Tongyi 电力技术专家 Power Equipment 同益电力设备

产品目录

Product Catalogue

专业品质　追求卓越

Professional in production
Excellent in Quality

浙江同益电力设备有限公司

ZHEJIANG TONGYI POWER EQUIPMENT CO.,LTD.

Tongyi 电力技术专家 Power Equipment 同益电力设备

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Tongyi 电力技术专家 Power Technology 同益电力科技

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企业理念 Enterprise Philosophy

绿色铸造、和谐铸造

我们一直致力于科技领域铸造的巅峰；

我们一直致力于为客户提供优质的前端产品；

我们一直致力于全面改善生态环境并使之持续发展；

为此我们孜孜不倦、矢志腾飞！

Tongyi 电力技术专家 Power Equipment 同益电力设备

Company Introduction

Zhejiang Tongyi Power Equipment Co., Ltd.(Zhejiang with profit equipment limited company) is a reputed company specializing in manufacturing fiberglass rod (FRP Rod), composite insulators, polymeric fuse cutout, cutout insulator, power fitting, MV switchgear, LV switchgear, power transformer, substation, and other insulation accessories for power transmission and distribution systems.

As a private enterprise being active in operation since 1996, we built our business on people, trust and mutual benefits on a long-term basis. After over 15 years' development and growth, at present, we have two manufacturing bases with the total area over 125,000 M^2 (Zhejiang Tongyi Power Equipment Co.,Ltd and Hubei Tongyi Power Technology Co.,Ltd.) Both plants are equipped with advanced manufacturing equipments and test devices to guarantee the quality of each product.

We have passed ISO 9001:2008, CCC, PCCC certifications and tests approved by KEMA and WHVRI (Wuhan High Voltage Research Institute). Thanks to the sound management system, reliable quality and hearty and timely service, we have been exporting our products to many countries and regions such as South Korea, Iran, Jordan, Australia, Brazil, Ecuador, Mexico, Zambia, South Africa, Sri Lanka, Russia, Indonesia, Southeast Asia, the Middle East and South America and so on.

In addition, we have built firm and close business ties with the regional reputed clients to participate in international and domestic tenders, as well as provide OEM service to manufacture according to customers' drawings and technical specifications. Hereby, we would sincerely welcome your interest in the potential cooperation with us to create a brighter future together.

浙江同益电力设备有限公司是一家享有良好信誉的公司，专业制造环氧玻璃纤维拉挤芯棒，复合绝缘子，跌落式熔断器，熔断器支柱，隔离开关支柱、低压和中高压成套开关设备，电力变压器、预装式变电站，导线夹、电力金具，和其它用于电力输送的配件。

公司自1996年以私营企业模式开始投入运营，经过15年的发展和成长，现在已经发展成为拥有总面积超过12万平方米的2个制造工厂（浙江同益电力设备有限公司、湖北同益电力科技有限公司）。公司配备先进的制造设备和检测仪器，加上严格的质量管理体系以确保我们的产品都是合格的。

公司已经通过ISO 9001:2008、CCC、PCCC认证，主打产品通过KEMA和武高所的测试。通过有力的管理体系、可靠的质量和贴心及时的服务，我公司已出口产品至世界各国各地区，如韩国、伊朗、约旦、澳大利亚、巴西、厄瓜多尔、墨西哥、赞比亚、南非、斯里兰卡、俄罗斯、印度尼西亚以及其它东南亚、中东和南美国家。

此外，我们通过与客户建立了良好的关系在国外和国内进行投标；同时也可提供OEM制造服务。在此，我们真诚地欢迎您与我们携手合作，共创美好未来。

Equipment
》设 备


↑ 牵引车间(三)


↑ 压注车间(二)


↑ 拉力测试设备


↑ 1800kV雷电冲击试验装置


↑ 箱式变电站车间


↑ 高低压成套生产车间（一）


↑ 多用途耐压试验装置


↑ 橡胶注射成型机


↑ 800吨金具压接机

TONGYI
POWER

← YDTM-300无晕试验变压器

Tongyi 电力技术专家 Power Equipment 同益电力设备

Qualifications / Certificates
资质证书

Production contents
产品目录

Tongyi 电力技术专家 Power Equipment 同益电力设备

FRP Rod (E-glass)

General

Tongyi Power has over 15 years of experience in manufacturing FRP Rod (fiberglass reinforced polymer rod) and has been exporting to our clients worldwide.

FRP Rods produced by our company has applied the pultrusion process technology, of which high-quality raw materials of reinforced glass fibers and epoxy resin are used.

Our FRP Rods are designed and manufactured mainly for composite insulator use with a variety of cross section diameters ranging from 6mm to 110mm and any length at option.

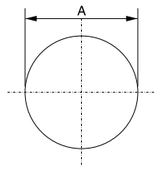
Applications

Mainly for power and electrical industries, such as composite/polymer insulators, insulation rod, thunder arrestor, dry power transformers and resistors, tap changers, switchgears; Cryogenic insulation, underwater conditions, electrical equipment and so on.

Besides, our pultruded FRP rod could also be used in other various industries where insulation, resistance to stress, weathering and corrosive atmospheres are important.

Properties

Superior mechanical strength and high stiffness
Corrosion resistance
Light weight
Long life cycle
Low maintenance
Non-magnetic
Flame resistant
Arc and track resistant
Electromagnetic transparency
Excellent electrical insulation
Non-conductive thermally and electrically



Product Specifications

Diameter-mm	Kg/Mtr	Diameter-mm	Kg/Mtr	Diameter-mm	Kg/Mtr
8	0.116	24	0.960	45	3.370
10	0.176	26	1.040	48	3.830
12	0.240	28	1.305	50	4.160
16	0.430	30	1.500	53	4.670
17	0.481	32	1.728	60	5.990
17.48	0.508	34	1.920	63	6.605
18	0.540	35	2.040	70	8.150
19	0.600	36	2.160	80	10.650
20	0.670	38	2.400	90	13.480
22	0.805	40	2.660	110	20.327

Note: Customized diameter and additional processing are also available.

Technical Data

No.	Item	Unit	Values	Standard	Evaluation
1	Density （20±2℃）	g/cm3	≥2.1	ASTM D 792	Pass
2	Water Absorption Rate	%	≤0.05	ASTM D 570	Pass
3	Tensile Strength	Mpa	1420	ASTM D 638	Pass
4	Bending Strength	Mpa	900	ASTM D 790	Pass
5	Torsional strength	N/mm^2	≥90	ASTM D4923	Pass
6	Thermal Bending Strength	Mpa	≥300	ASTM D 790	Pass
7	Dye Penetration Test	min	≥15	ASTM D5117	Pass
8	Volume Resistivity(140℃,96h)	Ω・m	$\geq 10^{10}$	ASTM D 257	Pass
9	Water Diffusion Test0.1% NaCl,100h,12kv,1min	mA	<0.03	IEC 1109	Pass
10	Lightning ImpulseWithstand Voltage (100kv)	times	≥5	ASTM D 149	Pass
11	D.C. Puncture Voltage	kv	≥50	ASTM D 149	Pass
12	Heat deflection temperature	℃	≥135	ASTM D 648	Pass
13	Glass Fiber Content	%	70-80	ASTM D2584	Pass

Above results are tested from Diameter 18mm Rods.
Standards: ASTM, IEC, GB and Enterprise Standard.

ECR Rod(ECR-glass)

Tongyi 电力技术专家 Power Equipment 同益电力设备

General

Tongyi Power has over 15 years of experience in manufacturing ECR Rods and has been exporting them to our clients worldwide.

ECR Rods produced by our company has applied the pultrusion process technology, of which high-quality raw materials of reinforced glass fibers and epoxy resin are used.

Our ECR Rods are designed and manufactured mainly for composite insulator use with a variety of cross section diameters ranging from 6mm to 110mm at options of any length.

Applications

Mainly for power and electrical industries, such as composite/polymer insulators, insulation rod, lightning arrestor, dry power transformers, power resistors, tap changers, switchgears, Cryogenic insulation, underwater conditions, electrical equipment and so on.

Besides, our pultruded ECR rod could also be used in other various industries where resistance to stress, weathering and corrosive atmospheres are important.

Properties

ECR Rod has better dielectric strength, stress-corrosion resistance; high surface resistance; higher mechanical strength and stiffness compared with E-glass (FRP Rod), wider application ranges than FRP Rod(E-glass). Better corrosive resistance; Light weight and long life cycle; Non-magnetic; Flame resistant; Arc and track resistant; Electromagnetic transparency; Excellent electrical insulation; Non-conductive thermally and electrically.

Product Specifications

Diameter-mm	Kg/Mtr	Diameter-mm	Kg/Mtr	Diameter-mm	Kg/Mtr
6	0.060	22	0.805	40	2.660
8	0.116	24	0.960	45	3.370
10	0.176	26	1.040	48	3.830
12	0.240	28	1.305	50	4.160
16	0.430	30	1.500	53	4.670
17	0.481	32	1.728	60	5.990
17.48	0.508	34	1.920	63	6.605
18	0.540	35	2.040	70	8.150
19	0.600	36	2.160	80	10.650
20	0.670	38	2.400	90	13.480

Note: Customized diameter and additional processing are also available.

Technical Data

No.	Item	Unit	Values	Standard	Evaluation
1	Density （20±2℃）	g/cm3	≥2.1	ASTM D 792	Pass
2	Water Absorption Rate	%	≤0.05	ASTM D 570	Pass
3	Tensile Strength	Mpa	1756	ASTM D 638	Pass
4	Bending Strength	Mpa	980	ASTM D 790	Pass
5	Torsional strength	N/mm^2	≥90	ASTM D4923	Pass
6	Thermal Bending Strength	Mpa	≥300	ASTM D 790	Pass
7	Dye Penetration Test	min	≥15	ASTM D5117	Pass
8	Volume Resistivity(140℃,96h)	Ω・m	$\geq 10^{10}$	ASTM D 257	Pass
9	Water Diffusion Test0.1% NaCl,100h,12kv,1min	mA	<0.03	IEC 1109	Pass
10	Lightning ImpulseWithstand Voltage (100kv)	times	≥5	ASTM D 149	Pass
11	D.C. Puncture Voltage	kv	≥50	ASTM D 149	Pass
12	Tensile Failing Load	%	≤10	ASTM D 638	Pass
13	Glass Fiber Content	%	75	ASTM D2584	Pass
14	Stress Corrosion Test (70kN)	h	≥96	TY Standard	Pass

Above results are tested from Diameter 18mm Rods.
Standards: ASTM, IEC, GB and Enterprise Standard.

General

Our FRP Profiles mainly include FRP Tube, Plate, Dogbone, Channel, Angle.

Pultrusion:

- Corrosion resistant
- Non–conductive thermally and electrically
- Non–magnetic electromagnetic transparency
- Light weight
- High strength
- Dimensional stability
- Long life cycle
- Low maintenance

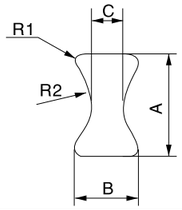
Available Grades:

Class “F”
Fiberglass
Insulation systems for 155 ℃

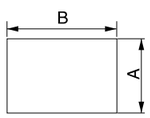
Other Grades:
Fiberglass
Polyester Resin
Class C – 120 ℃

Class “H”
Fiberglass
Class C – 120℃
Epoxy Resin
Insulation systems for 180℃

FRP Dogbone

Drawing	Product Code	A(mm)	B(mm)	C(mm)	R1	R2
	TY–8–6	8	6	3	1.3	2
	TY–10–8	10	8	4	1.5	3.5
	TY–12–10	12	10	5	1.6	3.7
	TY–13–10	13	10	6.9	1.6	6
	TY–16–10	16	10	5.3	1.6	8.3
	TY–19–10	19	10	6.1	1.8	9.7
	TY–19–10	19	12	6.1	1.8	9.7

FRP Plate

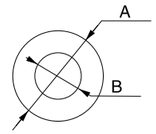
Drawing	Product Code	A(mm)	B(mm)
	TY–10–22	10	22
	TY–10–30	10	30
	TY–14–22	14	22
	TY–16–22	16	22
	TY–16–30	16	30
	TY–20–30	20	30
	TY–20–40	20	40
	TY–25–50	25	50
	TY–30–50	30	50
	TY–40–50	40	50
	TY–40–60	40	60
	TY–50–50	50	50
	TY–60–60	60	60

Note: Custom size is available upon request

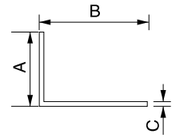
FRP Profile

Tongyi 电力技术专家 Power Equipment 同益电力设备

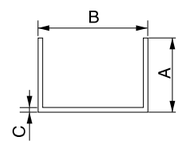
FRP Tube

Drawing	A(mm)	B(mm)
	ϕ18	ϕ12.5
	ϕ20	ϕ12.5
	ϕ24	ϕ12.5
	ϕ28	ϕ12.5
	ϕ30	ϕ12.5
	ϕ30	ϕ20
	ϕ35	ϕ12.5
	ϕ35	ϕ20
	ϕ38	ϕ12.5
	ϕ38	ϕ20
	ϕ40	ϕ12.5
	ϕ40	ϕ20
	ϕ50	ϕ20
	ϕ50	ϕ32
	ϕ60	ϕ20
	ϕ60	ϕ32
	ϕ70	ϕ20
	ϕ70	ϕ32
	ϕ80	ϕ20
	ϕ80	ϕ32
	ϕ90	ϕ20
	ϕ90	ϕ32

FRP Angle

Drawing	A(mm)	B(mm)	C(mm)
	30	30	5.1
	35	35	5.1
	40	40	2.5
	40	40	4
	45	45	5.1
	20	50	3
	50	50	5
	50.8	50.8	6.35
	20	75	3
	75	75	6
	75	75	9.5
	76	76	6.35
	76	76	9.53
	43	76	3
	76.2	76.2	6.35
	76.2	76.2	8
	100	100	9.5
	101	101	9.5
	101.6	101.6	12.7
	125	125	10
	152	152	0.53
	152	152	12.7

FRP Channel

Drawing	A(mm)	B(mm)	C(mm)
	32	50	5
	28	55	4
	30	63	3
	30	70	3.8
	30	70	4.5
	30	80	3
	30	80	5
	35	88	5
	20	94.5	2.8
	20	96	2.8
	60	110	10
	50	180	6
	50	180	8

Note: Custom size is available upon request

Composite Suspension Insulators
Tongyi 电力技术专家 Power Equipment 同益电力设备

Core Rod
Tongyi Power applies fiberglass rod(made from imported Glass and Epoxy Resin by pultrusion) to composite insulators for higher electrical and mechnical performance.FRP Rod is used in composite insulators below 66kV, ECR Rod is used in composite insulators above 66kV.

Sheds
The sheds are made from high quality HTV silicone rubber, using high pressure injection molding techniques to create a smooth surface. The weathersheds have excellent weather ability, high mechanical strength, anti–tracking, excellent corona resistance, pollution resistance and surface erosion resistance as well as superior Hydrophobicity performance.

End Fittings
There are a range of end fittings made of steel or ductile iron. They are directly crimped to the ECR core rod by a circumferential crimping process, which utilizes the rod's inherent tensile strength to achieve better performance.

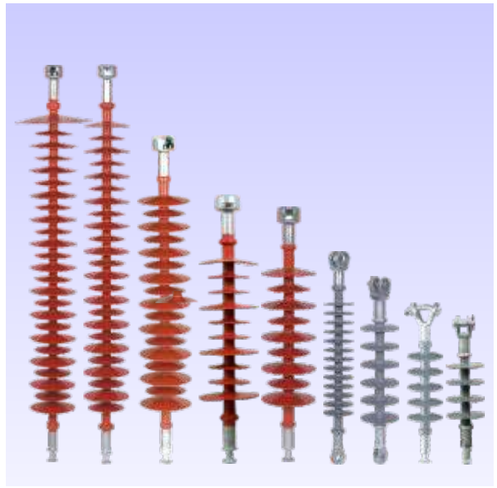
Interface
The silicone rubber housing is injection molded onto the rod to create a reliable interface which ensures a permanant bond between the silicone rubber and rods, as well as prevents intrusion of moisture and contaminations.

Leakage Distance
Our suspension insulators feature high leakage distance for maximum resistance to contamination and leakage currents in various environmental applications.

Mechanical Ratings
Tongyi Power composite suspension insulators are rated at a specified mechanical load of 40kN,70kN,100kN,120kN with proper ECR Rod size and enf fittings. Our routine tests are conducted at loads equal to or greater than the RTL rating according to IEC 61109 and ANSI C29.12.

Insulator Length
Tongyi Power composite suspension insulators have length ranging from 291mm to 2170mm appropriate for 10kV to 220kV. Thanks to our 13 years' manufacturing experience, different special length for OEM can be produced accordingly for special projects.

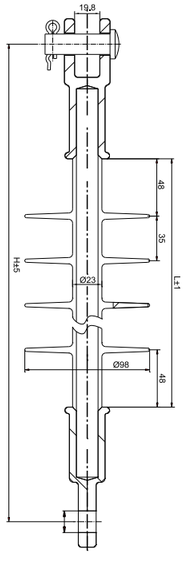
Standards
All Tongyi Power suspension insulators are manufactured and tested in strict accordance with IEC 61109 and IEC 62217, along with execution of ISO 9001 to guarantee quality.



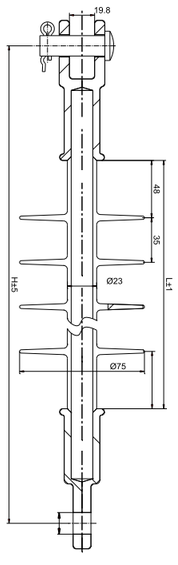
Corona Rings
Corona Ring, also named Grading Ring or Shielding Ring, is applied to one or both ends of the insulator for higher operating voltages so as to reduce electrical stress concentration on and within the insulators. They can reduce corona discharges as well as audible noise levels, radio and television interference levels.
Tongyi Power recommends an 8"(203mm) corona ring for composite suspension insulators from 110kV to 220kV as a default. For special and intended applications with a smaller or larger corona ring, please feel free to contact us.

Product Drawings

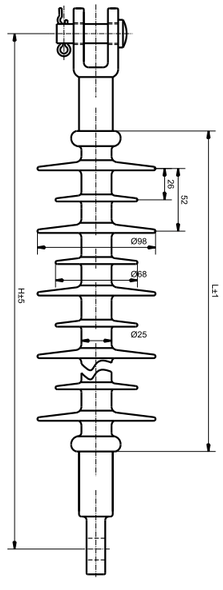
FXB1



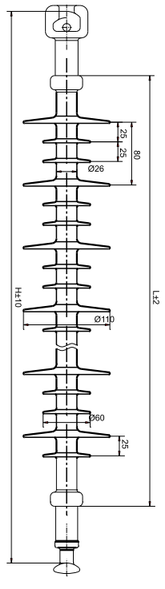
FXB2



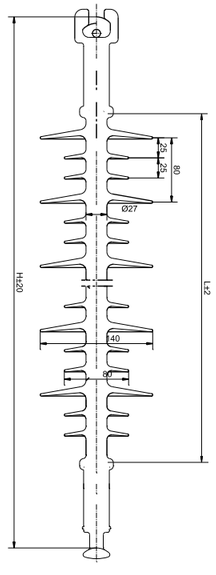
FXBW1



FXBW2



FXBW3



Product Specifications

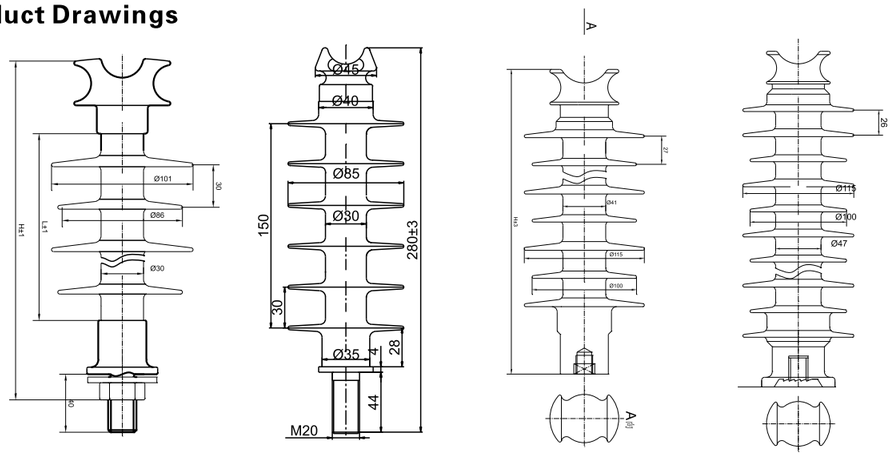
Model	Rated Voltage	Specified Mechanical Tensile Load (SML)	Section Length H	Polymer Length L	Minimum Creepage Distance	Lightning Impulse Withstand Voltage	I min Power Frequency Withstand Voltage(KV)	
	KV	KN	mm	mm	mm	KV	Dry	Wet
FXB1–10/40	10	40	291	155	340	135	66	60
FXB1–10/70	10	70	325	155	340	135	66	60
FXB2–10/40	10	40	301	165	440	141	70	60
FXB2–10/70	10	70	346	190	535	147	78	60
FXB2–10/100	10	100	346	190	535	147	78	60
FXBW1–10/40	10	40	342	196	600	125	100	60
FXBW1–10/70	10	70	370	196	600	125	100	60
FXBW1–10/100	10	100	402	196	600	125	100	60
FXBW1–10/120	10	120	412	196	600	125	100	60
FXBW1–20/70	20	70	422	300	750	187	121	108
FXBW1–20/100	20	100	442	300	750	187	121	108
FXBW1–22/120	20	120	454	300	750	187	98	70
FXBW1–24/70	24	70	450	292	604	180	120	96
FXBW2–24/70	24	70	465	292	847	170	120	90
FXBW2–24/100	24	100	500	292	847	170	120	90
FXB1–33/70	33	70	570	416	912	294	99	76
FXB1–33/100	33	100	600	416	912	294	99	76
FXB2–33/70	33	70	570	434	1154	200	90	70
FXB2–33/100	33	100	600	434	1154	200	90	70
FXBW2–35/70	35	70	620	464	1115	230	150	130
FXBW2–35/100	35	100	660	464	1115	230	150	130
FXBW2–35/120	35	120	680	464	1115	230	150	130
FXBW2–66/100	66	100	880	709	1970	400	240	140
FXBW2–66/100	66	100	990	770	1970	410	210	185
FXBW3–110/70	110	70	1220	1099	3518	550	290	230
FXBW3–110/100	110	100	1240	1099	3518	550	290	230
FXBW3–110/120	110	120	1260	1099	3518	550	290	230
FXBW3–132/100	132	100	1440	1294	4109	550	320	290
FXBW3–132/120	132	120	1460	1294	4109	550	320	290
FXBW3–220/100	220	100	2150	2000	6572	1000	540	495
FXBW3–220/120	220	120	2170	2000	6572	1000	540	495

Note: OEM service in accordance with technical requirements are available upon request.

Tongyi 电力技术专家 Power Equipment 同益电力设备

Composite Pin Insulators

Product Drawings

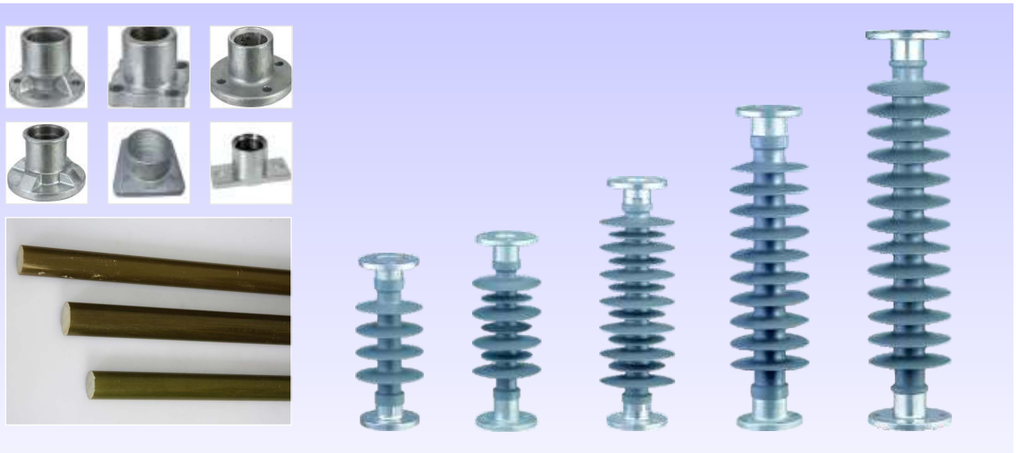


Product Specifications

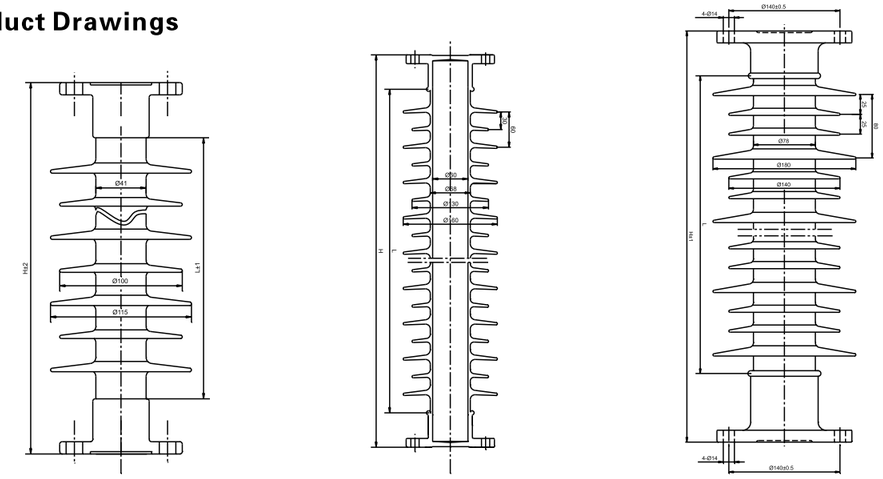
Model	Rated Voltage	Specified Mechanical Bending Load	Section Length H	Polymer Length L	Minimum Creepage Distance	Lightning Impulse Withstand Voltage	I min Power Frequency Withstand Voltage(KV)	
	KV	KN	mm	mm	mm	KV	Dry	Wet
FP–10/5T16	10	5	223	165	358	90	65	40
FP–10/5T18	10	5	223	165	358	90	65	40
FP–15/5T18	15	5	253	200	451	110	70	50
FP–15/5T20	15	5	253	200	451	110	70	50
FP–20/6T20	20	6	320	240	800	145	95	75
FP–20/12.5T20	20	12.5	358	305	790	145	95	75
FP–20/12.5T22	20	12.5	358	305	790	145	95	75
FP–24/6T20	24	6	272	160	650	125	95	75
FP–24/6T22	24	6	272	160	650	125	95	75
FP–36/12.5T20	36	12.5	410	383	960	210	143	98
FP–36/12.5T22	36	12.5	410	383	960	210	143	98
FP–35/12.5T24	36	12.5	410	383	960	210	143	98

Note: We also provide OEM service and manufacture according to drawings.

Composite Post Insulators



Product Drawings



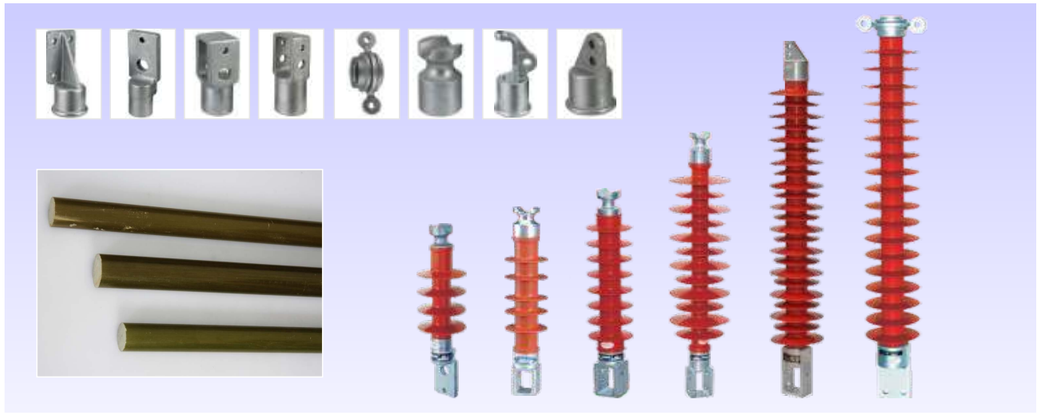
Product Specifications

Model	Rated Voltage	Specified Mechanical Bending Load	Section Length H	Polymer Length L	Minimum Creepage Distance	Lightning Impulse Withstand Voltage	I min Power Frequency Withstand Voltage(KV)	
	KV	KN	mm	mm	mm	KV	Dry	Wet
FZSW1–24/5	24	5	286	180	610	150	68	50
FZSW1–24/10	24	10	311	220	800	194	140	88
FZSW1–36/3	36	3	410	310	1104	200	100	80
FZSW1–36/2	36	2	410	310	1100	200	100	80
FZSW2–66/12.5	66	12.5	690	540	1660	410	150	135
FZSW2–66/12.5	66	12.5	810	660	2065	430	160	140
FZSW3–110/10	110	10	1150	1010	3550	450	265	185
FZSW3–11–/10	110	10	1200	1050	3710	450	265	185
FZSW3110/10	110	10	1220	1070	3730	450	265	185
FZSW3–110/10	110	10	1500	1350	4700	450	265	185
FZSW3–110/10	110	10	1500	1350	4700	450	265	185

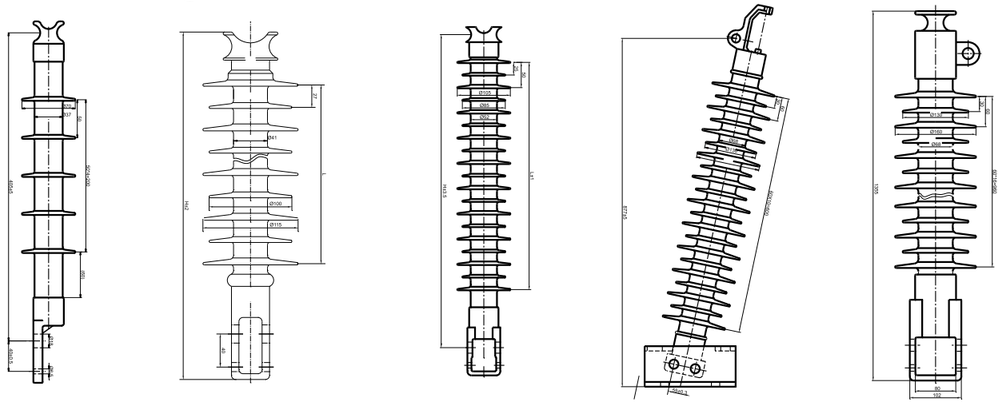
Note: We also provide OEM service and manufacture according to drawings.

Tongyi 电力技术专家 Power Equipment 同益电力设备

Composite Crossarm Insulators



Product Drawings



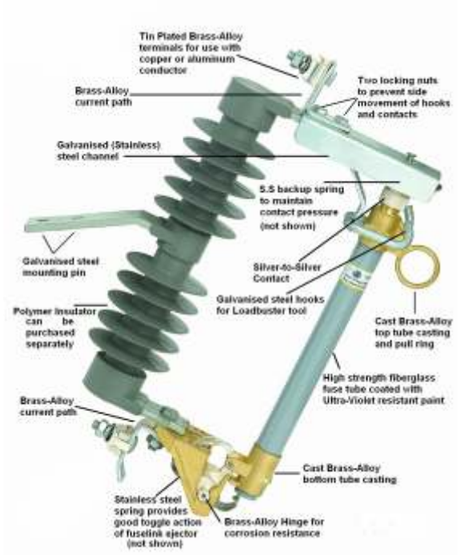
Product Specifications

Model	Rated Voltage	Specified Mechanical Bending Load	Section Length H	Polymer Length L	Minimum Creepage Distance	Lightning Impulse Withstand Voltage	Imin Power Frequency Withstand Voltage(KV)	
	kV	kN	mm	mm	mm	kV	Dry	Wet
FS–10/2.5	10	2.5	445	310	452	110	60	50
FS–10/5	10	5	254	260	450	110	60	50
FS–10/70	10	70–tensile	300+L	192	360	125	60	30
FS–10/8	10	8	210+L	160	380	135	70	50
FS–20/6	20	6	415	298	800	145	95	75
FS–25/12	25	12	760	480	1630	270	160	130
FS–25/12	25	12	760	480	1630	270	160	130
FS–25/12	25	16	800	530	1700	270	160	130
FS–25/16	25	16	800	530	1700	270	160	130
FS–25/16	25	16	890	650	1880	320	190	153
FS–25/8	25	8	670	430	1300	300	190	150
FS–25/8	25	8	840	520	1645	270	160	130
FS–27/54	27	54–tensile	550	340	955	260	150	125
FS–27/100	27	100–tensile	540	340	1058	260	150	125
FS–27/54	27	54–tensile	485	340	955	260	150	125
FS–27/54	27	54–tensile	580	340	955	260	150	125
FS–35/6	35	6	620	506	1200	200	130	100
FS–35/8	35	8	620	500	1180	200	130	100
FS–66/12.5	66	12.5	877	708	2065	430	160	140
FS–110/5	110	5	1355	1060	3210	550	265	230

Note: We also provide OEM service and manufacture according to drawings.

Polymeric Fuse Cutouts

Tongyi 电力技术专家 Power Equipment 同益电力设备



Application

Polymer cutout HRW series are designed to provide protection to the lines of your systems and distribution transformer against overload and short circuit damage.

Ratings

We are able to offer several frame sizes to properly match each system BIL. Each fuse cutout support has universal contacts that accommodate a 100A or a 200A fuse holder.

Interchangability

Our polymer cutout are designed to be electrically and mechanically interchangeable with the S&C type "XS", A.B. Chance type "C", ABB type "ICX" and Cooper type "L" cutouts, as well as all other fuse cutouts produced in accordance with the IEC 282, IEEE C37.41 and C37.42 standards.

Efficient Current Transfer

HRW Polymer cutout has an copper current path and all contacts are silver plated. Terminals are tin plated brass alloy for use with copper or aluminum conductors

Polymer Insulator

Our HRW cutout insulators are manufactured from HTV silicone rubber and have been evaluated with several material and technical analysis tests in accordance with IEC 61109–Annex C and ANSI C29–13–2000 Tracking & Erosion resistance. Creepage distances range from 360mm–960mm with different BIL.

Higher interrupt capacities

By using a copper arc–shortening rod attached to the dome nut inside the top of the fuse tube, lowering the fuse link, higher interrupt ratings are obtainable. It is necessary to use fuse links with removable button heads when using an arc–shortening rod.

Product Specifications

Model	Rated Voltage	Rated Current	Interrupting Capacity	BIL	Power Frequency Wishatnd Voltage	Creepage Distance	Packing Dimension
	kV	A	A	kV	kV	mm	LxWxH(mm)
HRW1	12	100	6300	75	45	360	410 x 210 x 120
HRW1	12	200	12500	75	45	360	
HRW2	12	100	6300	125	45	300	410 x 210 x 120
HRW2	12	200	12500	125	45	300	
HRW3	12	100	6300	125	45	390	410 x 220 x 120
HRW3	12	200	12500	125	45	390	
HRW4	12	100	6300	125	45	430	530 x 370 x 145
HRW4	12	200	12500	125	45	430	
HRW5	15	100	6300	125	45	380	500 x 260 x 135
HRW5	15	200	10000	125	45	380	
HRW6	24	100	10000	150	68	620	500 x 360 x 135
HRW6	24	200	12000	150	68	620	
HRW7	24	100	10000	120	68	620	500 x 360 x 135
HRW7	24	200	12000	120	68	620	
HRW8	27	100	10000	125	68	620	520 x 360 x 140
HRW8	27	200	12000	125	68	620	
HRW9	27	100	10000	120	68	580	500 x 360 x 140
HRW9	27	200	12000	120	68	580	
HRW10	36	100	10000	170	80	960	660 x 360 x 140
HRW10	36	200	12000	170	80	960	

Note: Cutout composite insulators can be supplied separately upon request.

Cutout composite insulator
Tongyi 电力技术专家 Power Equipment 同益电力设备

Cutout Insulator

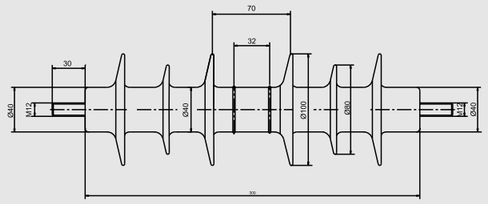
Product Specifications

Model Rod Diameter (mm) x Section Length (mm)	Rated Voltage kV	Specified Mechanical Bending Load kN	Creepage Distance mm	Power Frequency Withstand Voltage		Lightning Withstand Voltage (kV)
				Dry (kV)	Wet(kV)	
FPRZ–15/15– ϕ34 x 300	15	15	275	48	32	75
FPRZ–15/15– ϕ30 x 300	15	15	360	48	32	75
FPRZ–15/15– ϕ30 x 300	15	15	380	48	32	75
FPRZ–15/15– ϕ34 x 360	15	15	390	48	32	75
FPRZ–15/15– ϕ24 x 300	15	15	300	48	32	125
FPRZ–15/8– ϕ24 x 300	15	8	390	48	32	125
FPRZ–24/8– ϕ34 x 340	24	15	430	48	32	125
FPRZ–24/8– ϕ28 x 356	24	8	580	68	50	150
FPRZ–24/8– ϕ34 x 356	24	8	620	68	50	150
FPRZ–24/8– ϕ34 x 356	24	8	620	68	50	150
FPRZ–27/10– ϕ34 x 356	27	10	620	78	56	150
FPRZ–36/7– ϕ30 x 445	36	7	960	100	80	170

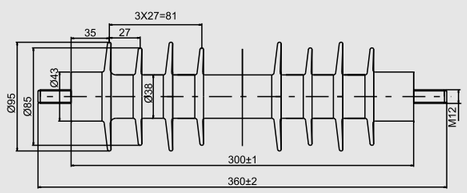
Note: welcome customer's drawing request for cutout insulator.

Drawings for cutout composite insulators

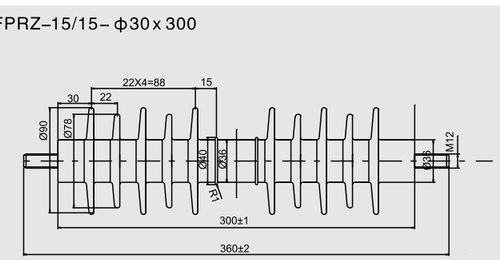
FPRZ–15/15– ϕ34 x 300



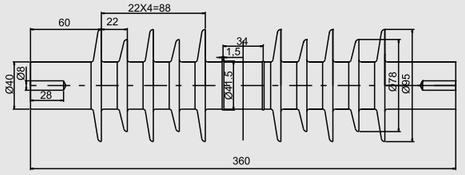
FPRZ–15/15– ϕ30 x 300



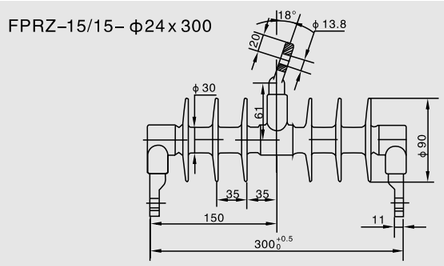
FPRZ–15/15– ϕ30 x 300



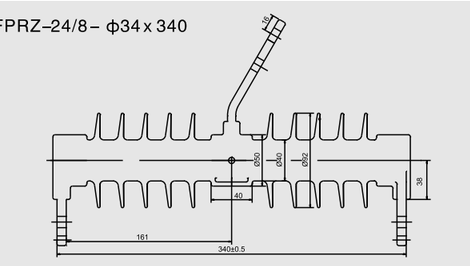
FPRZ–15/15– ϕ34 x 360



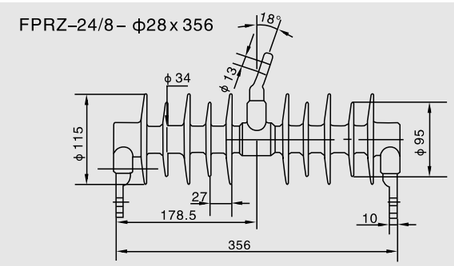
FPRZ–15/15– ϕ24 x 300



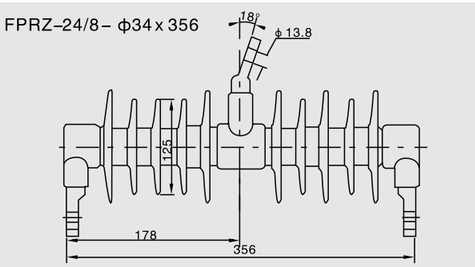
FPRZ–24/8– ϕ34 x 340



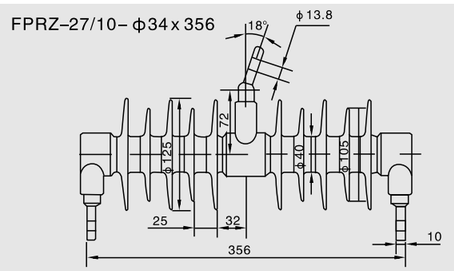
FPRZ–24/8– ϕ28 x 356



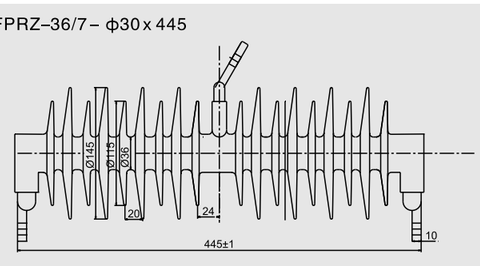
FPRZ–24/8– ϕ34 x 356



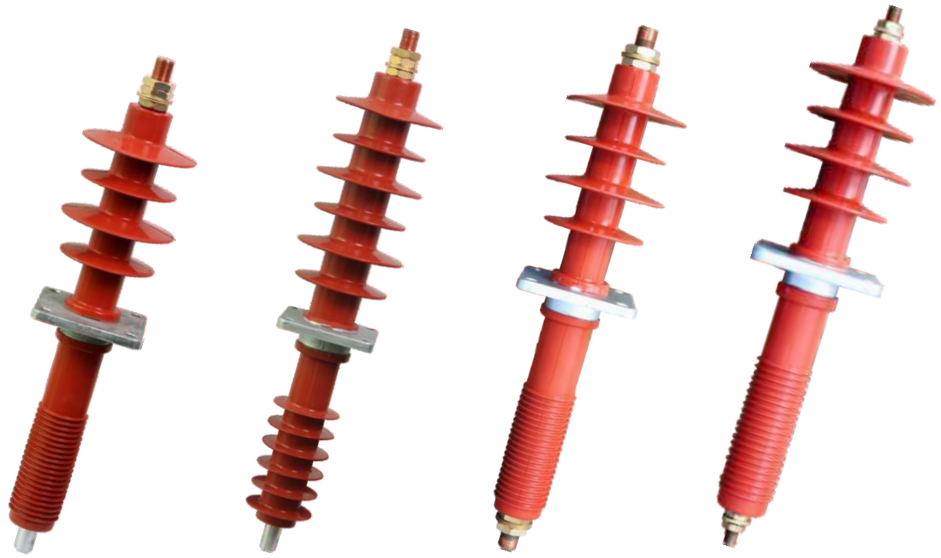
FPRZ–27/10– ϕ34 x 356



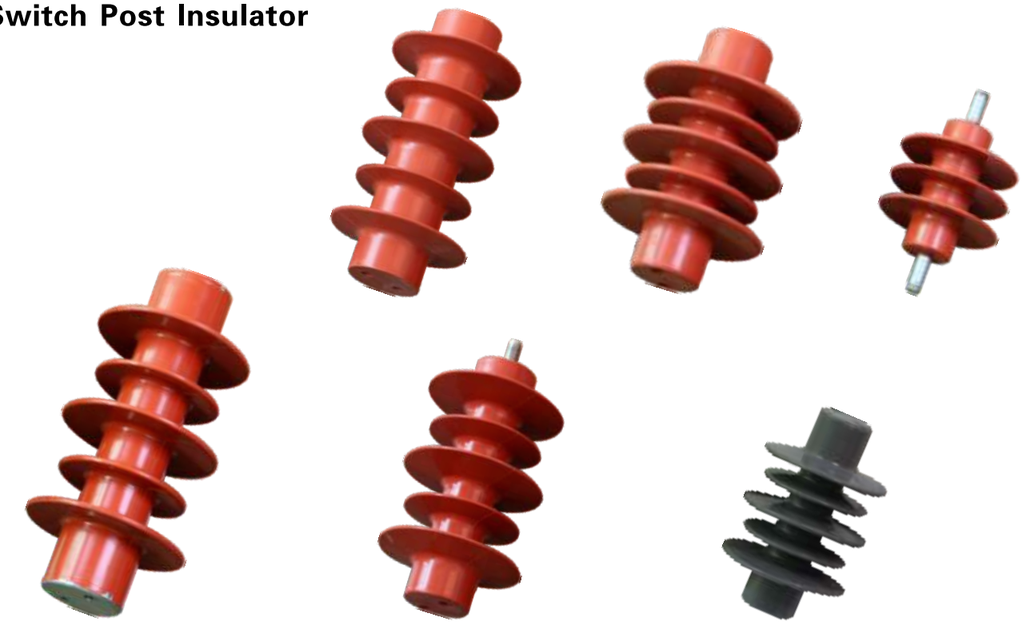
FPRZ–36/7– ϕ30 x 445



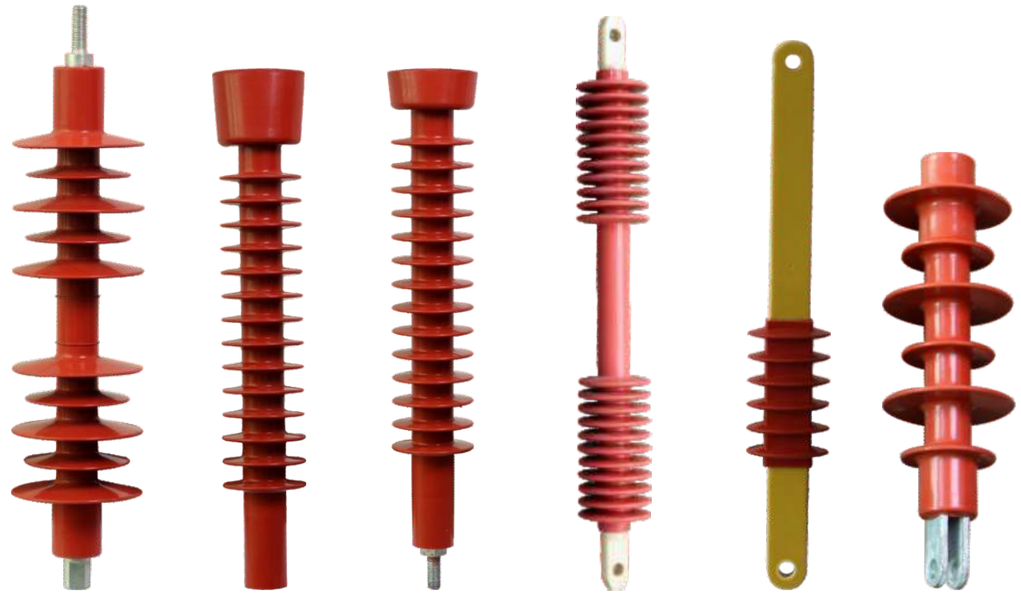
Composite Wall Bushing



Switch Post Insulator



Switch Insulation Pole

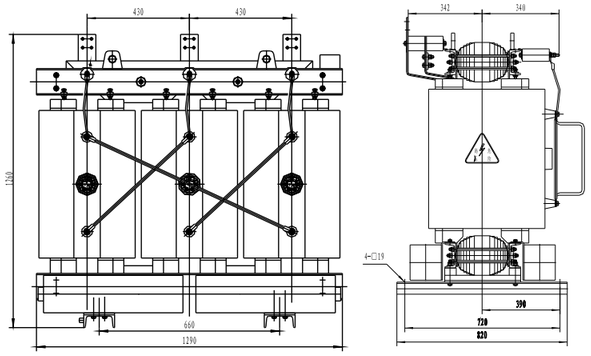


Switch Housing

Tongyi 电力技术专家 Power Equipment 同益电力设备

Three Phase Dry-type Power Transformer

Outline Drawing



Product Specification

Model	Po (W)	Pk(W) 75℃	Uk %	Lo %	Wt (kg)	Dimension(mm) a	b	d	e	g	h	k	LpA (dB)	LV Terminal
SC10–30/10	220	760	4	2	250	620	500	400	615	190	215	205	43	(a)
SC10–50/10	310	920		2	360	620	625	400	760	190	250	205	43	(a)
SC10–80/10	380	1100		2	460	790	640	400	700	200	270	265	43	(a)
SC10–100/10	450	1450		1.6	540	820	650	400	740	200	270	275	43	(a)
SC10–125/10	480	1710		1.6	620	1200	760	660	1150	256	357	325	43	(a)
SC10–160/10	550	1860		1.6	760	970	760	550	960	252	310	180	43	(a)
SC10–200/10	630	2210		1.6	855	1010	760	550	1000	260	320	340	43	(a)
SCB10–250/10	730	2410		1.4	950	1060	760	550	1060	265	325	355	44	(b)
SCB10–315/10	880	3030		1.4	1195	1100	760	660	1130	330	340	365	44	(b)
SCB10–400/10	990	3480	4	1.2	1425	1185	820	660	1160	282	330	395	44	(b)
SCB10–500/10	1170	4280		1.2	1565	1200	820	660	1190	342	340	400	44	(c)
SCB10–630/10	1350	5200		1.2	1725	1250	820	660	1270	351.5	340	415	44	(c)
SCB10–630/10	1300	5200		1.2	1780	1290	820	660	1260	342	340	430	45	(c)
SCB10–800/10	1520	6080		0.9	2125	1390	820	820	1350	355.5	370	465	45	(c)
SCB10–1000/10	1770	7100		0.9	2420	1630	1070	820	1650	365	450	550	45	(d)
SCB10–1250/10	2090	8460		0.9	2830	1500	920	820	1520	376	370	500	48	(d)
SCB10–1600/10	2480	10240	6	0.9	3460	1610	920	820	1580	390	390	535	48	(e)
SCB10–2000/10	3060	12600		0.7	4160	1700	920	820	1735	360	390	560	48	(e)
SCB10–2500/10	3600	15000		0.7	4820	1710	920	820	1845	380	400	575	48	(f)

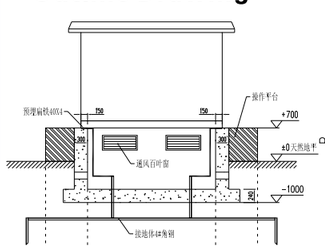
Note:the technical manual is made separately, please contact us for the profile.

ZBW/YBM Substation

Tongyi 电力技术专家 Power Equipment 同益电力设备

European Style Substation

Outline Drawing



Color Steel Plate Type

Anti-corrosion Wooden Type

General

The ZBW/YBM series combination compact substation is a outdoor three-phase complete power distribution rated frequency is 50/60Hz, and the voltage at the HV side is 35kV, LV side is 0.4kV. It can be used in the cities, villages and towns, path, factories, oil field, mine, dock, as well as constructive work places, for the accepting, converting and distributing. It has the features of strong complete set, small volume, convenience installation, simple maintenance, low cost, high automatic performance and safety running.
The combination substation conforms to IEC62271-202 and GB/T17467-1998 standards: high voltage / low voltage prefabricated substation,

Working Conditions

1. Altitude: ≤1000m;
2. Ambient temperature: -25 ~ +40℃;
3. Wind speed: 34m/s (Wind pressure: 700Pa);
4. Ice thickness: 20mm;
5. Relative humidity: daily average 95%, monthly average 90%;
6. Be free of severe shock, vibration and corrosion; no risk of fire and explosion.

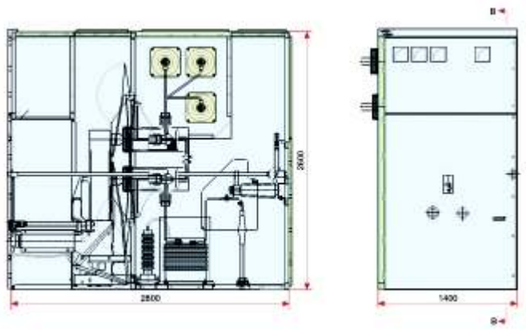
Technical Data

Ser. No.	Item	Unit	Value
1	Rated Capacity	kVA	30–1250
2	High Voltage Side		
2.1	Rated Voltage	kV	7.2–12
2.2	Rated Current	A	630
2.3	Rated Interrupting Current	kA	31.5–40
3	Low Voltage Side		
3.1	Rated Voltage	kV	0.4
3.2	Main Switch Rated Current	A	100–2500
3.3	Main Switch Rated Interrupting Capacity	kA	15–80
4	Protection Grade		IP 3X
5	Noise Level	dB	≤65

Note:the technical manual is made separately, please contact us for the profile.

KYN61–40.5(Z) Metal Clad Switchgear

Outline Drawing



General

KYN61–40.5 removable AC metal–clad switchgear (short for switchgear as below) applies to 40.5kV, 3 phase, AC and 50/60Hz electrical power network for receiving and distributing power energy and also for control, monitor and protect ion. It is applicable in general power system and occasions with frequent operation.

The product conforms to GB3906: 3~35kV AC Metal Enclosed Switchgear, IEC60694 & GB/T11022: Common Specifications For High–Voltage Switchgear and Controlgear Standards, as well as IEC62271–200 AC Metal–enclosed switchgear and controlgear for rated voltage above 1kV and below 52kV.

Working Conditions

1. Ambient temperature: –10 ~40℃
2. Altitude: ≤1000m;
3. Relative humidity: daily average ≤95%, monthly average ≤90%;
4. Earthquake intensity: ≤Magnitude 8;
5. Applicable in the places free of corrosives, inflammables and vapor.

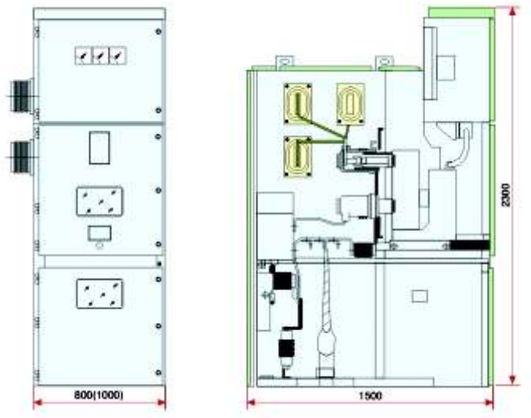
Product Parameter

Ser. No.	Item		Unit	Value
1	Rated Voltage		kV	40.5
2	Rated Insulation Level	Lightning Impulse Withstand Voltage	kV	185
		1min power frequency withstand voltage	kV	95
3	Rated Frequency		Hz	50
4	Rated Current		A	1250 1600 2000
5	Rated Short–circuit Breaking Current		kA	25,31.5
6	Rated Short– time Making Current (Peak)		kA	63,80
7	Rated Peak Withstand Current		kA	63,80
8	Rated Short–time Withstand Current(4s)		kA	25,31.5
9	Protection Grade of the Frame		IP3X or IP4X	
10	Overall Dimension (W×D×H)mm	VCB Cabinet	1400×2800×2600	
		SF_6 Circuit Breaker Cabinet	1400×2950×2600	
11	Weight of Circuit Breaker Cabinet		Kg	2600
	Weight of Handcart	SF_6 Handcart		300
		Vacuum Handcart		400

Note: Custom Products are available upon your request.

KYN28A–12(GZS1) Metal Clad Switchgear

Outline Drawing



General

KYN28A–12(GZS1) Withdrawable–type Metal Clad AC Enclosed Switchgear is developed on the basis of advanced technology from abroad, which can replace the out of date metal closed switch cabinet. The switchgear applies 3.6~12kV 3 phase AC 50Hz network to secondary receiving and distribution of power energy and also for control, monitor and protection.

The door applies the spray coating and has high resistance of impulse shock and corrosion. The main switch cabinet can be equipped with the our VS1,or ABB VD4, SIEMENS 3AH Series and GE VB2 vacuum circuit breaker.

It conforms to IEC62271–200 High Voltage Switchgear and controlgear Part 200: AC Metal–enclosed switchgear and controlgear for rated voltage above 1kV and up to and including 52kV; IEC 62271–100: High–voltage switchgear and controlgear Part 100: Alternating–current circuit–breakers; IEC60694 Common Specifications for High–Voltage Switchgear and Controlgear Standards.

Working Conditions

1. Ambient temperature: –10 ~40℃
2. Altitude: ≤1000m;
3. Relative humidity: daily average ≤95%, daily average of water vapor pressure ≤2.2Kpa
   monthly average ≤90%; monthly average of water vapor pressure ≤1.8Kpa
4. Earthquake intensity: ≤Magnitude 8;
5. Applicable in the places free of corrosives, inflammables and vapor.

Product Parameter

Ser. No.	Item		Unit	Value
1	Rated Voltage		kV	3.6; 7.2; 12
2	Rated Insulation Level	1min Power Frequency Withstand Voltage	kV	42
		Lightning Impulse Withstand Voltage	kV	75
3	Rated Frequency		Hz	50
4	Main Busbar Rated Current		A	630; 1250; 1600; 2000 2500; 3150; 4000; 5000
5	Branch Busbar Rated Current		A	630; 1250; 1600; 2000 2500; 3150; 4000; 5000
6	Rated Short-time Withstand Current (4s)		kA	16; 20; 25; 31.5; 40; 50
7	Rated Peak Withstand Current		kA	40; 50; 63; 80; 100; 125
8	Protection Grade		IP4X for the enclosure, IPX2 when CPT,CB Door is open	

Note: The technical manual is made separately, please contact us for the profile.
Custom cabinet is available upon your request.

General

Tongyi Power has over 15 years of experience in manufacturing FRP products (fiberglass reinforced polymer) and has been exporting to our clients worldwide.

FRP Rebar produced by our company has applied the pultrusion process technology with a variety of cross section diameter ranging from 3mm to 32mm, of which high–quality raw materials of reinforced glass fibers and epoxy resin are used. BFRP (Basalt FRP) is also available upon clients' request.

Benefits of FRP Rebar

- Light weight
- high strength
- high stiffness
- corrosion resistant
- flame resistant
- long life cycle
- easy cutting and processing
- excellent fatigue resistance
- non–conductive thermally and electrically
- transparent to magnetic fields

Applications

Concrete Exposed to De–Icing Salts
Bridge decks, median barriers, approach slabs, railroad crossings, salt storage facilities.

Concrete Exposed to Marine Salts
Seawalls, aquaculture operations, floating marine docks, buildings and structures near waterfronts, artificial reefs and water breaks.

Tunneling and Mining Applications
Subway, Rock nails, Electrolytic and ore extraction tanks

Electromagnetic Applications
MRI rooms in hospitals, seismic stations, telecommunication towers, Airport Radio and compass calibration pads Concrete near high voltage cables, transformers & substations.

Product Specifications

Diameter	mm	6	9	12	16	19	22	25	ASTM
Weight	g/m	52	118	209	372	524	702	908	standard
Glass Fiber	%	73	73	73	73	73	73	73	D2584
Density	g/m^3	1.85	1.85	1.85	1.85	1.85	1.85	1.85	D792
Tensile Strength	Mpa	825	760	690	655	620	586	550	D638
Tensile Modulus	Gpa	40	40	40	40	40	40	40	D638
Compressive Strength	Mpa	750	710	630	630	630	610	610	D695
Flexural Strength	Mpa	810	750	680	680	660	660	640	D790
Flexural Modulus	Gpa	40	40	40	40	40	40	40	D790
Shear Strength	Mpa	160	160	160	160	160	160	160	D3914
Longitudinal CTE	10^{-6}/°C	10	10	10	10	10	10	10	D696
Transverse CTE	10^{-6}/°C	20	20	20	20	20	20	20	D696
Water Absorption	%	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	D570

Note: Diameter ranges from 3mm to 32mm, different finish types are available.
Glossary: CET Coefficient of Thermal Expansion

Application Reference

Fittings for Suspension Insulator

Fittings for Pin Insulator

Fittings for Post Insulator

Fittings for Crossarm Insulator

Other Fittings