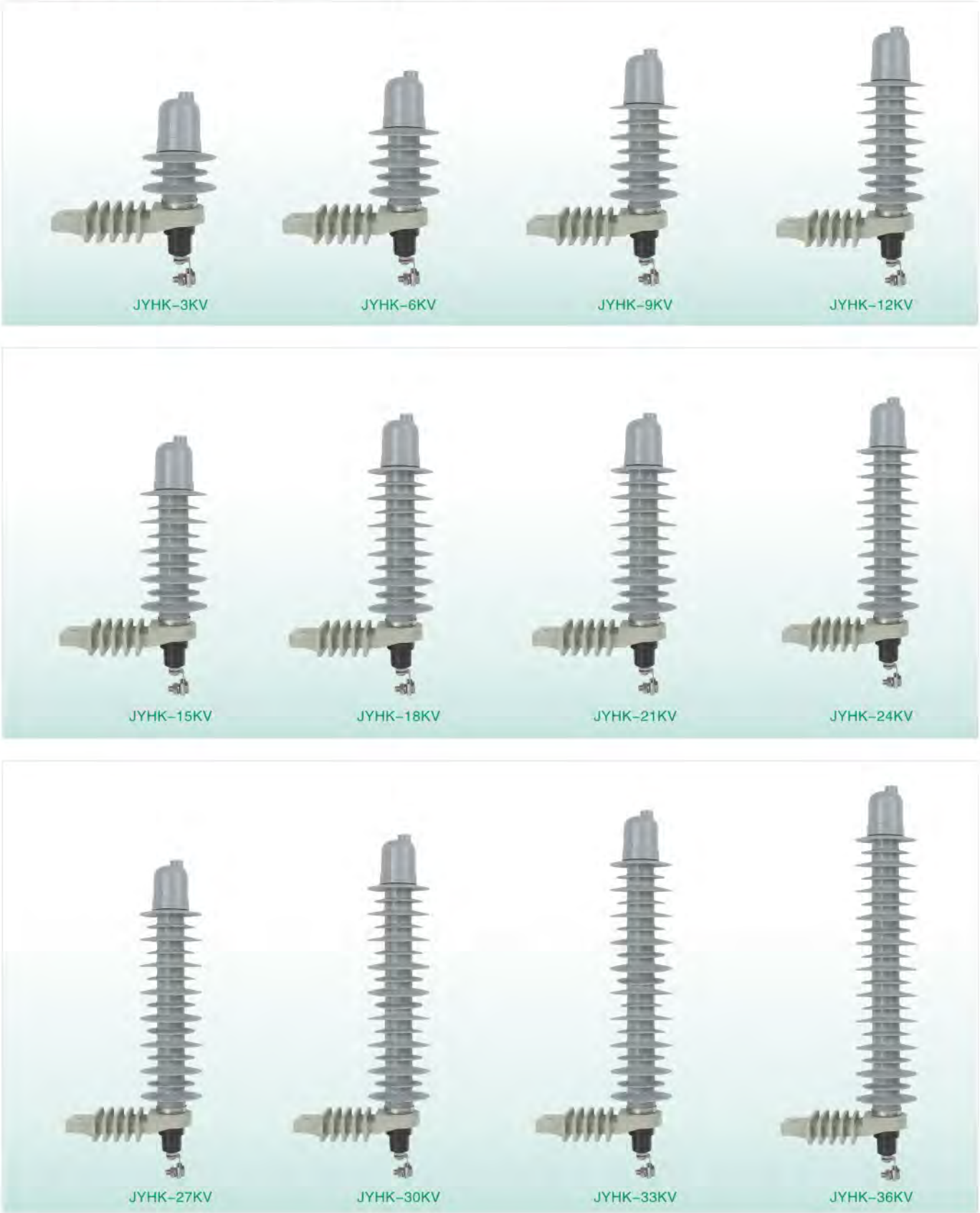


Surge Arrester With Cap Polymer Type





Surge Arrester With Cap Polymer Type



Surge Arrester Substation Type



| Model No. | Rated Voltage kV(ms) | Nominal System Voltage kV(rms) | MCOV kV(rms) | 1mA Reference Voltage At 1mA Dc kV(rms) | Switching Current Impulse Residual Voltage kV(crest) | Nominal Current Impulse Residual Voltage kV(crest) | Steep Current Impulse Residual Voltage kV(crest) | 2ms Long Impulse Withstand Current A(crest) | mm Leakage Distance (mm) |
|-----------|-------------------------|-----------------------------------|-----------------|---|---|---|---|--|-----------------------------|
| JY10ZW-12 | 12 | 10 | 9.6 | 17.4 | 27.6 | 32.4 | 37.2 | 400 | 335 |
| JY10ZW-24 | 31 | 24 | 19.2 | 31 | 45 | 67 | 74.4 | 400 | 670 |

| Model No. | Rated Voltage kV(ms) | Nominal System Voltage kV(rms) | MCOV kV(rms) | 1mA Reference Voltage At 1mA Dc kV(rms) | Switching Current Impulse Residual Voltage kV(crest) | Nominal Current Impulse Residual Voltage kV(crest) | Steep Current Impulse Residual Voltage kV(crest) | 2ms Long Impulse Withstand Current A(crest) | mm Leakage Distance (mm) |
|---------------|-------------------------|-----------------------------------|-----------------|---|---|---|---|--|-----------------------------|
| JY10ZW-42/126 | 42 | 35 | 30 | 73 | 107 | 126 | 145 | 400 | 1250 |
| JY10ZW-51/134 | 51 | 35 | 40.8 | 73 | 114 | 134 | 154 | 400 | 1250 |
| JY10ZW-75/230 | 75 | 66 | 60 | 127 | 196 | 230 | 265 | 600 | 2370 |
| JY10ZW-90/224 | 90 | 66 | 72.5 | 130 | 190 | 224 | 258 | 600 | 2370 |

| Model No. | Rated Voltage kV(ms) | Nominal System Voltage kV(rms) | MCOV kV(rms) | 1mA Reference Voltage At 1mA Dc kV(rms) | Switching Current Impulse Residual Voltage kV(crest) | Nominal Current Impulse Residual Voltage kV(crest) | Steep Current Impulse Residual Voltage kV(crest) | 2ms Long Impulse Withstand Current A(crest) | mm Leakage Distance (mm) |
|----------------|-------------------------|-----------------------------------|-----------------|---|---|---|---|--|-----------------------------|
| JY10ZW-96/238 | 96 | 110 | 75 | 140 | 207 | 238 | 262 | 800 | 2750 |
| JY10ZW-100/248 | 100 | 110 | 78 | 145 | 216 | 248 | 273 | 800 | 2750 |
| JY10ZW-192/476 | 192 | 220 | 150 | 280 | 414 | 476 | 524 | 800 | 5500 |
| JY10ZW-192/500 | 192 | 220 | 150 | 280 | 426 | 500 | 560 | 600 | 5500 |



Surge Arrester Porcelain Type



| Model No. | Rated Voltage kV(ms) | MCOV kV(ms) | Power Frequency Discharge Voltage ≥ kV(crest) | 1.2/50 μ s Impulse Discharge Voltage ≤ kV(crest) | 8/20 μ s Lightning Impulse Residual Voltage ≤ A(crest) | Long Impulse Withstand Current 2000 us | | 4/10 μ s High Current Impulse Withstand |
|-----------|-------------------------|----------------|--|--|--|---|------|---|
| | | | | | | 5kA | 10kA | |
| JY10C-6 | 6 | 5.1 | 11 | 18 | 18 | 100 | 200 | 65 |
| JY10C-9 | 9 | 7.65 | 16 | 27 | 27 | 100 | 200 | 65 |



| Model No. | Rated Voltage kV(ms) | MCOV kV(ms) | Power Frequency Discharge Voltage \geq kV(crest) | 1.2/50 μ s Impulse Discharge Voltage \leq kV(crest) | 8/20 μ s Lightning Impulse Residual Voltage \leq A(crest) | Long Impulse Withstand Current 2000 us | | 4/10 μ s High Current Impulse Withstand |
|-----------|-------------------------|----------------|---|---|---|---|------|---|
| | | | | | | 5kA | 10kA | |
| JY10C-12 | 12 | 10.2 | 22 | 36 | 36 | 100 | 200 | 65 |
| JY10C-15 | 15 | 12.7 | 26 | 45 | 45 | 100 | 200 | 65 |



| Model No. | Rated Voltage kV(ms) | MCOV kV(ms) | Power Frequency Discharge Voltage≥ kV(crest) | 1.2/50 μ s Impulse Discharge Voltage≤ kV(crest) | 8/20 μ s Lightning Impulse Residual Voltage≤ A(crest) | Long Impulse Withstand Current 2000 us | | 4/10 μ s High Current Impulse Withstand |
|-----------|-------------------------|----------------|---|--|--|--|------|---|
| | | | | | | 5kA | 10kA | |
| JY10C-18 | 18 | 15.3 | 33 | 54 | 54 | 100 | 200 | 65 |
| JY10C-24 | 24 | 19.5 | 40 | 72 | 72 | 100 | 200 | 65 |



| Model No. | Rated Voltage kV(ms) | MCOV kV(ms) | Power Frequency Discharge Voltage \geq kV(crest) | 1.2/50 μ s Impulse Discharge Voltage \leq kV(crest) | 8/20 μ s Lightning Impulse Residual Voltage \leq A(crest) | Long Impulse Withstand Current 2000 us | | 4/10 μ s High Current Impulse Withstand |
|-----------|-------------------------|----------------|--|---|---|---|------|---|
| | | | | | | 5kA | 10kA | |
| JY10C-33 | 33 | 27.5 | 56 | 99 | 99 | 100 | 200 | 65 |
| JY10C-36 | 36 | 29.0 | 61 | 108 | 108 | 100 | 200 | 65 |



Low Voltage Surge Arrester & Accessories



Low Voltage Surge Arrester Porcelain type

| Destination | Code No. | System Voltage kV (r,m,s) | Rated Voltage kV (r,m,s) | MCOV kV (r,m,s) | 8/20 μ s Lightning Current Impulse kV(crest) | Reference Voltage At 1mA DC kV | Long Impulse Withstand Current 2000 μ s A(crest) | 4/10 μ s High Current Impulse Withstand kV(crest) |
|-------------|-----------------|---------------------------|--------------------------|-----------------|--|--------------------------------|--|---|
| Low Voltage | YC1.5W-0.28/1.3 | 0.22 | 0.28 | 0.24 | 1.3 | 0.6 | 50 | 10 |
| | YC1.5W-0.5/2.6 | 0.38 | 0.5 | 0.42 | 2.6 | 1.2 | 50 | 10 |



Low Voltage Surge Arrester Polymer type

| Destination | Code No. | System Voltage kV (r,m,s) | Rated Voltage kV (r,m,s) | MCOV kV (r,m,s) | 8/20 μ s Lightning Current Impulse kV(crest) | Reference Voltage At 1mA DC kV | Long Impulse Withstand Current 2000 μ s A(crest) | 4/10 μ s High Current Impulse Withstand kV(crest) |
|-------------|-----------------|---------------------------|--------------------------|-----------------|--|--------------------------------|--|---|
| Low Voltage | YH1.5W-0.28/1.3 | 0.22 | 0.28 | 0.24 | 1.3 | 0.6 | 50 | 10 |
| | YH1.5W-0.5/2.6 | 0.38 | 0.5 | 0.42 | 2.6 | 1.2 | 50 | 10 |



Surge Arrester Disconnecter

| Operation Current | Power Frequency (A) | | | 2000 μ s Square Wave Impulse Withstand Curent(A) | 4/10 μ s High Withstand Current(kA) |
|-------------------|---------------------|--------|--------|--|---|
| | 20 | 200 | 800 | | |
| Operation Time | < 0.5 | < 0.04 | < 0.02 | ∞ | ∞ |



Surge Arrester Discharge Counter

| Model No. | Rated Voltage(kV) | Nominal Discharge Current (kA) | Operation Current Range | Current Impulse Residual Voltage (kV) | Long Impulse Withstand Current 2ms (A) | 4/10 High Current Impulse Withstand(kA) |
|-----------|-------------------|--------------------------------|-------------------------|---------------------------------------|--|---|
| JS-8 | 3-66 | 5 | 50-5000 | < 1 | 400-800 | 65-100 |
| JCQ | 3-220 | 10 | 50-5000 | < 1 | 600-800 | 100 |



Zinc Oxide Varister Block



| Model No. | Dimension(mm) | | Nominal Standard Discharge Current (kA) | Rated Voltage (kV) | MCOV (kV) | 8/20 μ s Lightning Impulse Residual Voltage (kV) | 2000/ μ s Square Impulse Current Withstand (A) | 4/10 μ s High Current Impulse (kA) |
|-----------|-------------------|--------------|---|--------------------|-----------|--|--|--|
| | Diameter | Height | | | | | | |
| D30 | $\Phi 30 \pm 0.2$ | 24 ± 0.5 | 5 | 3-3.4 | 2.55 | 9.1 | 100 | 65 |
| D32 | $\Phi 32 \pm 0.2$ | 24 ± 0.5 | 5 | 3-3.4 | 2.55 | 9.3 | 100 | 65 |



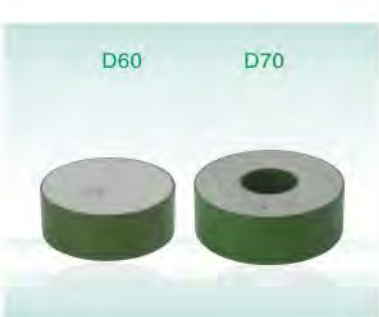
| Model No. | Dimension(mm) | | Nominal Standard Discharge Current (kA) | Rated Voltage (kV) | MCOV (kV) | 8/20 μ s Lightning Impulse Residual Voltage (kV) | 2000/ μ s Square Impulse Current Withstand (A) | 4/10 μ s High Current Impulse (kA) |
|-----------|-------------------|--------------|---|--------------------|-----------|--|--|--|
| | Diameter | Height | | | | | | |
| D35 | $\Phi 35 \pm 0.2$ | 24 ± 0.5 | 5 | 3-3.4 | 2.55 | 9.1 | 100 | 65 |
| D38 | $\Phi 38 \pm 0.2$ | 24 ± 0.5 | 10 | 3-3.4 | 2.55 | 9.3 | 200 | 65 |



| Model No. | Dimension(mm) | | Nominal Standard Discharge Current (kA) | Rated Voltage (kV) | MCOV (kV) | 8/20 μ s Lightning Impulse Residual Voltage (kV) | 2000/ μ s Square Impulse Current Withstand (A) | 4/10 μ s High Current Impulse (kA) |
|-----------|-------------------|--------------|---|--------------------|-----------|--|--|--|
| | Diameter | Height | | | | | | |
| D40 | $\Phi 40 \pm 0.2$ | 24 ± 0.5 | 10 | 3-3.4 | 2.55 | 9.1 | 250 | 100 |
| D42 | $\Phi 42 \pm 0.2$ | 24 ± 0.5 | 10 | 3-3.4 | 2.55 | 9.2 | 250 | 100 |



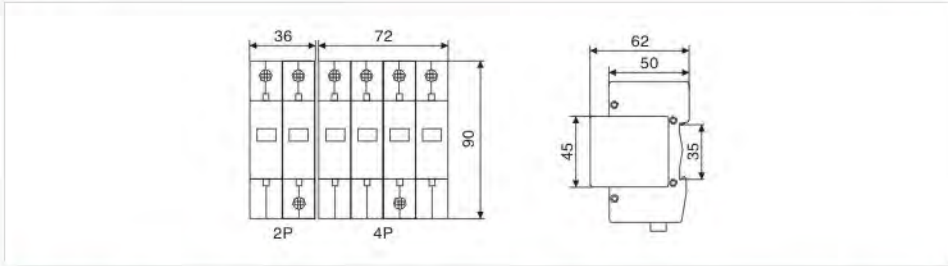
| Model No. | Dimension(mm) | | Nominal Standard Discharge Current (kA) | Rated Voltage (kV) | MCOV (kV) | 8/20 μ s Lightning Impulse Residual Voltage (kV) | 2000/ μ s Square Impulse Current Withstand (A) | 4/10 μ s High Current Impulse (kA) |
|-----------|-------------------|--------------|---|--------------------|-----------|--|--|--|
| | Diameter | Height | | | | | | |
| D48 | $\Phi 48 \pm 0.2$ | 24 ± 0.5 | 10 | 3-3.4 | 2.55 | 9.0 | 400 | 100 |
| D53 | $\Phi 53 \pm 0.2$ | 24 ± 0.5 | 10 | 3-3.4 | 2.55 | 8.9 | 400 | 100 |



| Model No. | Dimension(mm) | | Nominal Standard Discharge Current (kA) | Rated Voltage (kV) | MCOV (kV) | 8/20 μ s Lightning Impulse Residual Voltage (kV) | 2000/ μ s Square Impulse Current Withstand (A) | 4/10 μ s High Current Impulse (kA) |
|-----------|-------------------|--------------|---|--------------------|-----------|--|--|--|
| | Diameter | Height | | | | | | |
| D60 | $\Phi 60 \pm 0.2$ | 24 ± 0.5 | 20 | 3-3.4 | 2.55 | 9.1 | 600 | 100 |
| D70 | $\Phi 70 \pm 0.2$ | 24 ± 0.5 | 20 | 3-3.4 | 2.55 | 9.2 | 800 | 100 |

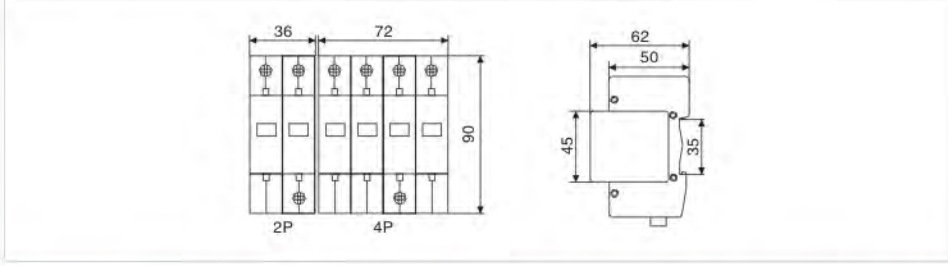


Surge Protective Device (SPD)



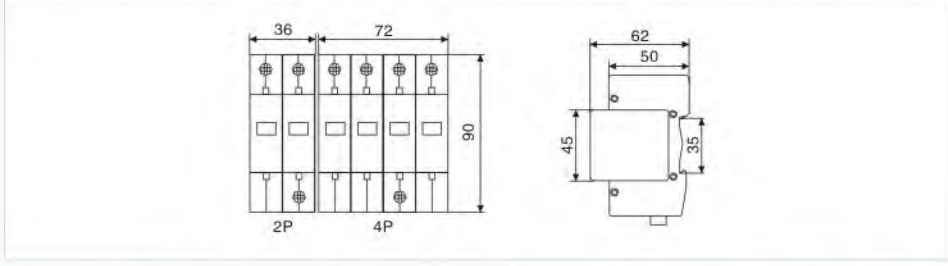
| Model No. | Rated Voltage Uo(V~) | Continuous Working Voltage Uc(V~) | Protection Level Up(kV) | Standard Discharge Current (8/20 μ s) In(kA) | Max Current Capacity Imax (8/20 μ s) In(kA) | Response Time (ns) | Working Environment $^{\circ}$ C | Relative Humidity |
|------------|----------------------|-----------------------------------|-------------------------|--|---|--------------------|----------------------------------|-------------------------------|
| CN1-B30/2P | 230/420 | 300 | 1.2 | 5 | 10 | 25 | -40~+85 | $\leq 95\%$ (25 $^{\circ}$ C) |
| CN1-B30/3P | 230/420 | 345 | 1.5 | 10 | 20 | 25 | -40~+85 | $\leq 95\%$ (25 $^{\circ}$ C) |

Poles: 1, 1+1, 2, 2+1, 3, 3+1, 4



| Model No. | Rated Voltage Uo(V~) | Continuous Working Voltage Uc(V~) | Protection Level Up(kV) | Standard Discharge Current (8/20 μ s) In(kA) | Max Current Capacity Imax (8/20 μ s) In(kA) | Response Time (ns) | Working Environment $^{\circ}$ C | Relative Humidity |
|------------|----------------------|-----------------------------------|-------------------------|--|---|--------------------|----------------------------------|-------------------------------|
| CN1-C20/2P | 230/420 | 385 | 1.8 | 15 | 30 | 25 | -40~+85 | $\leq 95\%$ (25 $^{\circ}$ C) |
| CN1-C20/3P | 230/420 | 385 | 1.8 | 20 | 40 | 25 | -40~+85 | $\leq 95\%$ (25 $^{\circ}$ C) |

Poles: 1, 1+1, 2, 2+1, 3, 3+1, 4

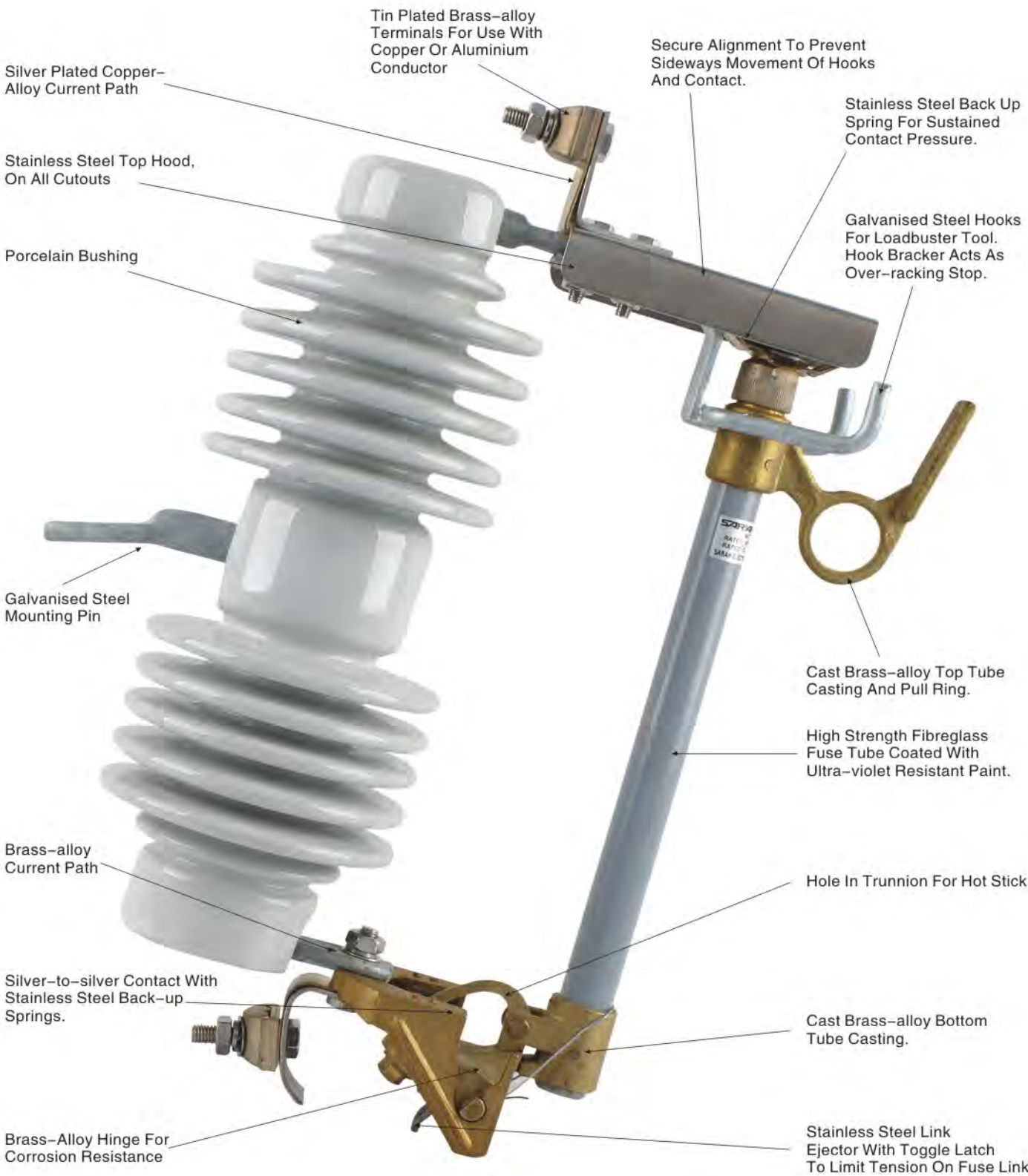


| Model No. | Rated Voltage Uo(V~) | Continuous Working Voltage Uc(V~) | Protection Level Up(kV) | Standard Discharge Current (8/20 μ s) In(kA) | Max Current Capacity Imax (8/20 μ s) In(kA) | Response Time (ns) | Working Environment $^{\circ}$ C | Relative Humidity |
|------------|----------------------|-----------------------------------|-------------------------|--|---|--------------------|----------------------------------|-------------------------------|
| CN1-D10/2P | 230/420 | 420 | 2.5 | 30 | 60 | 25 | -40~+85 | $\leq 95\%$ (25 $^{\circ}$ C) |
| CN1-D10/3P | 230/420 | 420 | 3.0 | 40 | 80 | 25 | -40~+85 | $\leq 95\%$ (25 $^{\circ}$ C) |

Poles: 1, 1+1, 2, 2+1, 3, 3+1, 4



Fuse Cutout



Fuse Cutout

