



BBCA

Power Electronics



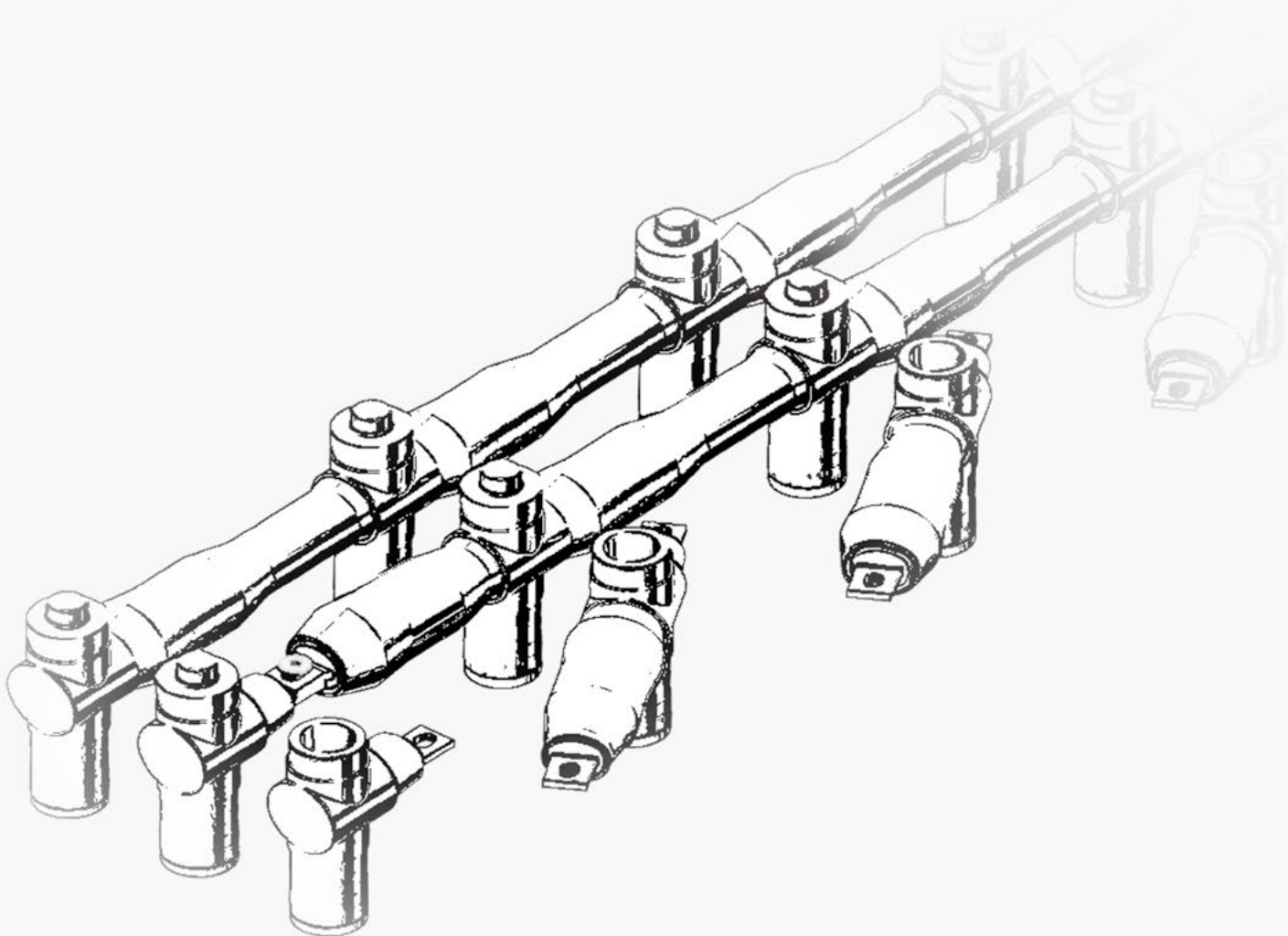
®



预制式电力电缆接头

适用于12.5 - 72.5 kV的地下电缆系统

For 12.5 - 72.5kV Underground Distribution Systems



北京必成达电力电子科技集团有限公司

Beijing Bichengda Electric Power Electronics Technology Group Co., Ltd.



前言 • Preface

北京必成达电力电子科技集团有限公司现注册于北京市西城区，是一家致力于研发、制造智能电网相关产品和中高压电力电缆附件于一体的专业化企业。

Beijing Bichengda Electric Power Electronics Technology Group Co., Ltd., currently registered in Xicheng District, Beijing, is a specialized enterprise dedicated to the research, development, and manufacturing of smart grid-related products and medium to high voltage power cable accessories.

公司自 97 年成立之初，即确定了以“信”为生存之本，以“合”为发展之道的经营理念。

Since its foundation in 1997, Bichengda Company has operated according to the philosophy - survival through "TRUST" and continuous development through "COOPERATION".

以“信”求生存。我们相信，人无信不立，企业无信亦无法生存。以诚信对待客户，“言必行，承必诺”是每一个公司员工工作行为的准则。以严肃认真的态度对待从原料采购到试验出厂的每一个环节，将质量可靠、工艺上乘的产品交付给每一个客户，是我们永远坚持的原则。

Survive through “TRUST”:

It is our belief that nobody can gain a position without being trustworthy and that no enterprise can get established without credibility. To treat customers with honesty and to honor commitments are the key principles of the code of conduct that all members of our company adhere to. We are dedicated to being serious and conscientious in every detail from raw material purchase to product delivery, so as to provide our customers with cutting-edge products of high quality.

以“合”求发展。企业不可能游离于行业之外自行发展，只有紧扣行业发展的方向，持续紧跟技术发展的潮流，企业才能做到不被淘汰。公司通过积极的与武高所、ABB、施耐德等对于业界技术发展处于引领地位的企事业单位进行合作，开发出了一大批如配电室综合监控系统、预制式高压电缆附件之类的处于业界前端的特有产品，丰富了业内人士的选择。

Continuous development with “COOPERATION”:

No enterprise can develop independently of its surrounding industry. To remain current, it must stay close to the direction of development of the industry and constantly follow the technology trends. By active cooperation with Wuhan High Voltage Research Institute, ABB, Schneider and other leading enterprises and public institutions, including integrated monitoring systems for distribution rooms and prefabricated high-voltage cable accessories. These innovations have enriched the options available to industry professionals.

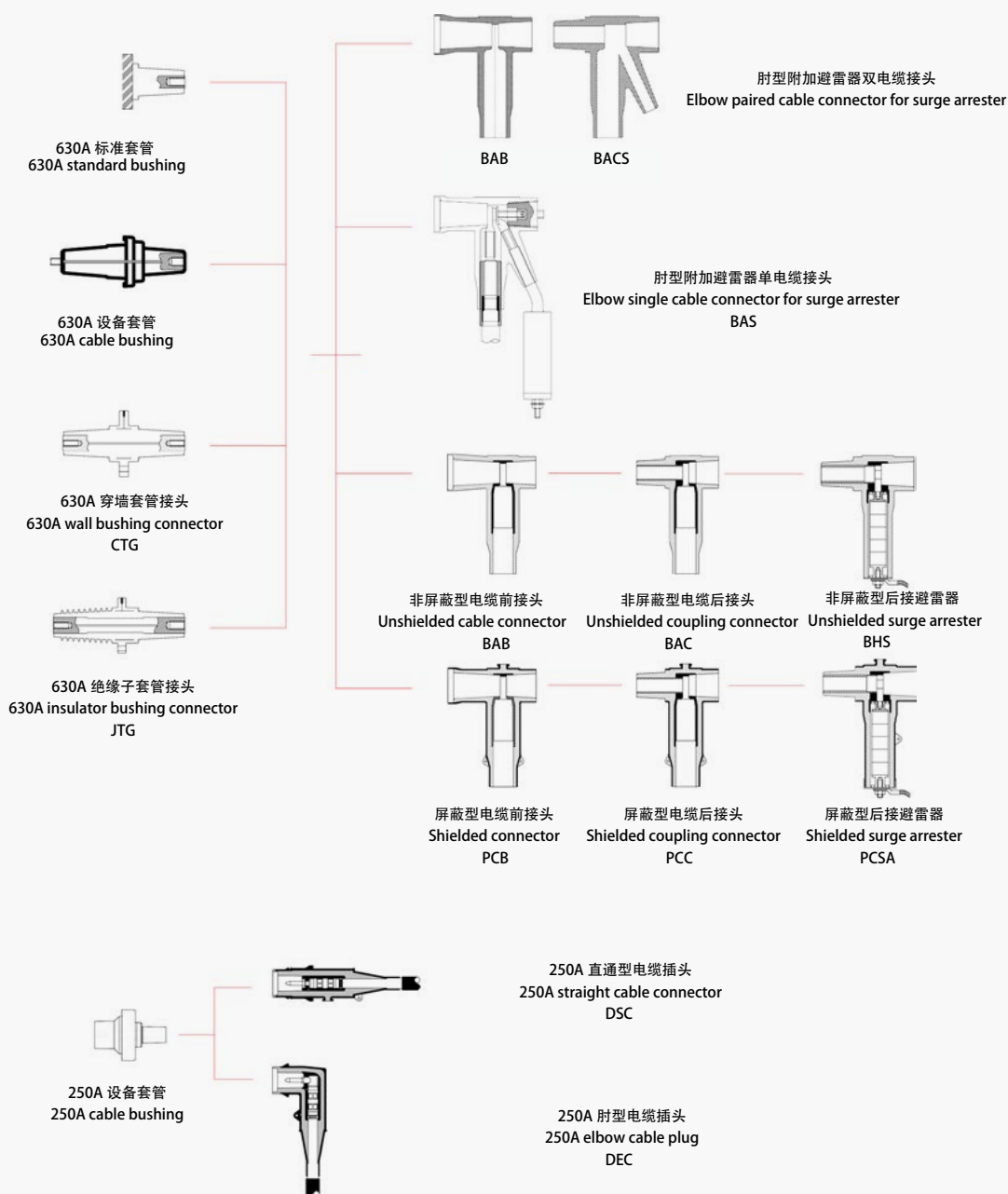
用技术先进的产品解决您的生产需要，用质量上乘的产品提升您的产品品质和市场竞争力，以诚信、合作的态度对待每一个希望和我们共同发展的客户，是我们永远坚持的信条。

It is our unswerving creed to meet your production demands with high-tech products, to improve your product quality and market competitiveness, and to maintain a sincere and cooperative relationship (attitude) with each client in pursuit of common growth.

概述 / Summary

BBCA 系列欧式可分离电缆连接器，严格按照 DIN47636、EN50180、EN50181 标准设计和制造，成功通过 IEC60502/IEC60840 标准所规定的型式试验项目，能和所有符合 DIN47636 和 EN50180，EN50181 标准的套管，插头或母排设备配合安装或互换安装。出厂前 100% 通过外观检查和电气性能检测，保证产品品质一致。

BBCA separable cable connectors of European type are designed and manufactured in strict accordance with DIN47636, EN50180 and EN50181, and have passed type tests according to IEC60502/IEC60840, fitting well with bushing, plugs and busbars complying with the above standards. All the connectors pass appearance inspection and electrical testing before delivery to ensure the product quality.



技术参数
Technical parameters

Executive standards		
执行标准	DIN47636	外锥套形仪器连接件用电力电缆插套组合配件 Bushing for Separable Accessories for Power Cable with Protruding Cone
	IEC60502	系统电压1kV (Um=1.2kV)以上至30kV (Um=36kV)挤出绝缘电力电缆及其附件 Power cables with Extruded Insulation and Their Accessories for Rated Voltages from 1 kV (Um=1.2kV) to 30kV (Um=36kV)
	IEC61442	系统电压6kV (Um=7.2kV)到30kV (Um=36kV)电力电缆附件试验方法 Test Methods for Accessories for Power Cables with Rated Voltages from 6 kV (Um = 7.2 kV) up to 30 kV (Um = 36 kV)
	GB12706	系统电压1kV (Um=1.2kV)到35kV (Um=40.5kV)挤包绝缘电力电缆及附件 Power cables with Extruded Insulation and Their Accessories for Rated Voltages from 1 kV (Um=1.2kV) up to 35kV (Um=40.5kV)
	GB311.1	高压输变电设备绝缘配合 Insulation Co-ordination for High Voltage Transmission and Distribution Equipments
	GB/T4109	交流电压高于1000V的绝缘套管 Insulated bushings for alternating voltages above 1000 V
	GB11032	交流无间隙金属氧化物避雷器 Metal Oxide Surge Arresters without Gaps for AC Systems
	IEC60840	额定电压30kV (Um=36kV) 以上至150kV (Um=170kV) 挤包绝缘电力电缆及其附件 - 试验方法和要求 Power cables with extruded insulation and their accessories for rated voltages above 30 kV (Um = 36 kV) up to 150 kV (Um = 170 kV) – Test methods and requirements

Voltage Parameters							
电压技术参数	项目 Items	15kV等级	20kV等级	24kV等级	35kV等级	40.5kV等级	72.5kV等级
	电缆系统电压 Rated Voltage	8.7/15kV	12/20kV	18/20kV	21/35kV	26/35kV	38/66kV
	AC工频耐压 AC voltage withstand 1min	39kV/5min	54kV/5min	65kV/5min	94.5kV/5min	117kV/5min	140kV/5min
	DC工频耐压 DC voltage withstand 15 min	35kV/15min	48kV/15min	57kV/15min	84kV/15min	104kV/15min	95kV/30min
	雷电冲击电压 1.5/50uS Lightning impulse voltage	95kV	125kV	150kV	210kV	250kV	325kV
	局部放电电压 ≤ 10pC Partial discharge voltage	15kV	20kV	31kV	36kV	45kV	57kV
	可适应电缆截面 Applicable conductor cross section	35 ~ 500mm ²	35 ~ 500mm ²	35 ~ 630mm ²	50 ~ 500mm ²	50 ~ 500mm ²	95 ~ 630mm ²

Current parameters				
电流技术参数	项目 Items	250A	630A	1250A
	热稳定电流 Thermal stability current	16kA 2S	25kA 2S	31.5kA 4S
	动稳定电流 Dynamic stability current	40kA 0.3S	63kA 0.35S	80kA 0.3S

630A 屏蔽型可分离式电缆前接头 630A shielded separable connector

■ 型号 / Type : PCB-615\624

■ 应用 / Applications:

- 通过 630A 预制式电缆前接头, 可实现单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的连接。

630A prefabricated connector enables connection of single-phase or three-phase cable with switchgear, transformer, cable distribution box and other electrical equipments.

- 适用于户内或户外安装。

Suitable for indoor or outdoor installations.

- 系统电压: 8.7/15kV \ 12/20kV。

Rated voltage: 8.7/15kV \ 12/20kV

- 持续额定电流: 630A。

Rated continuous current: 630A.

- 可扩展连接 PCC 后接头或 PCSA 系列避雷器, 实现多路安装或提供过电压保护。

Connect to PCC coupling connector or PCSA surge arrester to enable multi-loop installation or provide over voltage protection.

电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 35 ~ 500mm² / Conductor cross section: 35 ~ 500mm²
- 电缆导体类型: 铜芯或铝芯 / Type of cable conductor: Copper or aluminum



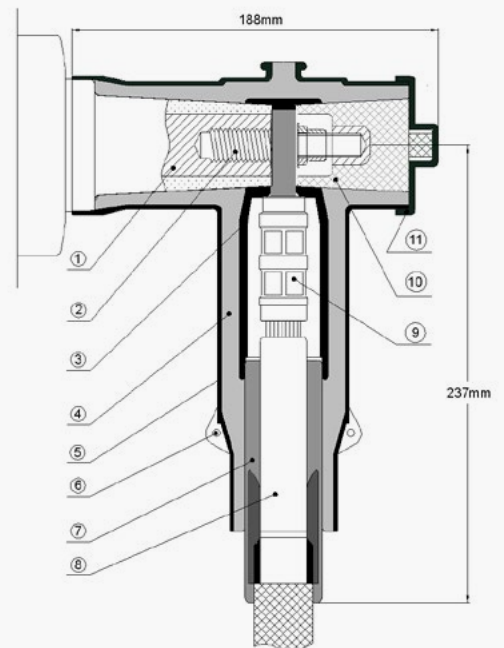
Types

选型表	连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 8.7/15kV \ 12/20kV (mm ²)
	PCB-615\624	CA6001	16.5-22	35-95
	PCB-615\624	CA6002	23.4-26.6	120-185
	PCB-615\624	CA6003	28.9-31.3	240-300
	PCB-615\624	CA6004	33.9-36.9	400-500

■ 特性 / Characteristics:

- 与 C 型套管配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with C-type bushing.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.

- 1- 630A 标准套管
630A standard bushing
- 2- 双头螺栓
Stud bolt
- 3- SIR 内均压层
SIR internal shielding layer
- 4- SIR 绝缘层
SIR insulating layer
- 5- SIR 屏蔽层
SIR shielding layer
- 6- 屏蔽层接地点
Ground point of the shielding layer
- 7- 应力控制单元
Stress control unit
- 8- XLPE 电力电缆
XLPE power cable
- 9- 压接铜鼻
Compression lug
- 10- 绝缘塞
Insulating plug
- 11- 绝缘塞屏蔽罩
Insulating plug shield



630A 屏蔽型可分离式电缆后接头 630A shielded separable coupling connector

■ 型号 / Type : PCC-615\624

■ 应用 / Applications:

- 通过与 630A 预制式电缆前接头 (PCB) 连接, 可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接, 实现多回路进出线。
Connected with 630A prefabricated connector (PCB), this type of connector provides extended connection between single-phase or three-phase cable and switchgear, transformer, cable distribution box and other electrical equipments.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 系统电压: 8.7/15kV \ 12/20kV。
Rated voltage: 8.7/15kV \ 12/20kV
- 持续额定电流: 630A。
Rated continuous current: 630A.
- 可扩展连接 PCC 后接头或 PCSA 系列避雷器, 实现多路安装或提供过电压保护。
Connect to PCC coupling connector or PCSA arrester to enable multi-loop installation or provide over voltage protection.



电缆特性 / Cable features:

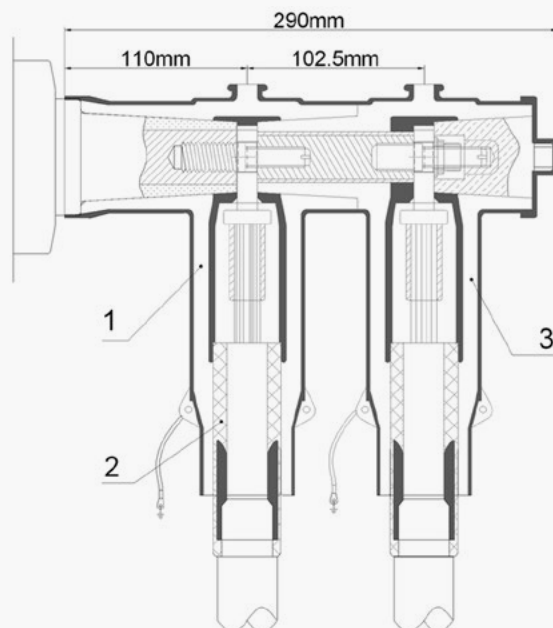
- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 35 ~ 500mm² / Conductor cross section: 35 ~ 500mm²
- 电缆导体类型: 铜芯或铝芯 / Type of cable conductor: Copper or aluminum

Types				
选型表	连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 8.7/15kV \ 12/20kV (mm ²)
	PCC-615\624	CA6001	16.5-22	35-95
	PCC-615\624	CA6002	23.4-26.6	120-185
	PCC-615\624	CA6003	28.9-31.3	240-300
	PCC-615\624	CA6004	33.9-36.9	400-500

■ 特性 / Characteristics:

- 在扩展回路时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections when used for multi-loop expansion.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 紧凑设计, 双电缆安装可以适用标准开关柜电缆室。
Compact design and pair-cable installation, suitable for the cable vault of standard switchgear.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.

1-PCB 前接头 PCB connector
2-应力控制单元 Stress control unit
3-PCC 后接头 PCC coupling connector



■ 型号 / Type : PCSA

■ 应用 / Applications:

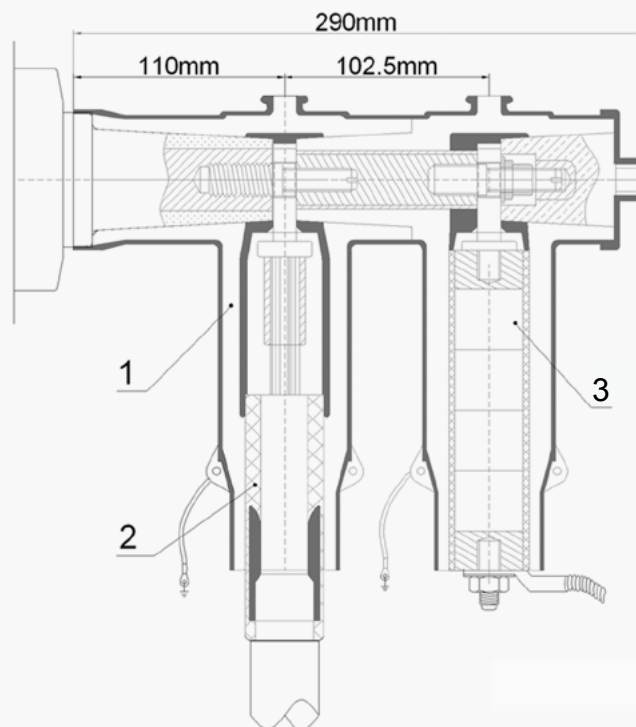
- 通过与 630A 预制式电缆接头 PCB/PCC 连接, 可为开关柜、变压器、电缆分接箱等其他电气设备提供过电压保护。

Connected with 630A prefabricated cable connector PCB/PCC, this type of surge arrester can provide over voltage protection for switchgear, transformer, cable distribution box and other electrical equipments.

- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 符合 GB11032-2002 技术要求。
Complying with technical requirements of GB11032-2002.

■ 特性 / Characteristics:

- 与适合的套管配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with type-matched connectors.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.
- 出厂前橡胶绝缘外套均通过电气性能检测。
Rubber insulation sleeve pass the electrical testing before delivery.
- 紧凑设计, 可以适用标准开关柜电缆室。
Compact design suitable to the cable vault of standard switchgear.



1-PCB 前接头
PCB connector
2-应力控制单元
Stress control unit
3-PCSA 避雷器
PCSA surge arrester

Types

选型表	型号 Type	国标规格 National standard specification	Un (kA)	Uc (kV)	Ur (kV)	In (kV)	Up (1/10uS) (kV)	Up (8/20uS) (kV)	Up (30/60uS) (kV)	备注 Remarks
	PCSA-15/35.8	HY5WS-15/35.8	10	12	15	5	41.2	35.8	30.6	(配电型)/(Applicable to distribution system)
	PCSA-17/50	HY5WS-17/50	10	13.6	17	5	57.5	50	42.5	(配电型)/(Applicable to distribution system)
	PCSA-17/45	HY5WZ-17/45	10	13.6	17	5	51.8	45	38.3	(电站型)/(For power station)

630A 屏蔽型可分离式电缆前接头
630A shielded separable connector

■ 型号 / Type : PCB-6242

■ 应用 / Applications:

- 通过 630A 预制式电缆前后接头配合, 可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接, 实现多回路进出线。
 630A prefabricated connector enables connection of single-phase or three-phase cable with switchgear, transformer, cable distribution box and other electrical equipments.in order to implement multi-loop installation.
- 适用于户内或户外安装。
 Suitable for indoor and outdoor installations.
- 系统电压: 18/20kV。
 Rated voltage: 18/20kV.
- 持续额定电流: 630A。
 Rated continuous current: 630A.
- 可扩展连接 PCC 后接头或 PCSA24 系列避雷器, 实现多路安装或提供过电压保护。
 Connect to PCC coupling connector or PCSA24 surge arrester to enable multi-loop installation or provide over voltage protection.



Types

选 型 表	连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 18/20kV (mm ²)
	PCB-6242	CA7001	25.7-29	50-95
	PCB-6242	CA7002	30-36	120-240
	PCB-6242	CA7003	38.3-44	300-500

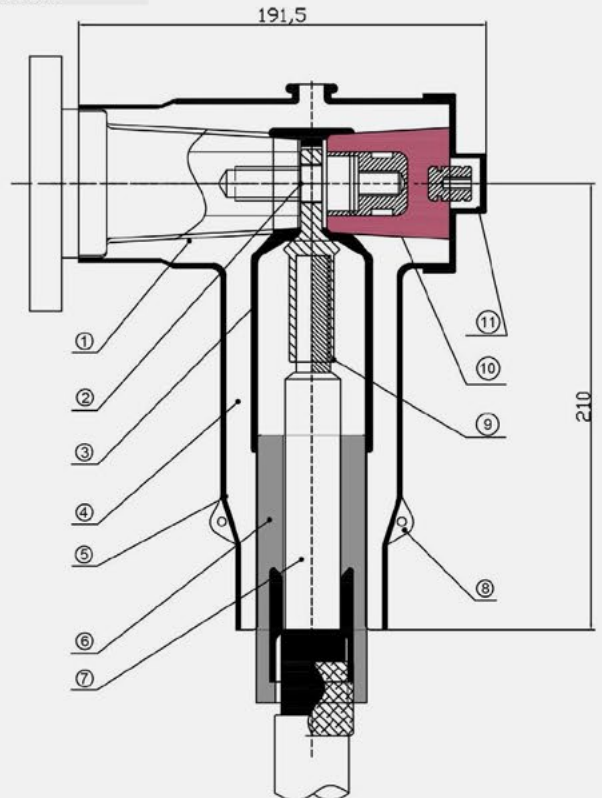
电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 50 ~ 500mm² / Conductor cross section: 50 ~ 500mm²
- 电缆导体类型: 铜芯或铝芯 / Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与 C 型套管配合时, 可提供全屏蔽和全封闭可分离连接。
 Able to provide fully-shielded or fully-sealed separable connections with C-type bushing.
- 可长期在水下或其他恶劣环境下使用。
 Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
 No least phase distance requirement.
- 可以水平、垂直或任意角度安装。
 Installation in horizontal, vertical or any other angles.

- 1- 630A 标准套管
630A standard bushing
- 2- 双头螺栓
Stud bolt
- 3- SIR 内均压层
SIR internal shielding layer
- 4- SIR 绝缘层
SIR insulating layer
- 5- SIR 屏蔽层
SIR shielding layer
- 6- 应力控制单元
Stress control unit
- 7- XLPE 电力电缆
XLPE power cable
- 8- 屏蔽层接地点
Ground point of the shielding layer
- 9- 压接铜圈
Compression lug
- 10- 绝缘塞
Insulating plug
- 11- 绝缘塞屏蔽罩
Insulating plug shield





630A 屏蔽型可分离式电缆后接头 630A shielded coupling connector

■ 型号 / Type : PCC-6242

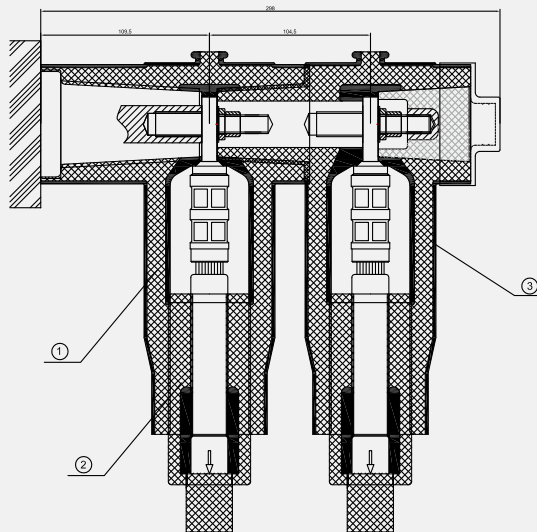
■ 应用 / Applications:

- 通过与 630A 预制式电缆前接头 (PCB) 配合, 可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接, 实现多回路进出线。
630A prefabricated connector enables connection of single-phase or three-phase cable with switchgear, transformer, cable distribution box and other electrical equipments in order to implement multi-loop installation.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 系统电压: 18/20kV。
Rated voltage: 18/20kV.
- 持续额定电流: 630A。
Rated continuous current: 630A.
- 可扩展连接 PCC 后接头或 PCSA24 系列避雷器, 实现多路安装或提供过电压保护。
Connect to PCC coupling connector or PCSA24 surge arrester to enable multi-loop installation or provide over voltage protection.



Types

选型表	连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 18/20kV (mm ²)
	PCB-6242	CA7001	25.7-29	50-95
	PCB-6242	CA7002	30-36	120-240
	PCB-6242	CA7003	38.3-44	300-500



电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE, EPR 等)
Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 50 ~ 500mm²
Conductor cross section: 50 ~ 500mm²
- 电缆导体类型: 铜芯或铝芯
Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与适合的接头配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with type matched connectors.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.
- 出厂前橡胶绝缘外套均通过电气性能检测。
Rubber insulation sleeve passes electrical testing before delivery.
- 紧凑设计, 可以适用标准开关柜电缆室。
Compact design, suitable to the cable vault of standard switchgear.

1-PCB 前接头
PCB connector

2-PCC 后接头
PCC coupling connector

3- 应力控制单元
Stress control unit

屏蔽型可分离式后接避雷器 Shielded separable surge arrester

■ 型号 / Type : PCSA24

■ 应用 / Applications:

- 通过与 630A 预制式电缆前接头 (PCB-624\6242) 连接, 可为开关柜、变压器、电缆分接箱等其他电气设备提供电压保护。

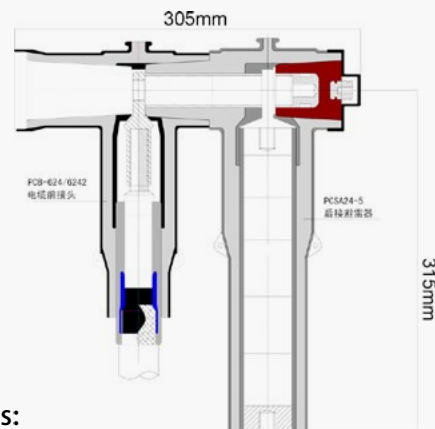
Connected with 630A prefabricated connector (PCB-624\6242), this type of arrester provides over voltage protection for switchgear, transformer, cable distribution box and other electrical equipments.

- 适用于户内或户外安装。

Suitable for indoor and outdoor installations.

- 符合 GB11032-2002 技术要求。

Complying with technical requirements of GB11032-2002.



■ 特性 / Characteristics:

- 与适合的接头配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with type-matched connectors.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.
- 出厂前橡胶绝缘外套均通过电气性能检测。
Rubber insulation sleeve passes electrical testing before delivery.
- 紧凑设计, 可以适用标准开关柜电缆室。
Compact design, suitable to the cable vault of standard switchgear.

Types

选型表	序号 S.N	名称/Name	单位	I 类接地方式 / Type I earthing		II 类接地方式 / Type II earthing	
				电站型 / Power station	配电型 / Distribution system	电站型 / Power station	配电型 / Distribution system
				1	系统电压 r.m.s / Rated voltage r.m.s	kV	26
2	持续运行电压 r.m.s / Continuous operating voltage r.m.s	kV	20.8	20.8	27.2	27.2	
3	直流 1mA 参考电压 / DC 1mA reference voltage	kV	≥ 37	≥ 37	≥ 48	≥ 51	
4	标称放电电流 peak / Peak nominal discharge current	kA	5	5	5	5	
5	操作冲击电流 peak / Peak switching impulse current	kA	0.5	0.5	0.5	0.5	
6	工频参考电流 peak / Peak power-frequency reference current	mA	1	1	1	1	
7	工频参考电压 / Power-frequency reference voltage	kV	≥ 26	≥ 26	≥ 34	≥ 34	
8	5ka 雷电冲击电流下残压 peak	kV	≤ 66	≤ 72	≤ 85	≤ 95	
9	操作冲击电流下残压 peak / Peak residual voltage under switching impulse current	kV	≤ 56	≤ 65	≤ 75	≤ 85	
10	陡坡冲击电流下残压 peak / Peak residual voltage peak under steep impulse current	kV	≤ 76	≤ 85	≤ 95	≤ 105	
11	2ms 方波通流能力 (18 次) peak / Peak 2ms square wave discharge capacity (18 times)	A	150	150	150	150	
12	大电流冲击耐受能力 (4/10μs) peak Peak high current impulse withstanding capability (4/10μs)	kA	65	65	65	65	
13	产品型号 / Type of product			HY5W-26/66	HY5W-26/72	HY5W-34/85	HY5W-34/95



630A 屏蔽型可分离式电缆接头 630A shielded separable connector

■ 型号 / Type : PCB-630/635

■ 应用 / Applications:

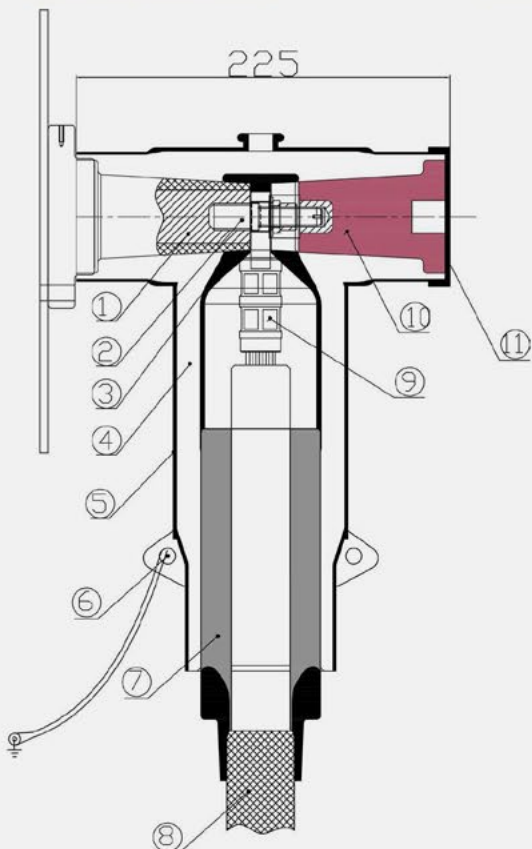
- 通过 630A 预制式电缆前后接头配合, 可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接, 实现多回路进出线。
630A prefabricated connector enables connection of single-phase or three-phase cable with switchgear, transformer, cable distribution box and other electrical equipments in order to implement multi-loop installation.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 系统电压: 21/35kV 26/35 kV。
Rated voltage: 21/35kV 26/35 kV.
- 持续额定电流: 630A。
Rated continuous current: 630A.
- 可扩展连接 PCC 接头或 PCSA35 系列避雷器, 实现多路安装或提供过电压保护。
Connect to PCC coupling connector or PCSA35 surge arrester to enable multi-loop installation or provide over voltage protection.



Types

连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 26/35kV (mm ²)
PCB-630/635	CA8001/9001	28-34	50-70
PCB-630/635	CA8002/9002	32.7-36.6	95-120
PCB-630/635	CA8003/9003	35.8-40.4	150-185
PCB-630/635	CA8004/9004	40.2-45.6	240-300
PCB-630/635	CA8005/9005	46.2-48.6	400-500

选型表



- 1-630A 标准套管
630A standard bushing
- 2-双头螺栓
Stud bolt
- 3-SIR 内均压层
SIR internal shielding layer
- 4-SIR 绝缘层
SIR insulating layer
- 5-SIR 屏蔽层
SIR shielding layer
- 6-屏蔽层接地点
Ground point of the shielding layer
- 7-应力控制单元
Stress control unit
- 8-XLPE 电力电缆
XLPE power cable
- 9-压缩铜鼻
Compression lug
- 10-绝缘塞
Insulating plug
- 11-绝缘塞屏蔽罩
Insulating plug shield

■ 电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE, EPR 等)
Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 50 ~ 500mm²
Conductor cross section: 50 ~ 500mm²
- 电缆导体类型: 铜芯或铝芯
Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与适合的套管配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with bushing.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.

630A 屏蔽型可分离式电缆接头 630A shielded coupling connector

■ 型号 / Type : PCC-630/635

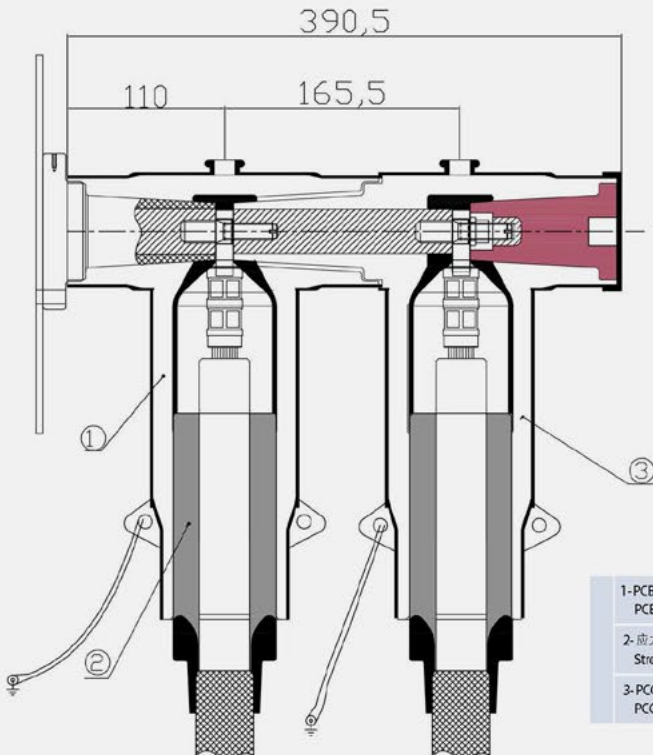
■ 应用 / Applications:

- 通过与 630A 预制式电缆前接头 (PCB) 连接, 可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接, 实现多回路进出线。
630A prefabricated connector enables connection of single-phase or three-phase cable with switchgear, transformer, cable distribution box and other electrical equipments.in order to implement multi-loop installation.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 系统电压: 21/35kV 26/35 kV。
Rated voltage: 21/35kV 26/35 kV.
- 持续额定电流: 630A。
Rated continuous current: 630A.
- 可扩展连接 PCC 接头或 PCSA35 系列避雷器, 实现多路安装或提供过电压保护。
Connect to PCC coupling connector or PCSA35 surge arrester to enable multi-loop installation or provide over voltage protection.



Types

连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 26/35kV (mm ²)
PCC-630/635	CA8001/9001	28-34	50-70
PCC-630/635	CA8002/9002	32.7-36.6	95-120
PCC-630/635	CA8003/9003	35.8-40.4	150-185
PCC-630/635	CA8004/9004	40.2-45.6	240-300
PCC-630/635	CA8005/9005	46.2-48.6	400-500



■ 电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE,EPR 等)
Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 50 ~ 500mm²
Conductor cross section: 50 ~ 500mm²
- 电缆导体类型: 铜芯或铝芯
Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与适合的套管配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with bushing.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.



屏蔽型可分离式后接避雷器 Shielded separable surge arrester

■ 型号 / Type : PCSA35

■ 应用 / Applications:

● 通过与 630A 预制式电缆前 / 后接头 (PCB、PCC) 连接, 可为开关柜、变压器、电缆分接箱等其他电气设备提供过电压保护。

Connected with 630A prefabricated connector (PCB/PCC), this type of arrester provides over voltage protection for switchgear, transformer, cable distribution box and other electrical equipments.

● 适用于户内或户外安装。

Suitable for indoor and outdoor installations.

● 符合 GB11032-2002 技术要求。

Complying with technical requirements of GB11032-2002.



■ 特性 / Characteristics:

● 与适合的接头配合时, 可提供全屏蔽和全密封可分离连接。

Able to provide fully-shielded or fully-sealed separable connections with type-matched connectors.

● 可长期在水下或其他恶劣环境下使用。

Long-time use in underwater or other severe environments.

● 无最小相间距离要求。

No least phase distance requirement.

● 可以水平、垂直或任意角度安装。

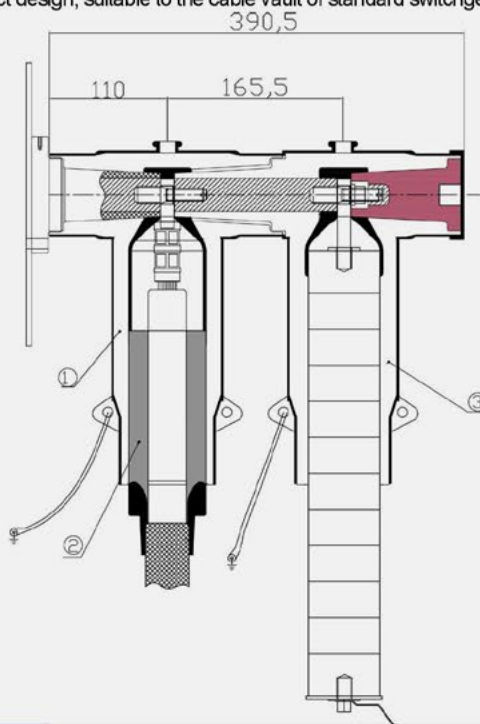
Installation in horizontal, vertical or any other angles.

● 出厂前橡胶绝缘外套均通过电气性能检测。

Rubber insulation sleeve pass electrical testing before delivery.

● 紧凑设计, 可以适用标准开关柜电缆室。

Compact design, suitable to the cable vault of standard switchgear.



Types

选型表	序号 S.N	名称/Name	单位	I类接地方式 /Type I earthing		II类接地方式 /Type II earthing
				电站型 / Power station	配电型 / Distribution system	中型点型 / Neutral point model
1	系统电压 r.m.s / Rated voltage r.m.s		kV	51	51	30
2	持续运行电压 r.m.s / Continuous operating voltage r.m.s		kV	40.8	40.8	24
3	直流 1mA 参考电压 / DC 1mA reference voltage		kV	≥ 73	≥ 73	≥ 44
4	标称放电电流 peak / Peak nominal discharge current		kA	5	5	5
5	操作冲击电流 peak / Peak switching impulse current		kA	0.5	0.5	0.5
6	工频参考电流 peak / Peak power-frequency reference current		mA	1	1	1
7	工频参考电压 / Power-frequency reference voltage		kV	≥ 51	≥ 51	≥ 30
8	5ka 雷电冲击电流下残压 peak		kV	≤ 134	≤ 125	≤ 80
9	操作冲击电流下残压 peak / Peak residual voltage under switching impulse current		kV	≤ 114	≤ 100	≤ 67.5
10	陡坡冲击电流下残压 peak / Peak residual voltage peak under steep impulse current		kV	≤ 154	≤ 140	≤ 90
11	2ms 方波通流能力 (18次) peak / Peak 2ms square wave discharge capacity (18 times)		A	400	500	400
12	大电流冲击耐受能力 (4/10μs) peak Peak high current impulse withstanding capability (4/10μs)		kA	100	100	100
13	产品型号 /Type of product			PCSA-35-51/134	PCSA-35-51/125	PCSA-35-30/80

66kV、630A 屏蔽型可分离式电缆前接头 66kV 630A shielded separable connector

■ 型号 / Type : PCB-66

■ 应用 / Applications:

- 通过 630A 预制式电缆前接头，可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接，实现多回路进出线。

Through the 630A prefabricated cable connectors, fully-shielded and fully-sealed separable connections can be provided for single-phase or three-phase cables with switchgear, transformers, cable junction boxes, and other electrical equipment, enabling multi-circuit in-and-out connections.

- 适用于户内或户外安装。

Suitable for indoor and outdoor installations.

- 额定电压：38/66kV

Rated Voltage: 38/66kV

- 持续额定电流：630A

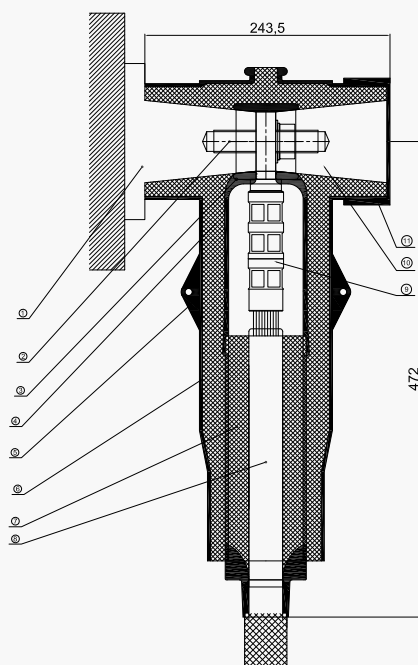
Rated continuous current: 630A.

- 可扩展连接 PCC 接头或 PCSA66 系列避雷器，实现多路安装或提供过电压保护。

Expandable connections with PCC connectors or PCSA66 series surge arresters enable multi-way installation or provide overvoltage protection.

电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面：95 ~ 630mm² / Conductor cross section: 95 ~ 630mm²
- 电缆导体类型：铜芯或铝芯 / Type of cable conductor: Copper or aluminum



1. 标准套管
2. 双头螺栓
3. 内均压层
4. 主绝缘层
5. 外屏蔽层接地点
6. 外屏蔽层
7. 应力锥
8. 电缆
9. 接线端子
10. 绝缘塞
11. 屏蔽罩

■ 特性 / Characteristics:

- 与适合的套管配合时，可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded and fully-sealed separable connections with matched type sleeves.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.

66kV、630A 屏蔽型可分离式电缆后接头

66kV 630A shielded separable coupling connector

■ 型号 / Type : PCC-66

■ 应用 / Applications:

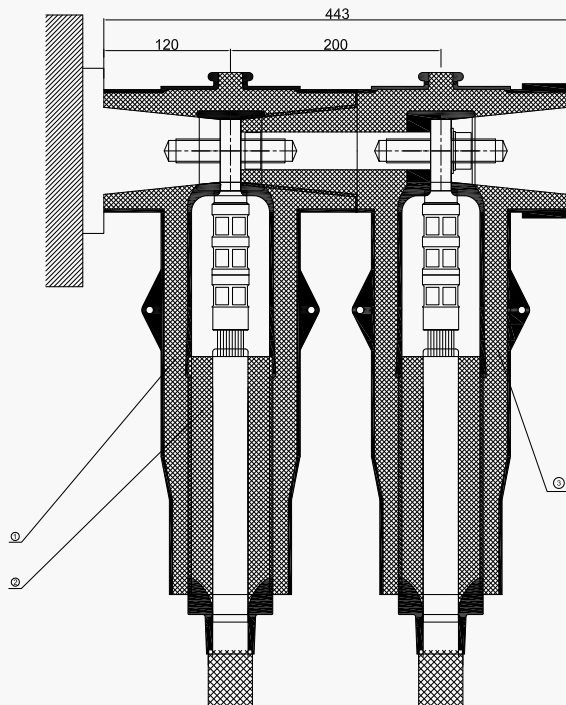
- 通过与 630A 预制式电缆前接头 (PCB) 连接, 可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接, 实现多回路进出线。

By connecting with the 630A prefabricated cable front connector (PCB), expandable connections can be provided for single-phase or three-phase cables with switchgear, transformers, cable junction boxes, and other electrical equipment, enabling multi-circuit in-and-out connections.

- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 额定电压: 38/66kV
Rated Voltage: 38/66kV
- 持续额定电流: 630A
Rated continuous current: 630A.
- 可扩展连接 PCC 接头或 PCSA66 系列避雷器, 实现多路安装或提供过电压保护。
Expandable connections with PCC connectors or PCSA66 series surge arresters enable multi-way installation or provide overvoltage protection.

电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 95 ~ 630mm² / Conductor cross section: 95 ~ 630mm²
- 电缆导体类型: 铜芯或铝芯 / Type of cable conductor: Copper or aluminum



■ 特性 / Characteristics:

- 与适合的套管配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded and fully-sealed separable connections with matched type sleeves.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.



66kV、屏蔽型可分离式后接避雷器
66kV Shielded separable surge arrester

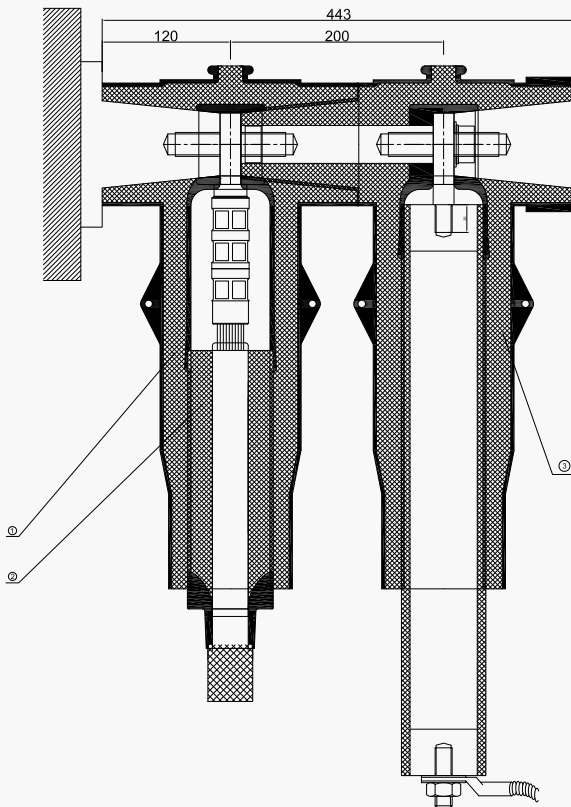
■ 型号 / Type : PCSA-66

■ 应用 / Applications:

- 通过与 630A 预制式电缆前 / 后接头 (PCB、PCC) 连接, 可为开关柜、变压器、电缆分接箱等其他电气设备提供过电压保护。

By connecting with the 630A prefabricated cable front/rear connectors (PCB, PCC), overvoltage protection can be provided for switchgear, transformers, cable junction boxes, and other electrical equipment.

- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 符合 GB11032 技术要求。
Complying with technical requirements of GB11032.



■ 特性 / Characteristics:

- 与适合的接头配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded and fully-sealed separable connections with matched type connectors.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 出厂前橡胶绝缘外套均通过电气性能检测。
All rubber insulating jackets are subjected to electrical performance testing before leaving the factory.

非屏蔽肘型电缆前 / 后接头 Unshielded elbow connector / coupling connector

■ 型号 / Type : BAB-615\BAC-615

■ 应用 / Applications:

- 通过 630A 预制式电缆前后接头配合, 可实现单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的连接。

Proper combinations of 630A prefabricated connector and coupling connectors enable connections between single-phase or three-phase cables and switchgear, transformer, cable distribution box and other electrical equipments.

- 适用于户内封闭式柜内安装。
Suitable for indoor installation in closed type cabinets.
- 系统电压: 8.7/15KV。
Rated voltage: 8.7/15KV.
- 持续额定电流: 630A。
Rated continuous current: 630A.

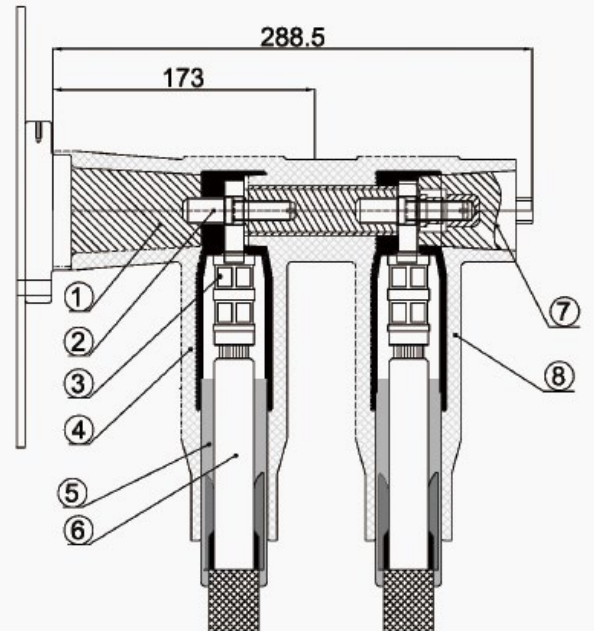
电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 35 ~ 500mm² / Conductor cross section: 35 ~ 500mm²
- 电缆导体类型: 铜芯或铝芯 / Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与 C 型套管配合时, 可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated and fully-sealed separable connections with C-type bushing.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.
- 附加避雷器符合 GB11032-2002 标准要求。
The surge arrester complies with GB11032-2002.

- | | |
|-----------|---------------------|
| 1-设备套管 | Cable bushing |
| 2-双头螺栓 | Stud bolt |
| 3-压接端子 | Compression lug |
| 4-前接头 | Connector |
| 5-应力控制单元 | Stress control unit |
| 6-XLPE 电缆 | XLPE cable |
| 7-绝缘盖塞 | Insulating plug |
| 8-后接头 | Coupling connector |



Types				
选型表	连接器型号	应力控制单元型号	应力控制单元扩张范围	适用电缆导体截面
	Type of connector	Type of stress control unit	芯绝缘直径)	Conductor cross section
			Stretch range over insulation (mm)	8.7/15kV (mm ²)
	BAB-615\BAC-615	CA6001	16.5-22	35-95
	BAB-615\BAC-615	CA6002	23.4-26.6	120-185
BAB-615\BAC-615	CA6003	28.9-31.3	240-300	
BAB-615\BAC-615	CA6004	33.9-36.9	400-500	

非屏蔽肘型附加避雷器电缆前 / 后接头 Unshielded elbow connector / coupling connector for surge arrester

- 型号 / Type : BAS-615 (非屏蔽肘型附加避雷器前接头 / Unshielded elbow connector for surge arrester)
BACS-615 (非屏蔽肘型附加避雷器后接头 / Unshielded elbow coupling connector for surge arrester)

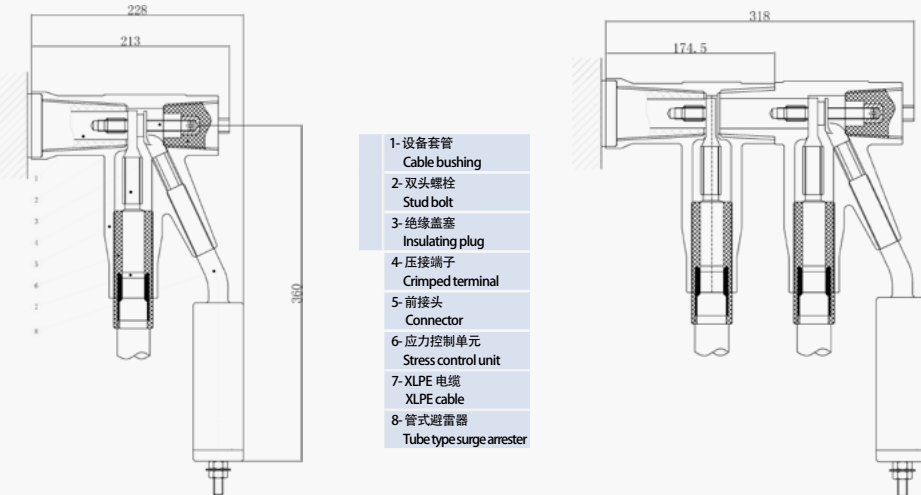
■ 应用 / Applications:

- 通过 630A 预制式电缆前后接头配合, 可实现单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的连接, 同时提供过电压保护。
Proper combinations of 630A prefabricated connectors and coupling connectors enable connections between single-phase or three-phase cable and switchgear, transformer, cable distribution box and other electrical equipments, and provides over-voltage protection for the equipments.
 - 适用于户内封闭式柜内安装。
Suitable for indoor installation in closed type cabinets.
 - 系统电压: 8.7/15KV。
Rated voltage: 8.7/15KV.
 - 持续额定电流: 630A。
Rated continuous current: 630A.
- 电缆特性 / Cable features:
- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (EPR etc.)
 - 电缆导体截面: 35 ~ 500mm² / Conductor cross section: 35 ~ 500mm²
 - 电缆导体类型: 铜芯或铝芯 / Type of cable conductor: Copper or aluminum



■ 特性 / Characteristics:

- 与 C 型套管配合时, 可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated and fully-sealed separable connections with C-type bushing.
- 可长期在水下或其它恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.
- 附加管式避雷器符合 GB11032-2002 标准要求, 标配管式避雷器为配电型, 参数为 HY5WS-17/50。
The tube type surge arrester complies with GB11032-2002. This type of surge arrester with standard configuration (parameter: HY5WS-17/50) is of distribution type.



Types				
选型表	连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 8.7/15kV (mm ²)
	BAS-615\BACS-615	CA6001	16.5-22	35-95
	BAS-615\BACS-615	CA6002	23.4-26.6	120-185
	BAS-615\BACS-615	CA6003	28.9-31.3	240-300
	BAS-615\BACS-615	CA6004	33.9-36.9	400-500



15kV 非屏蔽型避雷器
15kV unshielded surge arrester

- 型号 / Type : BHS (15kV 非屏蔽型后接避雷器 / 15kV unshielded rear surge arrester)
HY5W (15kV 非屏蔽型管式避雷器 / 15kV unshielded tube type surge arrester)

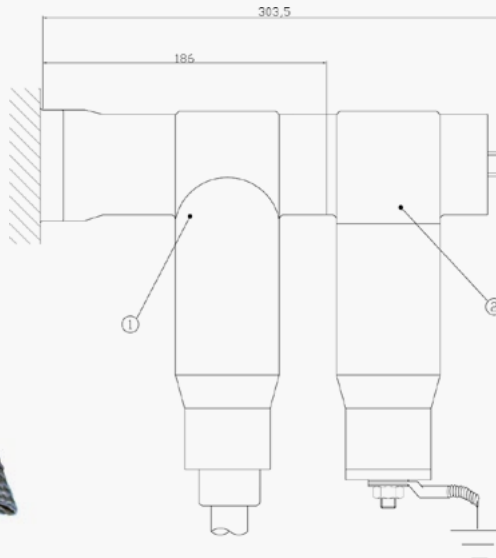
■ 应用 / Applications:

- 通过与 630A 非屏蔽型电缆接头连接, 可为开关柜、变压器、电缆分接箱等其他电气设备提供过电压保护。
Connected with 630A unshielded cable connector, this type of arrester can provide over voltage protection for switchgear, transformer, cable distribution box and other electrical equipments.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 符合 GB11032-2002 技术要求。
Complying with technical requirements of GB11032-2002.



■ 特性 / Characteristics:

- 与适合的接头配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded and fully-sealed separable connections with type-matched connectors.
- 可长期在潮湿污秽等恶劣环境下使用。
Long-time use in damp and filthy or other severe environments.
- 出厂前橡胶绝缘外套均通过电气性能检测。
Rubber insulation sleeve pass electrical testing before delivery.
- 紧凑设计, 可以适用标准开关柜电缆室。
Compact design, suitable to the cable vault of standard switchgear.



1-前接头
Connector
2-后接避雷器
Surge arrester

Types										
选型表	型号 Type	国标规格 National standard specification	Un (kA)	Uc (kV)	Ur (kV)	In (kV)	Up (1/10uS) (kV)	Up (8/20uS) (kV)	Up (30/60uS) (kV)	备注 Remarks
	BHS-15/35.8	HY5WS-15/35.8	10	12	15	5	41.2	35.8	30.6	(配电型)/(Applicable to distribution system)
	BHS-17/50	HY5WS-17/50	10	13.6	17	5	57.5	50	42.5	(配电型)/(Applicable to distribution system)
	BHS-17/45	HY5WZ-17/45	10	13.6	17	5	51.8	45	38.3	(电站型)/(For power station)

250A 可分离式肘型 \ 直通型电缆接头 250A separable elbow cable connector \ 250A separable straight cable connector

- 型号 / Type : DEC-215\224 屏蔽式肘型电缆接头 /DEC-215\224 separable elbow cable connector
DSC-215\224 屏蔽式直通型电缆接头 /DSC-215\224 separable straight cable connector

■ 应用 / Applications:

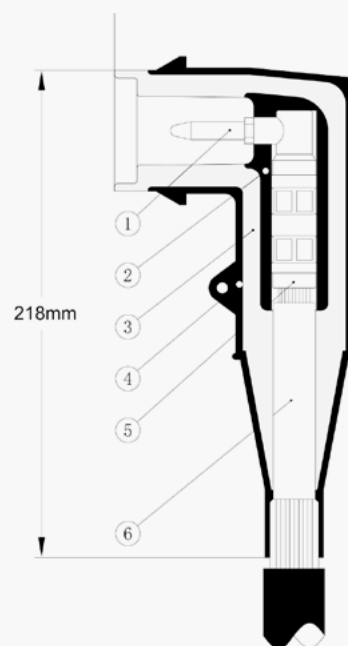
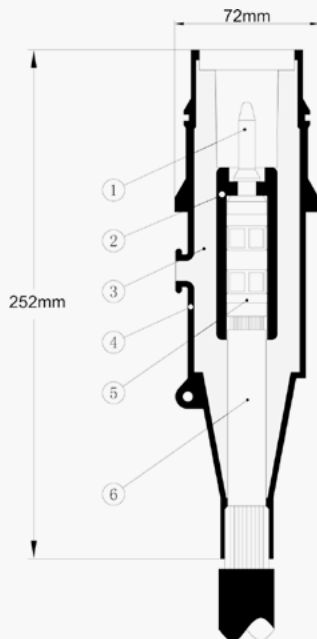
- 通过 250A 预制式肘型电缆接头 \ 直通型电缆接头, 可实现单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的连接。
250A prefabricated elbow connector (straight cable connector) enables connections between single-phase or three-phase cable and switchgear, transformer, cable distribution box and other electrical equipments.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 系统电压: 8.7/15kV \ 12/20kV。
Rated voltage: 8.7/15kV \ 12/20kV.
- 持续额定电流: 250A。
Rated continuous current: 250A.

电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 35 ~ 150mm² / Conductor cross section: 35 ~ 150mm²

■ 特性 / Characteristics:

- 与 A 型套管配合时, 可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated and fully-sealed separable connections with A-type bushing.
- 可长期在水下或其它恶劣环境下使用。
Long-time use in underwater or other severe environments.
- DEC-215 \ 224 肘型接头无最小相间距离要求。
No least phase distance requirement for DEC-215 \ 224 elbow connectors.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.



1- 导电插头	Electrical plug
2- 内均压层	Internal shielding layer
3- 绝缘层	Insulating layer
4- 外屏蔽层	Outer shielding layer
5- 压接端子	Compression lug
6- XLPE 电缆	XLPE cable



35kV内锥插拔式GIS终端

GIS terminal / plug type 35kV

■ 型号/ Type GCC-35-I \ II \ III

■ 应用/Applications:

- 通过与符合EN50181标准绝缘子配合，可提供单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的扩展连接。
With type-matched standard insulators (EN50181), enable connections between single-phase or three-phase cable and switchgear, transformer, cable distribution box and other electrical equipments.
- 适用于户内安装。
Suitable for indoor installations.
- 额定电压：26/35kV。
Rated Voltage: 26/35kV
- 持续额定电流：630~1250A。
Rated continuous current: 630-1250A

■ 电缆特性/ Cable features:

- - 挤包绝缘电力电缆 (XLPE,EPR等)
Power cable with extruded insulation(XLPE,EPR etc.)
- - 电缆导体截面：50~630mm²
Conductor cross section:50~630mm²
- - 电缆导体类型：铜芯或铝芯
Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与适合的套管配合时，可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with type-matched connectors.
- 可长期在水下或其它恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以垂直角度安装。
Installation in vertical.



选型表	终端型号	额定电压/电流	适用绝缘子型号	适用电缆导体截面 (mm ²)
	TYPE	Rated Voltlage/Current	Insulator type	Conductor cross section
	GCC-35-I	26/35kV、630A	Type 1	35-240
	GCC-35-II	26/35kV、800A	Type 2	35-240
	GCC-35-III	26/35kV、1250A	Type 3	50-630

35kV 内锥插拔式 GIS 避雷器 35kV indoor cone-type plug-in GIS surge arrester.

■ 型号 / Type : GCL-35

■ 应用 / Applications:

- 通过与符合 EN50181 标准绝缘子配合，可为开关柜、变压器、电缆分接箱等其他电气设备提供过电压保护。
In conjunction with EN50181-compliant insulators, it can provide overvoltage protection for switchgear, transformers, cable junction boxes, and other electrical equipment.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 符合 GB11032 技术要求。
Complying with technical requirements of GB11032.



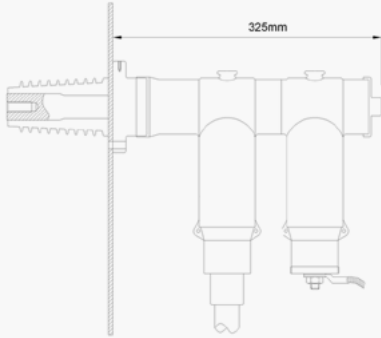
■ 特性 / Characteristics:

- 与适合的套管配合时，可提供全屏蔽和全密封可分离连接。
When paired with suitable bushings, it can provide fully shielded and fully sealed separable connections.
- 可长期在水下或其它恶劣环境下使用。
It can be used long-term underwater or in other harsh environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以垂直角度安装。
It can be installed at a vertical angle.

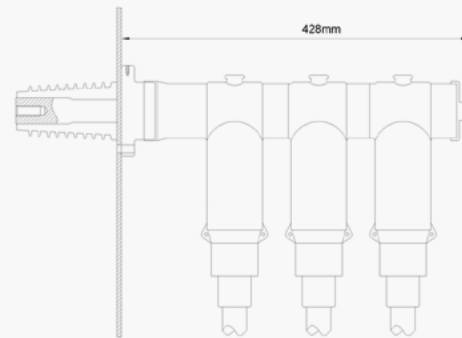


开关柜屏蔽型接头典型接线组合方案

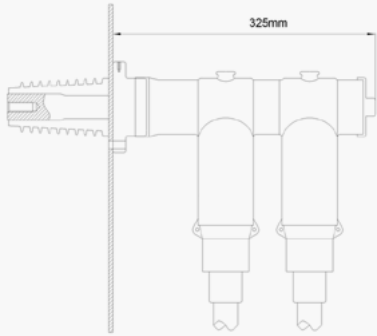
Typical combined wiring scheme of shielded connectors for switchgear:



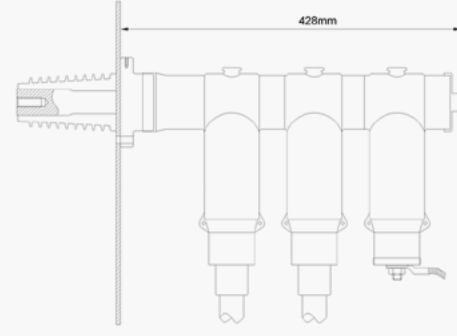
PCB+PCSA
1 路前接头 + 后接避雷器 / 1 connector+2 surge arresters



PCB+PCC+PCC
1 路前接头 + 2 路后接头 / 1 connector+2 coupling connectors



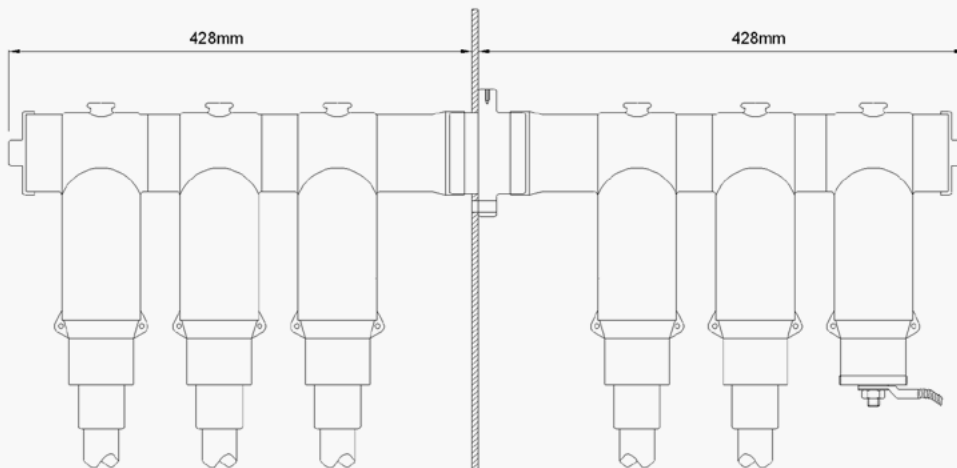
PCB+PCC
1 路前接头 + 1 路后接头 / 1 connector+1 coupling connector



PCB+PCC+PCSA
1 路前接头 + 1 路后接头 + 后接避雷器
1 connector+1 coupling connector+1 surge arrester

电缆分支箱屏蔽型接头典型接线组合方案

Typical combined wiring scheme of shielded connectors for cable distribution box

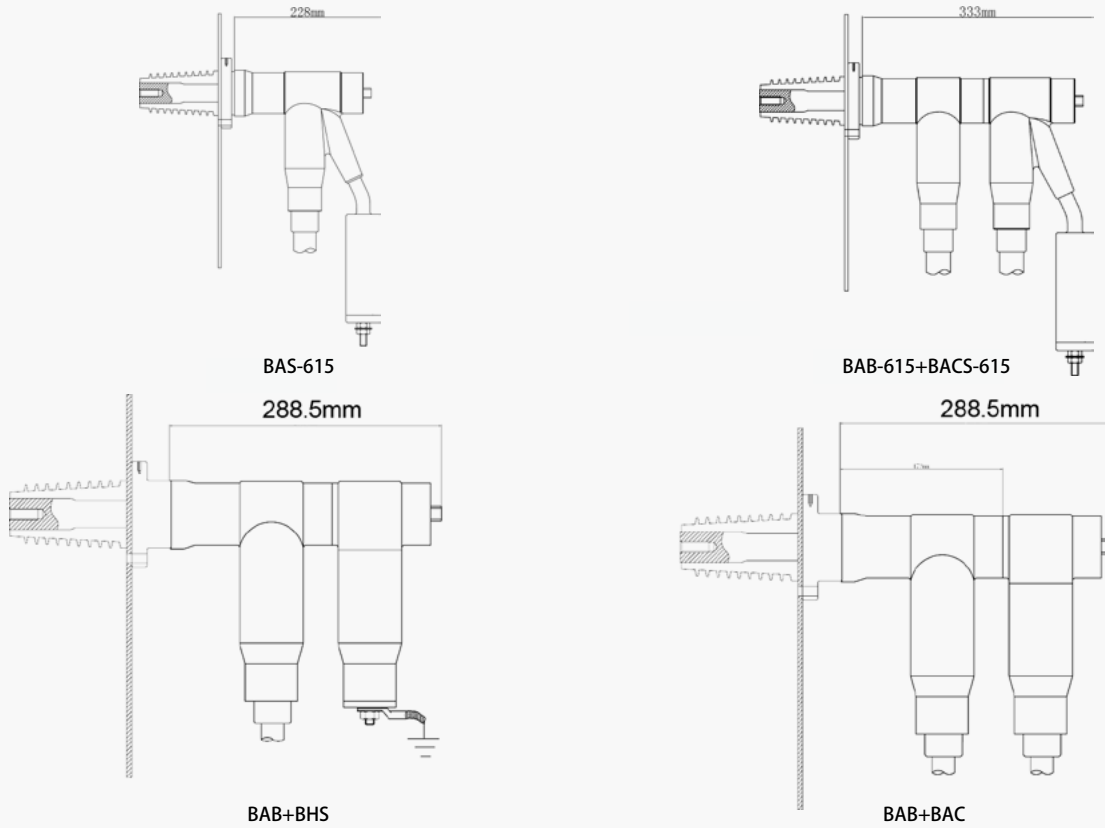


PCB+PCC+PCC
1 路前接头 + 2 路后接头 / 1 connector+2 coupling connectors

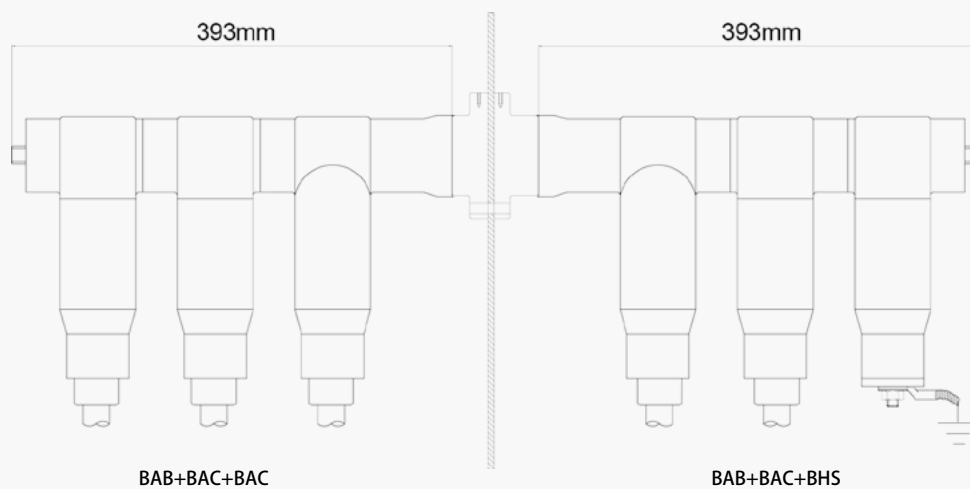
PCB+PCC+PCSA
1 路前接头 + 1 路后接头 + 后接避雷器
1 connector+1 coupling connector+1 surge arrester

接线方案 2
Wiring scheme 2

- 开关柜非屏蔽型接头典型接线组合方案
Typical combined wiring scheme of unshielded connectors for switchgear



- 电缆分支箱非屏蔽型接头典型接线组合方案
Typical combined wiring scheme of unshielded connectors for cable distribution box



美式可分离电缆连接器

Separable cable connectors of US type

■ 概述 / Summary

美式可分离电缆连接器，严格按照 ANSI IEEE Std386 标准设计，成功通过 IEC60502.4 标准所规定的型式试验项目，能和所有采用或达到 Std386 标准的产品实现互换安装。

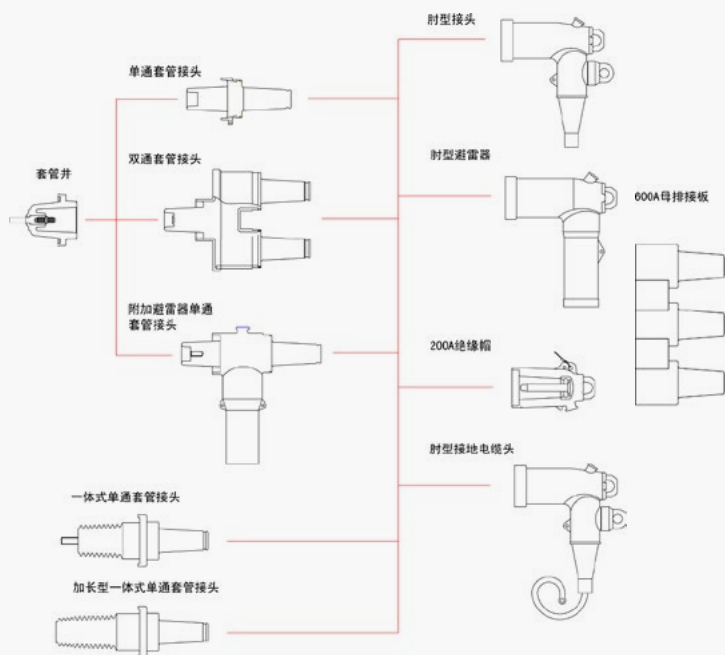
Our separable cable connectors of US type are designed in strict accordance with ANSI IEEE Std386, and have successfully passed type tests required by IEC60502.4, available for replacement with all products adopting or meeting Std386 standard.

Applicable standards

执行标准	标准名称
ANSI IEEE 592-1990	高压电缆接头和可分离绝缘连接器的外露半导体护套 Exposed Semi-conducting Shields on High-voltage Cable Joints and Separable Insulated Connectors
IEC60502	系统电压 1kV (Um=1.2kV) 以上至 30kV (Um=36kV) 挤出绝缘电力电缆及其附件 Power cables with Extruded Insulation and Their Accessories for Rated Voltages from 1kV (Um=1.2kV) to 30kV (Um=36kV)
IEC61442	系统电压 6kV (Um=7.2kV) 到 30kV (Um=36kV) 电力电缆附件试验方法 Test Methods for Accessories for Power Cables with Rated Voltages from 6 kV (Um = 7.2 kV) up to 30 kV (Um = 36 kV)
GB12706-2002	系统电压 1kV (Um=1.2kV) 到 35kV (Um=40.5kV) 挤包绝缘电力电缆及附件 Power cables with Extruded Insulation and Their Accessories for Rated Voltages from 1kV (Um=1.2kV) up to 35kV (Um=40.5kV)
GB311.1-1997	高压输电设备的绝缘配合 Insulation Co-ordination for High Voltage Transmission and Distribution Equipments
GB/T41.9-1999	高压套管技术条件 Technical Conditions for High Voltage Bushing
GB11032-2000	交流无间隙金属氧化物避雷器 Metal Oxide Surge Arresters without Gaps for AC Systems

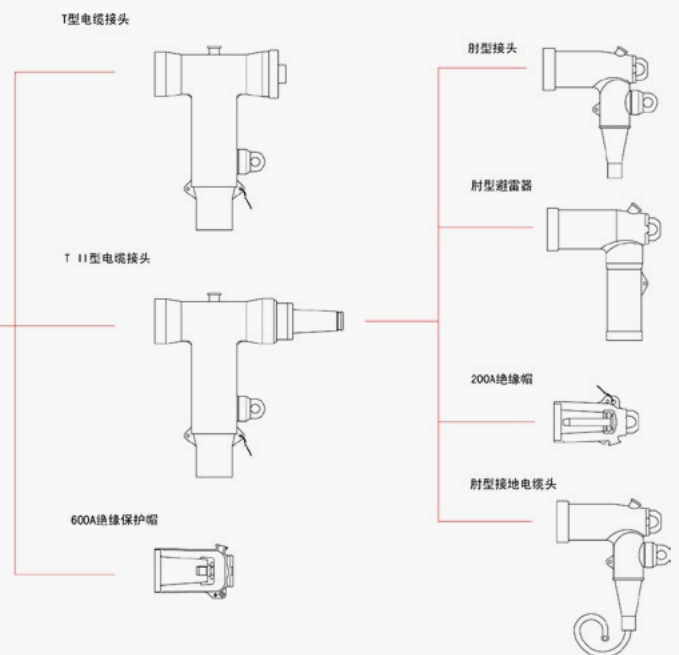
■ 美式 200A 系列可分离电缆连接器

200A separable cable connectors of US type



■ 美式 600A 系列可分离电缆连接器

600A separable cable connectors of US type



T 型电缆接头 T-shaped cable connector

■ 型号 / Type : BT-615

■ 应用 / Applications:

- T型电缆接头应用于环网柜、电缆分接箱的主网或箱式变的环网系统，作用于进出线电缆连接。可连接600A母排，亦可通过中间连接头进行T-T组合连接。
The T-shaped cable connector is mainly used in the primary grid of ring main unit and cable distribution box or the looped network of box transformers for connection with inlet/outgoing lines. It can connect with 600A busbars, T-T combined connection through intermediate connectors and realize.
- 其测试点可安装故障指示器或带电指示器，实现快速故障定位或线路带电状态指示，亦可满足核相要求。
The testing point can be mounted with a fault indicator or a voltage presence indicator for rapid fault allocation or indication of voltage presence of the circuit, and for verification of phase sequence.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 系统电压：8.7/15kV。
Rated voltage: 8.7/15kV
- 持续额定电流：600A。
Rated continuous current: 600A

电缆特性 / Cable features:

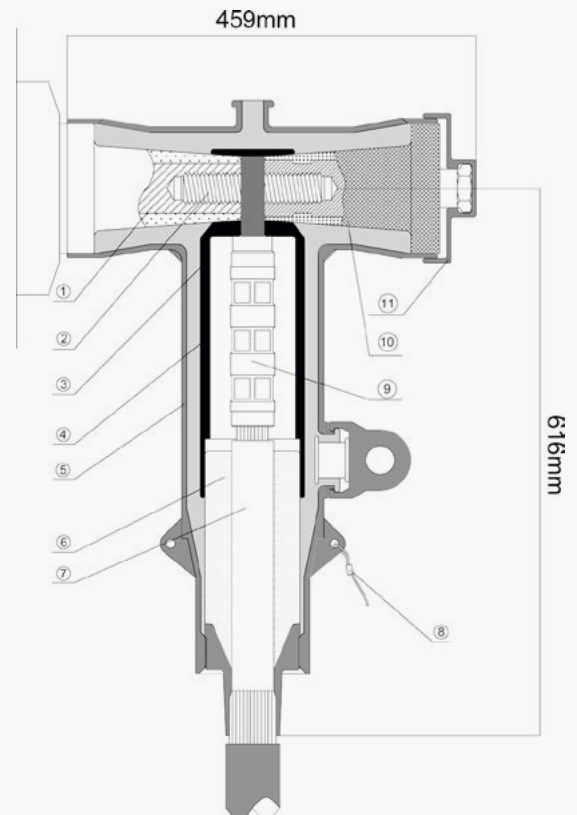
- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面：35 ~ 500mm² / Conductor cross section: 30 ~ 500mm²
- 电缆导体类型：铜芯或铝芯 / Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与适合的接头配合时，可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with type-matched bushing.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.



1-600A 设备套管	600A equipment bushing
2-双头螺栓	Stud bolt
3-SIR 内均压层	SIR internal shielding layer
4-SIR 绝缘层	SIR insulating layer
5-SIR 屏蔽层	SIR shielding layer
6-应力控制单元	Stress control unit
7-XLPE 电力电缆	XLPE power cable
8-屏蔽层接地点	Ground point of the shielding layer
9-压接端子	Compression lug
10-绝缘塞	Insulating plug
11-绝缘塞屏蔽罩	Insulating plug shield





T-II 型电缆接头

T-II cable connector

■ 型号 / Type : BT-615-2

■ 应用 / Applications:

- T-II 型电缆接头应用于环网柜、电缆分接箱的主网和分支系统，作用于进出线电缆连接。

The T-II type cable connector is mainly used in the primary grid of ring main unit and cable distribution box and branches for connection with inlet/outgoing lines.

- 其尾部可连接 200A 肘型电缆接头，增加出线路数（降低设备投资），也可安装避雷器，作为设备保护。

Its rear end can fit with 200A elbow cable connector for increasing the number of outgoing lines (reducing the investments in equipments), and can be mounted with an arrester for protection of equipments.

- 当分支作为备用时，可用 200A 绝缘保护帽将其密封。

When being used in a standby branch, it can be sealed with a 200A insulating protective cap.

- 其测试点可安装故障指示器或带电指示器，实现快速故障定位或线路带电状态指示，亦可满足核相要求。

The testing point can be mounted with a fault indicator or a voltage presence indicator for rapid fault allocation or indication of voltage presence of the circuit, and for verification of phase sequence.

- 适用于户内或户外安装。

Suitable for indoor and outdoor installations.

- 系统电压：8.7/15kV。

Rated voltage: 8.7/15kV

- 持续额定电流：600A。

Rated continuous current: 600A

电缆特性 / Cable features:

- 挤包绝缘电力电缆（XLPE,EPR 等） / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面：35 ~ 500mm² / Conductor cross section: 35 ~ 500mm²
- 电缆导体类型：铜芯或铝芯 / Type of cable conductor: Copper or aluminum

■ 特性 / Characteristics:

- 与适合的套管配合时，可提供全绝缘和全密封可分离连接。

Able to provide fully-shielded and fully-sealed separable connections with type-matched bushing.

- 可长期在水下或其他恶劣环境下使用。

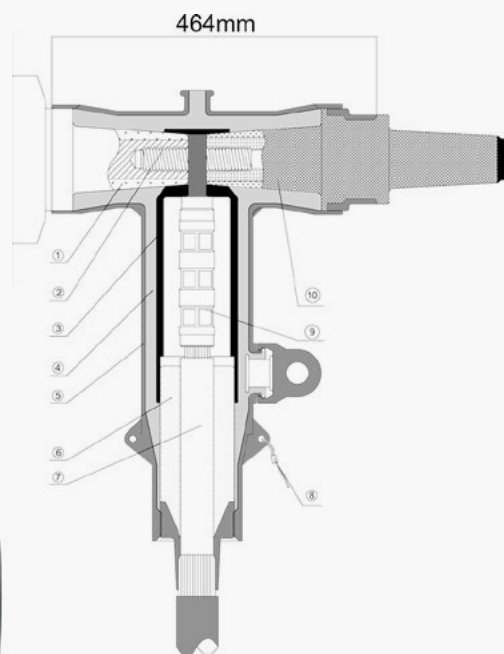
Long-time use in underwater or other severe environments.

- 无最小相间距离要求。

No least phase distance requirement.

- 可以水平、垂直或任意角度安装。

Installation in horizontal, vertical or any other angles.



1- 600A 设备套管	600A equipment bushing
2- 双头螺栓	Stud bolt
3- SIR 内均压层	SIR internal shielding layer
4- SIR 绝缘层	SIR insulating layer
5- SIR 屏蔽层	SIR shielding layer
6- 应力控制单元	Stress control unit
7- XLPE 电力电缆	XLPE power cable
8- 屏蔽层接地点	Ground point of the shielding layer
9- 压接端子	Compression lug
10- 负荷转换套管	Load reducing bushing

APCB 型电缆接头 APCB cable connector

■ 型号 / Type : APCB-615

■ 应用 / Applications:

- APCB 型电缆接头应用于环网柜、电缆分接箱的主网或箱式变的环网系统，作用于进出线电缆连接。可连接 600A 母排，亦可通过中间接头进行 T-T 组合连接。
APCB cable connector applies to ring main unit, cable distribution box's main grid or box-type looped network system, it acts on incoming and outgoing cable connections. It is able to connect to 600A busbar board or conduct T-T built-up connection through intermediate connector.
适用于户内或户外安装。
- Suitable for indoor or outdoor installations.
系统电压：8.7/15kV \ 12/20kV。
- Rated voltage: 8.7/15kV \ 12/20kV
持续额定电流：630A。
- Rated continuous current: 630A。
- 可扩展连接 PCC 后接头或 PCSA 系列避雷器，实现多路安装或提供过电压保护。
Connect to PCC coupling connector or PCSA surge arrester to enable multi-loop installation or provide over voltage protection。

电缆特性 / Cable features:

- 挤包绝缘电力电缆 (XLPE, EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面：25 ~ 300mm² / Conductor cross section: 25 ~ 300mm²
- 电缆导体类型：铜芯或铝芯 / Type of cable conductor: Copper or aluminum



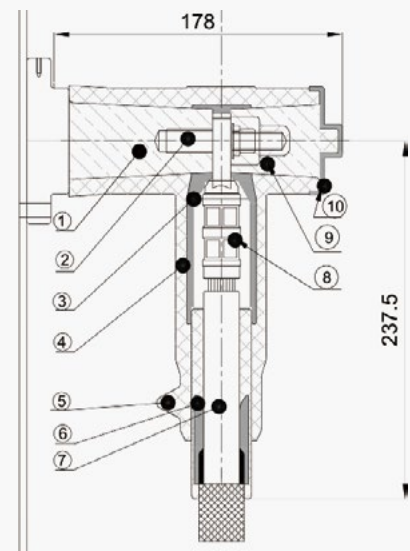
Types

选型表	连接器型号 Type of connector	应力控制单元型号 Type of stress control unit	应力控制单元扩张范围 (芯绝缘直径) Stretch range over insulation (mm)	适用电缆导体截面 Conductor cross section 8.7/15kV \ 12/20kV (mm ²)
	APCB-615	TYPE02	16.5-22	25-95
	APCB-615	TYPE03	23.4-31.3	120-300

■ 特性 / Characteristics:

- 与适合的套管配合时, 可提供全屏蔽和全密封可分离连接。
Able to provide fully-shielded or fully-sealed separable connections with type-matched bushing.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 可以水平、垂直或任意角度安装。
Installation in horizontal, vertical or any other angles.

1- 600A 标准套管 600A standard bushing
2- 双头螺栓 Stud bolt
3- SIR 内均压层 SIR internal shielding layer
4- SIR 绝缘层 SIR insulating layer
5- 屏蔽层接地点 Ground point of the shielding layer
6- 应力控制单元 Stress control unit
7- XLPE 电力电缆 XLPE power cable
8- 压接铜鼻 Compression lug
9- 绝缘塞 Insulating plug
10- 绝缘塞屏蔽罩 Insulating plug shield





负荷转换接头 Load reducing tab plug

■ 概述 / Summary

负荷转换接头由负荷转换套管和负荷转换封套组成，用于将 600A 套管界面转换为 200A 套管界面，一端可与 600A 设备（套管或母线接板）连接，另一端可连接 200A 附件如肘型电缆插头，绝缘保护帽及肘型避雷器等设备。负荷转换套管可与 T 型电缆接头本体组成 T-II 头。

The load reducing tab plug, composed of a load reducing bushing and a load reducing seal, is used for changing from 600A bushing interface to 200A bushing interface, the one end of which can be connected with 600A equipments (bushing or busbar board), while the other end with 200A accessories, such as elbow plug, insulating protective cap and elbow surger arrester. The load transfer bushing together with a T-shaped connector comprises a T-II head.



600A 母排接板 600A Busbar board

■ 型号 / Type : MP2 (3、4) -15/600

■ 概述 / Summary

600A 母排接板用于电缆分支箱，在电缆分支中起母线分支作用，它可以和 T 型接头、T-II 型接头、负荷转换接头、绝缘保护帽及其他电缆附件灵活、方便地组合成多分支路线。

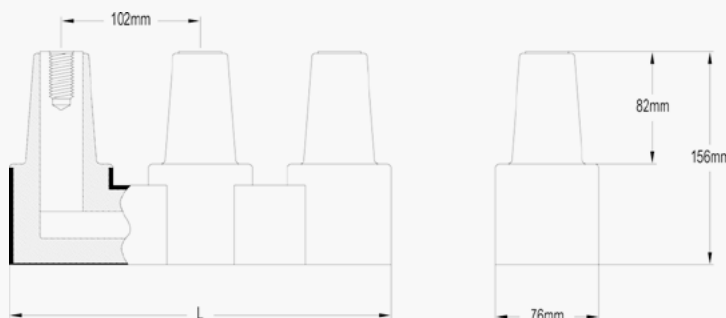
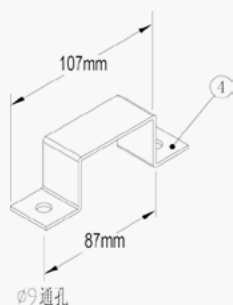
The 600A busbar board can be used in cable distribution boxes as a busbar branch of a cable branch. It can be flexibly and conveniently connected to the T-shaped connector, T-II connector, load reducing tab plug, insulating protective cap and other cable accessories to form a network circuit.

母线接板分 2 路、3 路和 4 路，又称之为两通母排接板、三通母排接板和四通母排接板。

The busbar board may have 2 lines, 3 lines or 4 lines, which are called two-way busbar board, three-way busbar board and four-way busbar board respectively.

注意：当母排接板预留与备用出线时，一定要用绝缘保护帽将套管密封。

Notes: When the busbar board is reserved for outgoing line, the bushing must be sealed with an insulating protective cap.



200A 可分离插入式肘型电缆接头 200A separable plug-in elbow connector

■ 型号 / Type : BLE-215

■ 应用 / Applications:

- 通过 200A 预制式肘型电缆接头与配合的 200A 套管连接, 可实现单相或三相电缆与开关柜、变压器、电缆分接箱等其他电气设备的连接。
The 200A prefabricated elbow connector, coupled with a 200A bushing, can realize connection between single-phase or three-phase cable and switchgear, transformer, cable distribution box and other electrical equipments.
- 适用于户内或户外安装。
Suitable for indoor and outdoor installations.
- 系统电压: 8.7/15kV。
Rated voltage: 8.7/15kV
- 持续额定电流: 200A。
Rated continuous current: 200A

电缆特性 / Cable features:

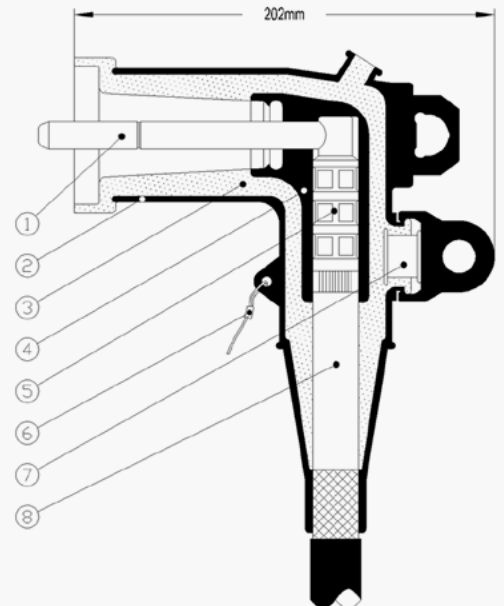
- 挤包绝缘电力电缆 (XLPE,EPR 等) / Power cable with extruded insulation (XLPE, EPR etc.)
- 电缆导体截面: 35 ~ 150mm² / Conductor cross section: 35 ~ 150mm²

■ 特性 / Characteristics:

- 与适合的套管配合时, 可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated or fully-sealed separable connections with type-matched bushing.
- 可长期在水下或其他恶劣环境下使用。
Long-time use in underwater or other severe environments.
- 无最小相间距离要求。
No least phase distance requirement.
- 肘型接头内置电容测试点, 可以安装带电指示器, 实现线路状态显示。
The elbow connector is built with a capacity testing point, on which a voltage presence indicator can be mounted to display line status.
- 国内标配接头导电杆不带灭弧材料; 出口产品带灭弧材料; 若需, 请注明;
The conducting rod of domestic standard connector is not designed with any arc resistant material, while export products do. Please specify if required.



1- 灭弧导电杆	Arc resistant conducting rod
2- 外屏蔽层	Outer shielding layer
3- 绝缘层	Insulating layer
4- 内均压层	Internal voltage equalizing layer
5- 压接端子	Compression lug
6- 接地线	Earthing wire
7- 验电测试点	Electrical testing point
8- XLPE 电缆	XLPE cable



套管井 Bushing well

- 型号 / Type : TGY-225 (环氧树脂 /Epoxy resin)
TGY-225N (增强纤维树脂 /Reinforced fiber resin)

应用 / Applications:

200A 套管井主要用于美式箱变，美式环网开关柜等电气设备，安装在美式箱变的一侧与高压绕组相连，提供高压出线；与之连接的附件有：单通套管接头、双通套管接头、附件避雷器单通套管接头。

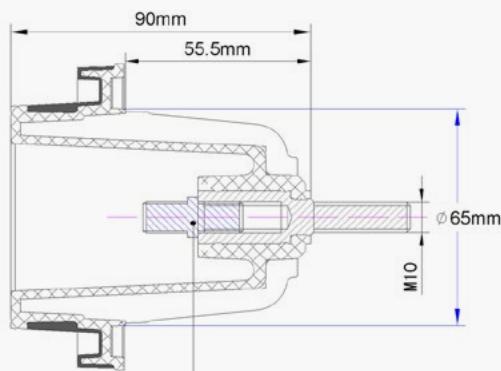
The 200A bushing well is mainly used in US box-type transformer, switchgear for looped network and other electrical equipments, which is connected with the high-voltage winding at one side of the US box-type transformer for providing high-voltage outgoing lines. Accessories connected with the bushing well include: single pass bushing connector, two-way bushing connector and single pass bushing connector for surge arrester.

特性 / Characteristics:

- 其材料采用高性能合成树脂，具有优良的电气绝缘性能和机械性能。
Made of high-performance synthetic resin, is outstanding in electrical insulation and mechanical properties.
- 套管井螺栓采用可分离式设计，可在现场方便快捷的将损坏的螺栓拆卸并更换。
With detachable bolts, the bushing well is easy for on-site disassembly and replacement in case of damages.
- 系统电压 25kV，额定电流 200A。
Rated voltage 25kV, rated current 200A.
- 界面安装尺寸符合 ANSI IEEE386-2006 标准要求。
The interface installation dimensions comply with ANSI IEEE386-2006.

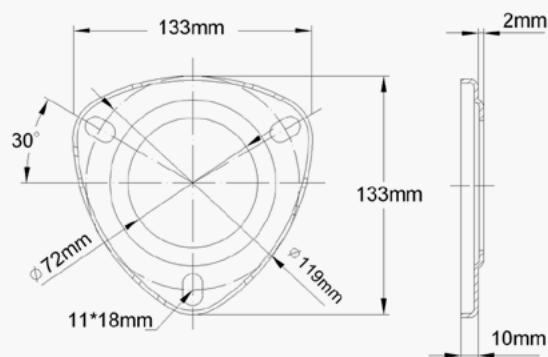
标准包装 / Standard packing:

- 套管井 /Bushing well
- 耐油密封圈 /Oil-resistant sealing ring
- 套管井防尘罩 /Dust shield
- 清洁布 /Cleaning cloth
- 固定压板 (选配) /Clamping plate (optional)



可拆卸双头螺栓 Detachable stud bolt

套管井开孔尺寸示意图 /Hole size of the bushing well



固定压板外形尺寸 /Overall dimension of the clamping plate

200A 套管接头 200A bushing connector

■ 单通套管接头 / Single-pass bushing connector

型号 / Type : DTG-215

■ 概述 / Summary :

单通套管接头主要安装在美式箱变、环网柜及其它电气设备上的套管井，与套管井组合成一体式套管接头，用于套管井与时型电缆插头、避雷器或接地电缆头的连接。

The single-pass bushing connector is mainly installed in the bushing well of US box-type transformer and ring main unit and other electrical equipments. This type of connector and the bushing well form a one-piece bushing connector used for linkage between the bushing well and elbow cable connector, arrester or earthing cable end.

单通套管接头与套管井配合使用，使现场安装或更换变成可能和便捷。

The single-pass connector is coupled with the bushing well in use to enable on-site installation or replacement. Adopting high-quality rubber insulation, its internal design has an arc suppressing mechanism, which can ensure reliable arc extinction under normal current and voltage when the elbow type load pluggable cable connector is switched on/off.

The connector is designed with high-quality rubber insulation and an arc suppressing mechanism inside to ensure reliable arc extinction when the elbow type load pluggable cable connector is switched on/off under normal current and voltage.



■ 双通套管接头 / Two-way bushing connector

型号 / Type : STG-215

■ 概述 / Summary :

双通套管接头主要安装在美式箱变、环网柜及其它电气设备上的套管井，与套管井组合使其其中一路实现与单通套管接头相同功能，另一路可连接肘型避雷器，可实现设备过电压保护；或扩展连接肘型接头，实现环网功能。

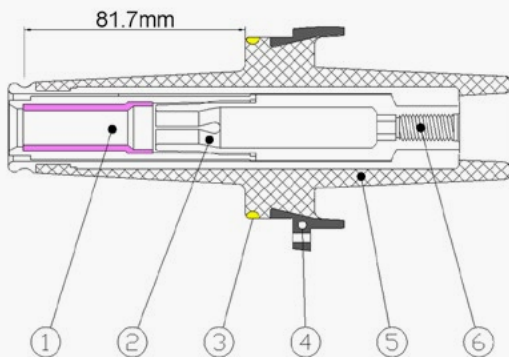
The two-way bushing connector is mainly installed in the bushing well of US box-type transformer and ring main unit and other electrical equipments. Coupled with the bushing well, one way of the connector can realize the same function with the single-pass connector, while the other way can provide over voltage protection for equipments when connected with an elbow arrester or enable functions of the loop network in case of extended link with an elbow connector.

双通套管接头内设有独特的棘轮机构，可将接头旋转至合适位置并不影响性能。

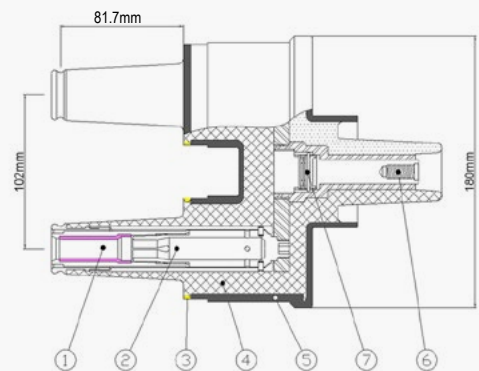
The two-way connector is designed with a unique ratchet mechanism inside, thus available to be rotated to any positions without any effect on its performance.

采用高品质橡胶绝缘，其内部设计有灭弧机构，可确保在正常电流电压下，开断和闭合肘型负荷插拔电缆接头时可靠灭弧。

This type of connector is designed with high-quality rubber insulation and an arc suppressing mechanism inside to ensure reliable arc extinction when the elbow type load pluggable cable connector is switched on/off under normal current and voltage.



- | | |
|------------|-------------------------|
| 1-灭弧室 | Arc suppressing chamber |
| 2-弹性接触 | Flexible contact |
| 3-标志圈 | Marking |
| 4-外屏蔽层 | Outer shielding layer |
| 5-绝缘层 | Insulating layer |
| 6-3/8-16in | |
| 7-力矩棘轮 | Torque spanner |





一体式单通套管接头 One-piece single pass bushing connector

■ 型号 / Type : YTG-215

■ 概述 / Summary:

200A 一体式单通套管接头, 绝缘子端按照空气绝缘设计, 可安装在埋地式箱变的一侧与高压绕组相连, 提供 200A 高压出线; 或安装在开关柜内, 作为穿墙套管使用。

The 200A one-piece single pass bushing connector, with air space design at the insulator end, can be connected with the high-voltage winding at the primary side of the buried box transformer for providing 200A high-voltage outgoing lines, or installed in a switchgear as a kind of wall bushing.

■ 特性 / Characteristics:

- 其材料采用高性能环氧树脂, 具有优良的电气绝缘性能和机械性能。
Made of high-performance synthetic resin, thus outstanding in electrical insulation and mechanical properties.
- 按穿墙套管结构设计, 局放性能优异。
Designed as a wall bushing structure, excellent in partial discharge performance.
- 系统电压 8.7/15kV, 额定电流 200A。
Rated voltage 8.7/15kV, rated current 200A.
- 套管配合尺寸符合 ANSI IEEE386-2006 标准要求。
Fitting dimensions comply with ANSI IEEE386-2006.

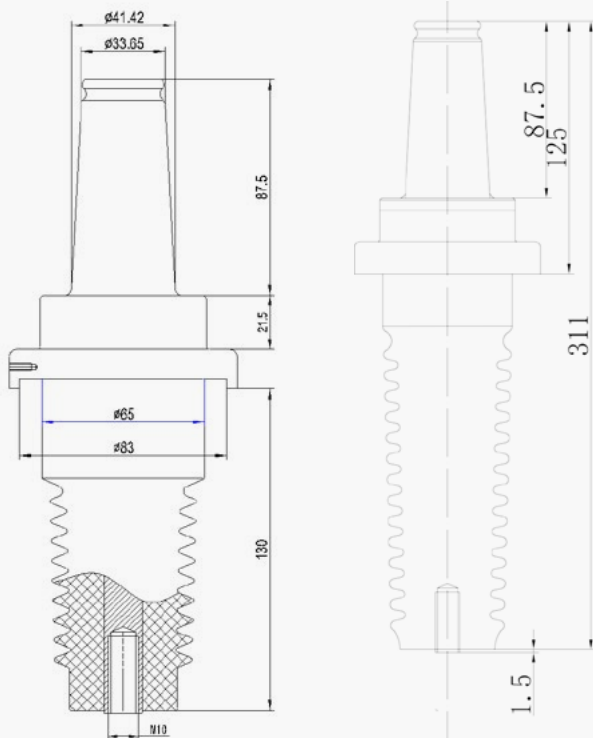


■ 标准包装 / Standard packing:

- 一体式单通套管接头 / One-piece single pass bushing connector
- 耐油密封圈 / Oil-resistant sealing ring
- 红色防尘罩 / Red dust shield
- 清洁布 / Cleaning cloth
- 固定压板 (选配) / Clamping plate (optional)

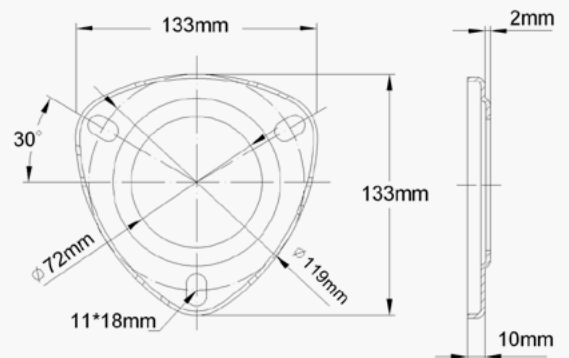
A 型 / Type A

B 型 / Type B



开孔尺寸示意图 / Hole size

固定压板外形尺寸 / Overall dimension of the clamping plate



■ 全绝缘肘型氧化锌无间隙避雷器
Elbow all-insulated ZnO arrester without Gaps
型号 / Type : ZSA-517

■ 概述 / Summary :

全绝缘肘型无间隙氧化锌避雷器可直接安装在箱变、环网柜、电缆分支箱等电气设备上的 200A 单通套管、双通套管或母线排上，为设备或电缆提供电压保护。

This type of arrester can be directly installed on the 200A single-pass bushing, two-way bushing or busbar of box transformer, ring main unit, cable distribution box and other electrical equipments for providing voltage protection for equipments or cables.



■ 附加避雷器单通套管接头
Single-pass bushing connector for surge arrester
型号 / Type : DTB-517

■ 概述 / Summary :

附加避雷器单通套管接头主要安装在美式箱变、环网柜及其它电气设备上的套管井，与套管井组合成一体式套管接头，用于套管井与肘型电缆插头或接地电缆头的连接；附加避雷器可为设备提供过电压保护。

The single-pass bushing connector for surge arrester is mainly installed in the bushing well of US box-type transformer and ring main unit and other electrical equipments. This type of connector and the bushing well form a one-piece bushing connector used for linkage between the bushing well and elbow cable connector or earthing cable end. The surge arrester can provide over voltage protection for equipments.

采用高品质橡胶绝缘，其内部设计有灭弧结构，可确保在正常电流电压下，开断和闭合肘型负荷插拔电缆接头时能可靠灭弧。

The connector is designed with high-quality rubber insulation and an arc suppressing mechanism inside to ensure reliable arc extinction when the elbow type load pluggable cable connector is switched on/off under normal current and voltage.

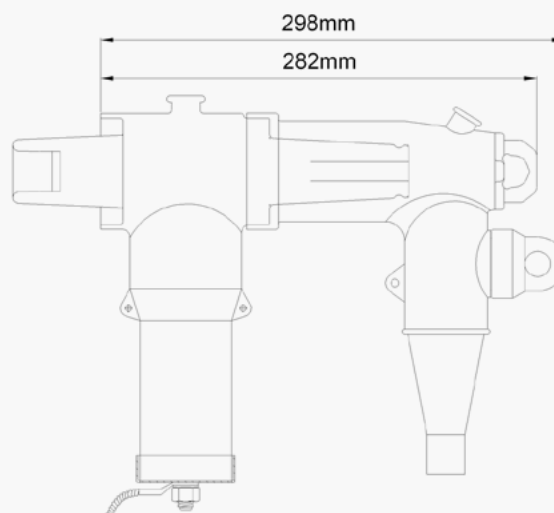
附加避雷器符合国标 GB11032-2002 标准要求。

The surge arrester complies with the national standard GB11032-2002.



Main technical parameters of the ZnO arrester

序号 S.N	主要技术参数 Technical Parameters	配电型 Distribution System	配电型 Distribution System	电站型 Power Station	氧化锌 避雷器 主要 技术 参数
1	型号 Type	12/36	17/50	17/45	
2	系统电压 Rated voltage	12kV	17kV	17kV	
3	系统标称电压 Nominal system voltage	10kV	10kV	10kV	
4	持续运行电压 Continuous operating voltage	9.6kV	13.6kV	13.6kV	
5	标称放电电流 Nominal discharge current	5Ak	5Ak	5Ak	
6	残压 雷电冲击 8/20 ≤ Residual voltage/lightning impulse 8/20 ≤	35.8kV	50kV	45kV	
7	残压 操作冲击 30/60 ≤ Residual voltage/switching impulse 30/60 ≤	30.6kV	42.5kV	38.3kV	
8	残压 陡波冲击 1/10 ≤ Residual voltage/steep impulse 1/10 ≤	41.2kV	57.5kV	51.6kV	
9	2mS 防波电流 ≥ 2mS square wave current ≥	100A	100A	200A	
10	直流 1mA 参考电压 U1mA ≥ DC 1mA reference voltage U1mA ≥	19.5kV	19.5kV	25.0kV	
11	0.75U1mA 泄漏电流 ≤ 0.75U1mA leakage current ≤	50uA	50uA	50uA	



PLUS 型开关柜用连接母线 PLUS connecting busbar for switchgear

- 型号 / Type : PPMJ - 615 \ 624 (630A 屏蔽型母线) / PPMJ - 615 \ 624 (630A shielded busbar)
PPMJ - 1215 \ 1224 (1250A 屏蔽型母线) / PPMJ - 1215 \ 1224 (1250A shielded busbar)

应用 / Applications:

- 通过与开关柜套管连接，可实现多台开关柜之间连接。
Via switchgear bushing, the busbars enable connections among switchgears.
- 系统电压：8.7/15kV \ 12/20kV。
Rated voltage: 8.7/15kV \ 12/20kV.
- 持续额定电流：630A \ 1250A。
Rated continuous current: 630A \ 1250A.

特性 / Characteristics:

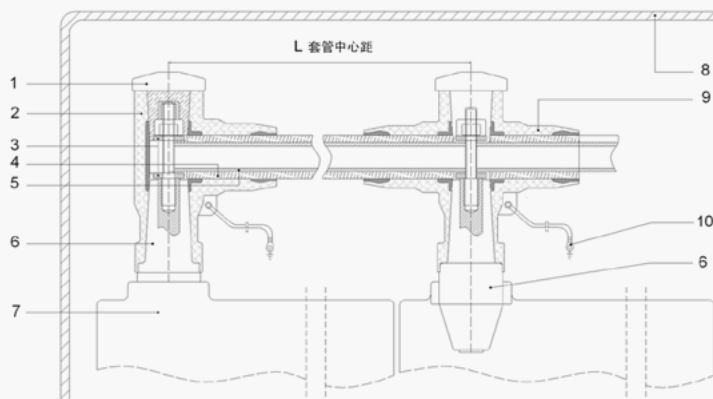
- 与 C 型套管配合时，可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated and fully-sealed separable connections with C-type bushing.
单极，插接式设计。
- Single-pole and plug-in design.
母线由圆铜棒（管）组成，外表复合硅橡胶绝缘层。
- The busbar consists of round copper bars (tubes) and is covered with a composite silicone rubber insulating layer.
- 母线连接采用硅橡胶绝缘的终端连接头和十字接头。
- End connectors and cross joints with silicon rubber insulation are used for connection with the busbars.
- 屏蔽型母线无最小相间距离要求，不受污染和凝漏的影响。
- The shielded busbar is free of requirement on least phase distance and effects of contamination and condensate leakage.



订货须知 / Ordering instructions:

母线加工长度 L 以两开关柜设备套管中心距为依据，订货时务必提供参数；若以母线长度为依据，请明确。

As the length L of the busbar is based on the distance between the bushings' center of two switchgears, relevant parameters must be provided with the order. Please make it clear if the busbar length is to be used as a reference.



1- 硅胶屏蔽罩	Silicone shield
2- 终端接头	End connector
3- 母线夹	Busbar clip
4- 硅橡胶母线绝缘	Silicone busbar insulation
5- T2 铜棒（管）	T2 copper bar (tube)
6- 630A 套管	630A bushing
7- 开关柜壳体	Switchgear case
8- 母线室防护壳	Busbar chamber shield
9- 十字接头	Cross joint
10- 接头屏蔽接地	Earthing wire of connector shield

PLUS 型开关柜用连接母线 PLUS connecting busbar for switchgear

- 型号 / Type : PPMJ - 635 (630A 屏蔽型母线) (630A shielded busbar)
PPMJ - 1235 (1250A 屏蔽型母线) (1250A shielded busbar)

应用 / Applications:

- 通过与开关柜套管连接，可实现多台开关柜之间连接。
Via switchgear bushing, the busbars enable connections among switchgears.
- 系统电压：26/35kV
Rated voltage: 26/35kV
- 持续额定电流：630A \ 1250A
Rated continuous current: 630A \ 1250A.

特性 / Characteristics:

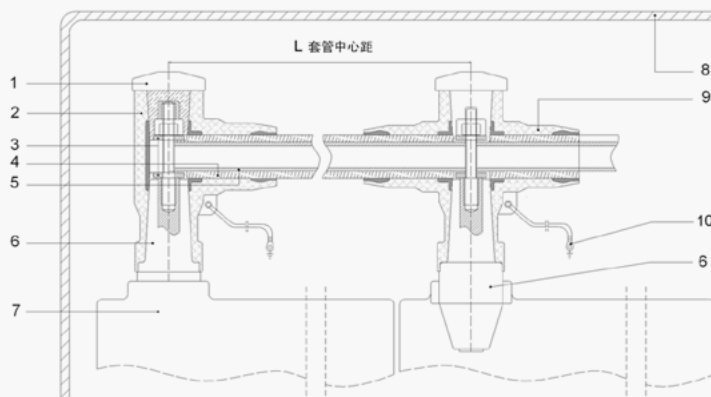
- 与适合的套管配合时，可提供全屏蔽和全密封可分离连接。
When matched with suitable bushings, it can provide fully shielded and fully sealed separable connections.
- 单极，插接式设计。
Single-pole and plug-in design.
- 母线由圆铜棒（管）组成，外表复合硅橡胶绝缘层。
The busbar consists of round copper bars (tubes) and is covered with a composite silicone rubber insulating layer.
- 母线连接采用硅橡胶绝缘的终端连接头和十字接头。
End connectors and cross joints with silicon rubber insulation are used for connection with the busbars.
- 屏蔽型母线无最小相间距离要求，不受污染和凝漏的影响。
The shielded busbar is free of requirement on least phase distance and effects of contamination and condensate leakage.



订货须知 / Ordering instructions:

母线加工长度 L 以两开关柜设备套管中心距为依据，订货时务必提供参数；若以母线长度为依据，请明确。

As the length L of the busbar is based on the distance between the bushings' center of two switchgears, relevant parameters must be provided with the order. Please make it clear if the busbar length is to be used as a reference.



1- 硅胶屏蔽罩	Silicone shield
2- 终端接头	End connector
3- 母线夹	Busbar clip
4- 硅橡胶母线绝缘	Silicone busbar insulation
5- T2 铜棒（管）	T2 copper bar (tube)
6- 630A 套管	630A bushing
7- 开关柜壳体	Switchgear case
8- 母线室防护壳	Busbar chamber shield
9- 十字接头	Cross joint
10- 接头屏蔽接地	Earthing wire of connector shield



630A 环氧树脂绝缘套管
630A epoxy resin insulated bushing

穿墙套管 /Wall bushing 型号 / Type : CTG-615

概述 / Summary :

穿墙套管，主要使用在欧式电缆分接箱内，套管两端可连接标准电缆接头。
This type of wall bushing is mainly used in European type cable distribution box and can fit with standard cable connectors on both ends.

系统电压：8.7/15KV

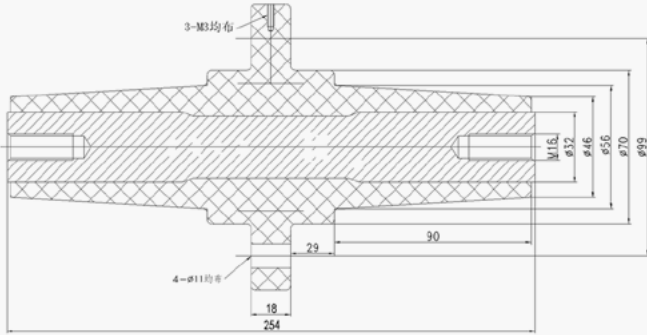
Rated voltage: 8.7/15kV

额定电流：630A

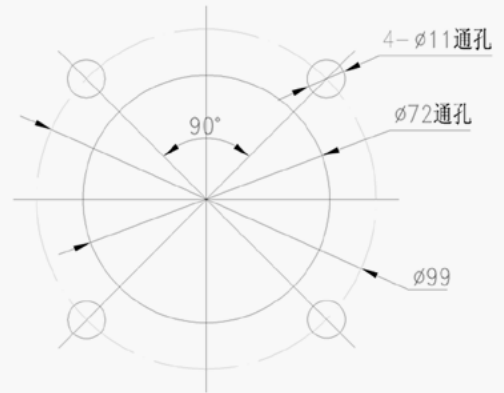
Rated current: 630A

验电测试点电容：20pF

Capacity of the electrical testing point: 20pF



柜体开孔尺寸 /Hole size of the cabinet



绝缘子套管 / Insulator bushing 型号 / Type : JTG-615

概述 / Summary :

绝缘子套管，绝缘子端按照空气绝缘设计，可安装在户内开关柜内，作为穿墙套管使用；套管端可连接标准电缆接头。

The air insulated insulator bushing can be used as a wall bushing in indoor switchgears; the bushing end can connect to standard cable connectors.

系统电压：8.7/15KV

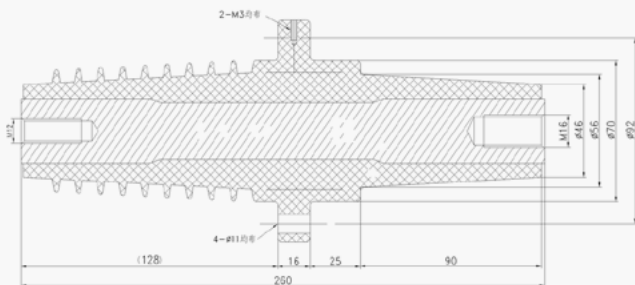
Rated voltage: 8.7/15kV

额定电流：630A

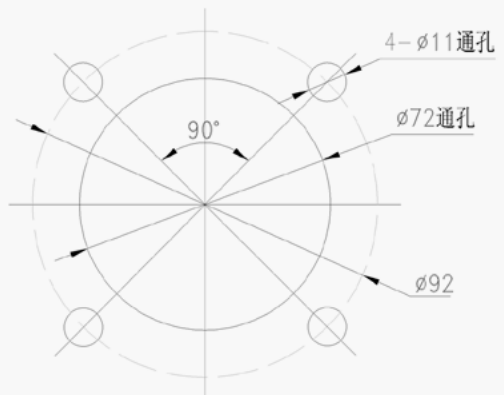
Rated current: 630A

验电测试点电容：20pF

Capacity of the electrical testing point: 20pF



柜体开孔尺寸 /Hole size of the cabinet



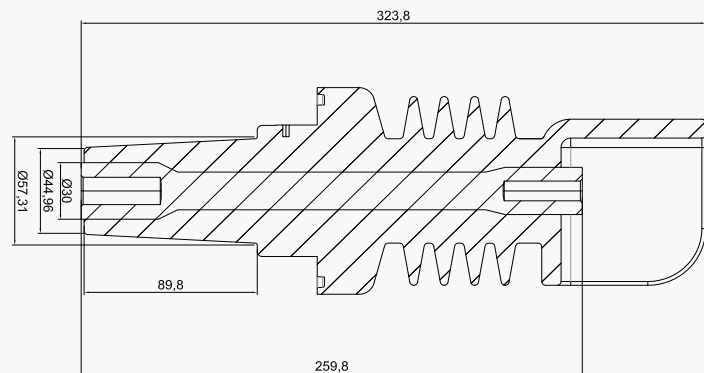


15/24kV、630/1250A 环保柜进出线套管 15/24kV, 630/1250A eco-friendly switchgear inlet and outlet bushings

- 型号 / Type : JYZ-615/1215-H
JYZ-624/1224-H

应用 / Applications:

- 一端密封于环保气体柜内内，一端可接欧式前接头。
One end is sealed inside the environmentally-friendly gas cabinet, and the other end can be connected to a European-style front connector.
- 系统电压：8.7/15kV \ 12/20kV
Rated voltage: 8.7/15kV \ 12/20kV
- 持续额定电流：630A \ 1250A
Rated continuous current: 630A \ 1250A.



特性 / Characteristics:

- 套管法兰面上的接触点可直接接地或连接带电显示器指示套管带电；
The contact points on the bushing flange surface can be directly grounded or connected to a live display to indicate that the bushing is energized.
- 连接接头部分与法兰之间的过度部分可挂接电流互感器；
The transition section between the connection joint and the flange can accommodate a current transformer.
- 适用于环保气体绝缘介质。
Suitable for environmentally-friendly gas insulation medium.



FLAT 型开关柜用连接母排 FLAT type switchgear connecting busbar

■ 型号 / Type : FPMJ-615

■ 应用 / Applications:

- 通过与开关柜套管连接，可实现多台开关柜之间连接。
Via switchgear bushing, the busbars enable connections among switchgears.
- 系统电压：8.7/15kV。
Rated voltage: 8.7/15kV.
- 持续额定电流：630A。
Rated continuous current: 630A.



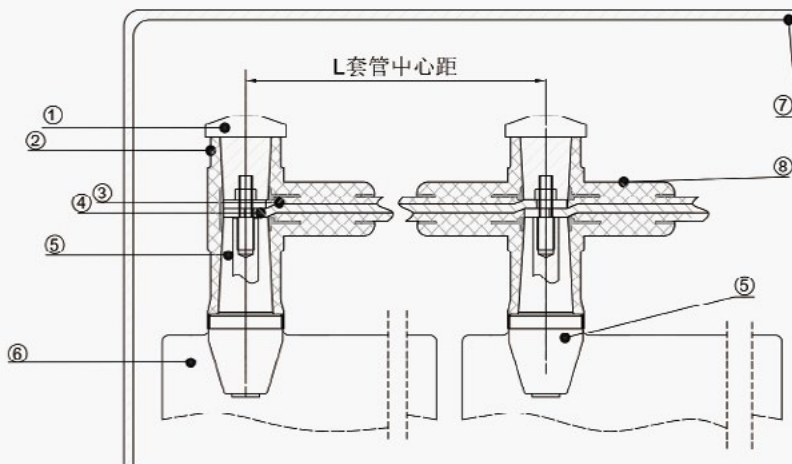
■ 特性 / Characteristics:

- 与适合的套管配合时，可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated and fully-sealed separable connections with type-matched bushing.
- 单极，插接式设计。
Single-pole and plug-in design.
- 母线由铜排组成，外表复合硅橡胶绝缘层。
Busbar is composed by copper busbar, the surface is covered with composite silicone rubber insulated layer.
- 母线连接采用硅橡胶绝缘的终端连接头和十字连接头。
End connectors and cross joints with silicon rubber insulation are used for connection with the busbars.
- 屏蔽型母线无最小相间距离要求，不受污染和凝漏的影响。
The shielded busbar is free of requirement on least phase distance and effects of contamination and condensate leakage.
- 非屏蔽型母线需加装防护罩。
The unshielded busbar should be mounted with a shield.

■ 订货须知 / Ordering instructions:

母线加工长度 L 以两开关柜设备套管中心距为依据，订货时务必提供参数；若以母线长度为依据，请明确。

As the length L of the busbar is based on the distance between the bushings' center of two switchgears, relevant parameters must be provided with the order. Please make it clear if the busbar length is to be used as a reference.



1- 硅胶屏蔽罩	Silicone shield
2- 终端连接头	End connector
3- 硅橡胶母线绝缘	Silicone busbar insulation
4- T2 铜排	T2 copper busbar
5- 630A 套管	630A bushing
6- 开关柜壳体	Switchgear case
7- 母线室防护壳	Busbar chamber shield
8- 十字连接头	Cross joint

FLEX 型开关柜用连接母排 FLEX type switchgear connecting busbar

■ 型号 / Type : FLEX-615

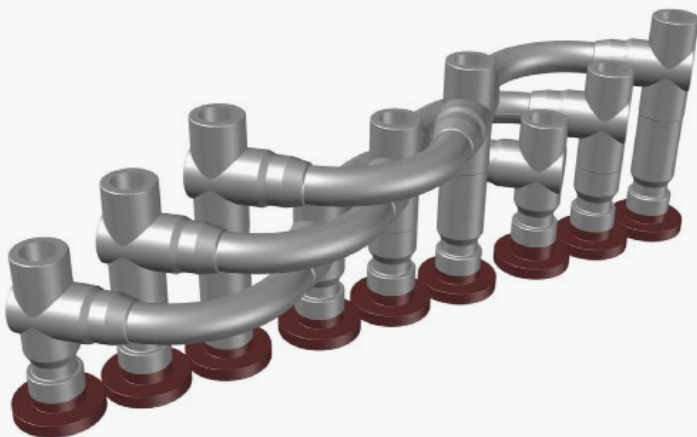
■ 应用 / Applications:

- 通过与开关柜套管连接，可实现多台开关柜之间连接。
Via switchgear bushing, the busbars enable connections among switchgears.
- 系统电压：8.7/15kV。
Rated voltage: 8.7/15kV.
- 持续额定电流：630A。
Rated continuous current: 630A.



■ 特性 / Characteristics:

- 与适合的套管配合时，可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated and fully-sealed separable connections with type-matched bushing.
- 单极，插接式设计。
Single-pole and plug-in design.
- 母线由铜排组成，外表复合硅橡胶绝缘层。
Busbar is composed by copper wire, the surface is covered with composite silicone rubber insulated layer.
- 母线连接采用硅橡胶绝缘的终端连接头和十字接头。
End connectors and cross joints with silicon rubber insulation are used for connection with the busbars.
- 屏蔽型母线无最小相间距离要求，不受污染和凝漏的影响。
The shielded busbar is free of requirement on least phase distance and effects of contamination and condensate leakage.
- 非屏蔽型母线需加装防护罩。
The unshielded busbar should be mounted with a shield.



■ 订货须知 / Ordering instructions:

母线加工长度 L 以两开关柜设备套管中心距为依据，订货时务必提供参数；若以母线长度为依据，请明确。

As the length L of the busbar is based on the distance between the bushings' center of two switchgears, relevant parameters must be provided with the order. Please make it clear if the busbar length is to be used as a reference.

E-PLUS 型全屏蔽单体柜（固体绝缘开关柜）专用连接母线 E-PLUS for fully shielded single cabinet (Solid insulated switchgear)

■ 型号 / Type : EPMJ-615

■ 应用 / Applications:

- 通过与开关柜套管连接，可实现多台单体柜（固体绝缘开关柜）之间连接
Via switchgear bushing, Enables connection among multiple single cabinet (solid insulated switchgears)
- 系统电压：8.7/15KV。
Rated voltage: 8.7/15kV.
- 持续额定电流：630A。
Rated continuous current: 630A.



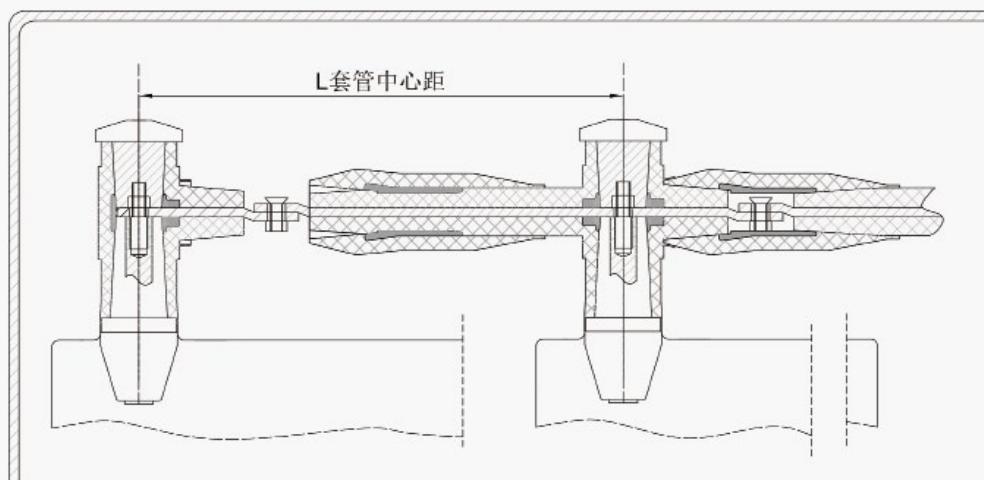
■ 特性 / Characteristics:

- 与适合的套管配合时，可提供全绝缘和全密封可分离连接。
Able to provide fully-insulated and fully-sealed separable connections with type
- 单只母线可在不影响相邻电路连接的情况下独立拆装。
Single busbar can be disassembled independently without affecting adjacent circuit connection.
- 对单体柜（固体绝缘开关柜）在组装过程中，因制造工艺造成的相邻套管之间的位置偏差有良好的适应性。适应范围：水平范围，垂直范围。
In the assembly process of single cabinet (solid insulated switchgear), it has good adaptability for the position deviation between adjacent bushings caused by manufacturing process. Adaptive range: horizontal range, vertical range.
- 屏蔽型母线无最小相间距离要求，不受污染和凝漏的影响。
The shielded busbar is free of requirement on least phase distance and effects of contamination and condensate leakage.
- 非屏蔽型母线需加装防护罩。
The unshielded busbar should be mounted with a shield.

■ 订货须知 / Ordering instructions:

母线加工长度 L 以两开关柜设备套管中心距为依据，订货时务必提供参数；若以母线长度为依据，请明确。

As the length L of the busbar is based on the distance between the bushings' center of two switchgears, relevant parameters must be provided with the order. Please make it clear if the busbar length is to be used as a reference.



开关柜用内锥型母线连接器
Busbar connector with inner cone for switchgear

- | | |
|--|-----------------------------|
| ■ 630A 内锥型母线连接器 / 630A inner cone busbar connector | 型号 / Type : NLM-615 / 624 |
| ■ 630A 内锥型母线绝缘子 / 630A inner cone busbar insulator | 型号 / Type : JYZ-615 / 624 |
| ■ 1250A 内锥型母线连接器 / 1250A inner cone busbar connector | 型号 / Type : NLM-1215 / 1224 |
| ■ 1250A 内锥型母线绝缘子 / 1250A inner cone busbar insulator | 型号 / Type : JYZ-1215 / 1224 |
| ■ 内锥型母线绝缘子绝缘封堵 / Inner cone busbar insulator block | 型号 / Type : JYFD-15 / 24 |

■ **应用 / Applications:**

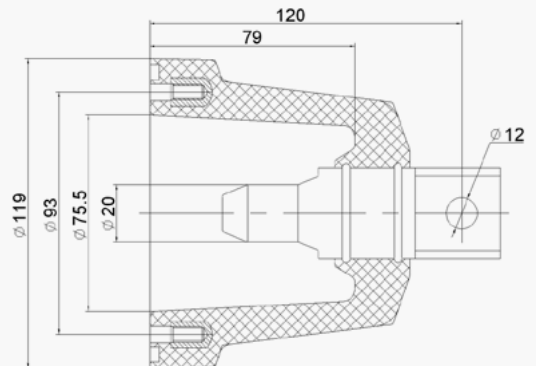
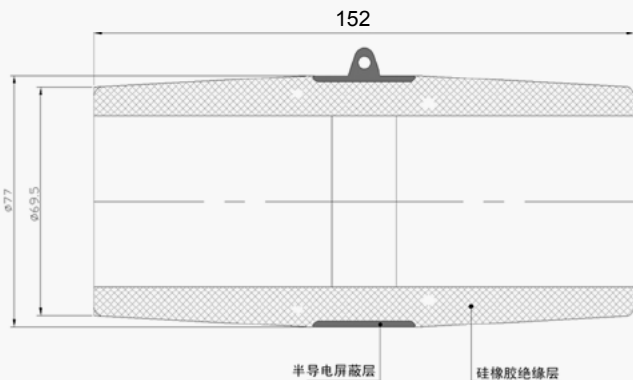
- 通过与开关柜内锥绝缘子连接，可实现多台开关柜之间的电气连接。
 Via the inner cone insulator of switchgear, the connectors can realize electrical connections among switchgears.
- 系统电压：8.7/15kV \ 12/20kV。
 Rated voltage: 8.7/15kV \ 12/20kV.
- 持续额定电流：630A\1250A。
 Rated continuous current: 630A\1250A.

■ **特性 / Characteristics:**

- 与适合的内锥绝缘子配合时，可提供全屏蔽和全密封可分离连接。
 Able to provide fully-insulated and fully-sealed separable connections with type-matched inner cone insulators.
- 母线连接采用大电流弹性触指设计，可满足开关柜额定及短路耐受电流。
 The busbar connection of high-current flexible contact design meets the requirement of the rated current and short-circuit withstand current of switchgear.
- 特殊结构设计，可防止局部放电和保证绝缘特性。
 Special design of the connector can prevent partial discharge and ensure good insulation effect.
- 无最小相间距离要求，不受污染和凝漏的影响。
 The connectors are free of requirement on least phase distance and effects of contamination and condensate leakage.
- 现场安装简便，并柜安全可靠。
 Easy for on-site installation, safe and reliable connection of cabinets.



绝缘子配合尺寸 / Fitting dimensions of the insulator



15kV 国网标准化集成节点开关柜快速连接器 15kV State Grid standardized integrated node switchgear quick connector

■ 型号 / Type :

(10kV SF6 集成节点开关柜快速连接器) (10kV SF6 integrated node switchgear quick connector) QCS-15

(10kV 环保型集成节点开关柜快速连接器) (10kV eco-friendly integrated node switchgear quick connector) QCS-15-H



■ 应用 / Applications:

用于环网柜、旁路开关，引导载流导体穿过与其电位不同的箱壳，作为导电部分支持物和对箱壳绝缘使用。

使用环境：SF6 绝缘介质或环保型气体

安装方式：安装在柜体的 SF6 柜快接座内部通过螺栓连接内部导电部分，外部对接里得快速连接头

型号配置：250A 快接座对接 250A 快速连接头

Used in ring main units and bypass switches, it guides the current-carrying conductor through the enclosure, which has a different potential, serving as a support for conductive parts and providing insulation from the enclosure.

Operating Environment: SF6 insulation medium or eco-friendly gas

Installation Method: Installed inside the SF6 quick connection port of the cabinet body, where the internal conductive parts are connected by bolts, and externally mated with the quick connector.

Model Configuration: 250A quick connection port mated with a 250A quick connector.

PT 软连接
PT flexible connector

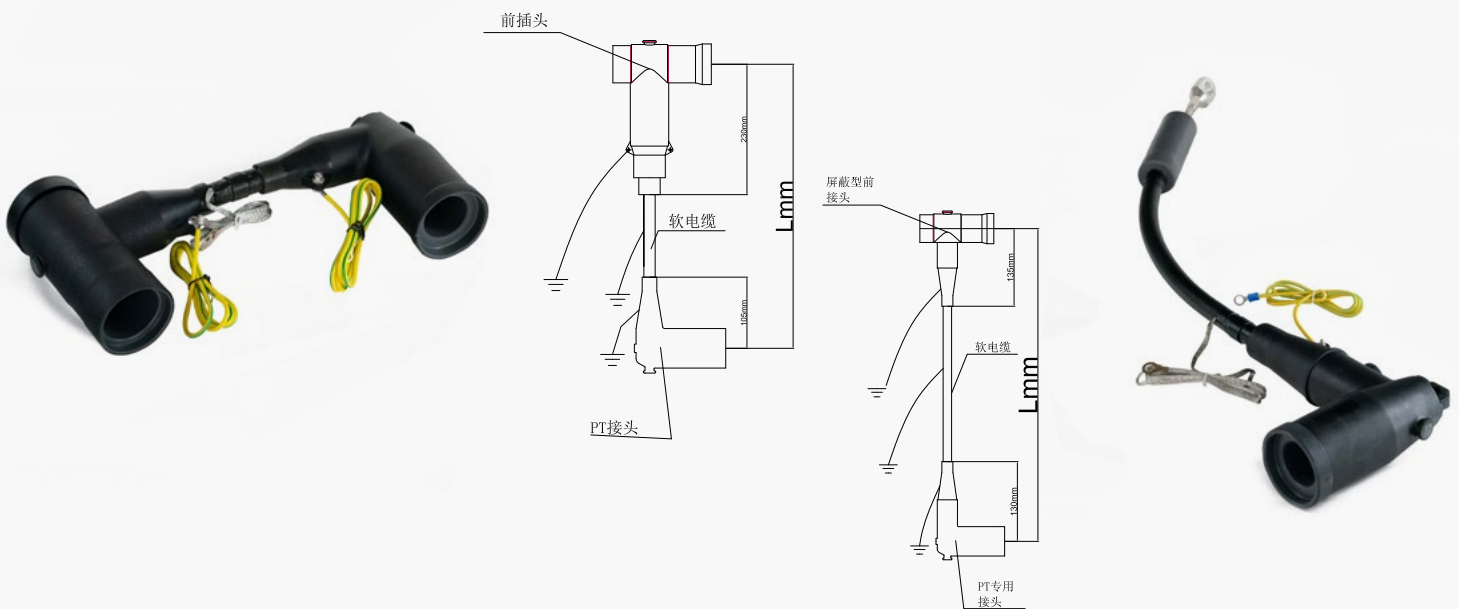
■ 型号 / Type :

(10kVPT 软连接) (10kV PT flexible connector) PTDL-15-L
 (20kVPT 软连接) (20kV PT flexible connector) PTDL-20-L

■ 应用 / Applications:

可以用于环网柜中互感器与进出线套管的连接
 系统电压：8.7/15kV\12/20kV

It can be used for connecting the current transformer to the inlet and outlet bushings in ring main units.
 System Voltage: 8.7/15kV, 12/20kV.



■ 特性 / Characteristics:

采用矿用 EPDM 绝缘电缆，柔软度高，绝缘性能可靠；
 电缆表面为屏蔽结构，对安装位置无限制；
 组装发货，现场安装简便，安全可靠；
 订货时请提供套管之间的中心距（最小距离 360mm）。

Uses mining-grade EPDM insulated cable, featuring high flexibility and reliable insulation performance.
 The cable surface has a shielded structure, with no restrictions on installation position.
 Pre-assembled and delivered, ensuring simple on-site installation, safety, and reliability.
 Please provide the center distance between bushings when ordering (minimum distance 360mm).

开关柜内锥 / 外锥套管试验终端

Switchgear internal cone/external cone bushing test terminal

■ 开关柜内锥套管试验终端 / Switchgear internal cone bushing test terminal

I 型 10kV 内锥型套管试验终端 /

Type I 10kV internal cone bushing test terminal 型号 : SYZD-615-N- I

I 型 20kV 内锥型套管试验终端 /

Type I 20kV internal cone bushing test terminal 型号 : SYZD-624-N- I

II 型 10kV 内锥型套管试验终端 /

Type II 10kV internal cone bushing test terminal 型号 : SYZD-615-N- II

II 型 20kV 内锥型套管试验终端 /

Type II 20kV internal cone bushing test terminal 型号 : SYZD-624-N- II

检测耐压可达：65kV/1 分钟

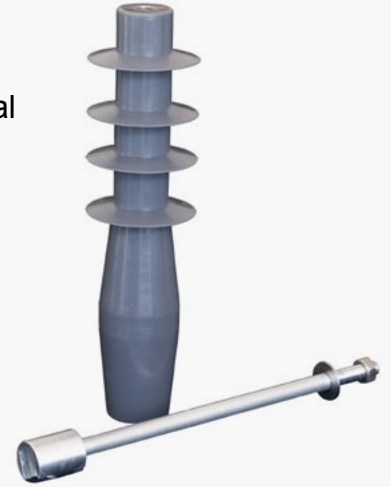
最高耐压可达：79kV/1 分钟

该终端主要用于 10-20kV 开关柜内锥套管出厂耐压测试试验。

The testing voltage can reach: 65kV for 1 minute

The maximum withstand voltage can reach: 79kV for 1 minute

This terminal is primarily used for factory withstand voltage testing of internal cone bushings in 10-20kV switchgear.



■ 开关柜外锥套管试验终端 / Switchgear external cone bushing test terminal

10kV 外锥型套管试验终端 /

10kV external cone bushing test terminal 型号 : SYZD-615

20kV 外锥型套管试验终端 /

20kV external cone bushing test terminal 型号 : SYZD-624

35kV 外锥型套管试验终端 /

35kV external cone bushing test terminal 型号 : SYZD-635

检测耐压可达：95kV/5 分钟

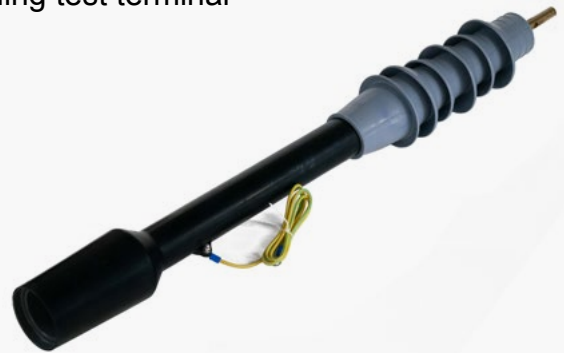
最高耐压可达：117kV/5 分钟

该终端主要用于 10-35kV 开关柜内锥套管出厂耐压测试试验。

The testing voltage can reach: 95kV for 5 minute

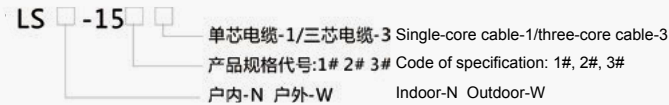
The maximum withstand voltage can reach: 117kV for 5 minute

This terminal is primarily used for factory withstand voltage testing of internal cone bushings in 10-35kV switchgear.



电缆附件 Cable accessories

■ 冷缩户内 / 户外终端 / Cold shrinkable indoor/outdoor terminal 型号 / Type :

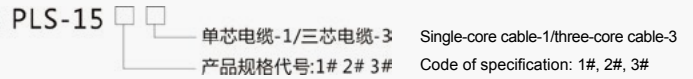


■ 概述 / Summary :

本型号冷缩户内 / 户外终端采用全新冷缩扩展技术, 内设应力控制单元, 一种规格可适应多种电缆线径, 安装简便、快捷。可适用于在户内 / 户外环境下, XLPE 电力电缆与电气设备或线路连接时, 作为电缆终端使用。

This type of cold shrinkable indoor/outdoor terminal, developed with the new cold shrinkage and expansion technology, with stress control unit inside, is easy and convenient for installation. A terminal of a same specification is applicable to cables of different diameters. It is suitable for indoor and outdoor environments, and can be used as a kind of terminal for XLPE cables connected with electrical equipments or circuits.

■ 冷缩电缆分相配件 / Phase-splitting accessory of cold shrinkable cable 型号 / Type :



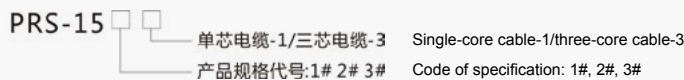
■ 概述 / Summary :

本型号冷缩电缆分相配件主要用于预制式电缆接头与电气开关设备连接时, 作为 XLPE 电缆分相处理的配件。分相配件不含终端, 以分支手套和冷缩管组成, 采用全新冷缩扩张技术, 一种规格可适应多种电缆线径, 安装简便、快捷。

This type of accessories is mainly used for phase-splitting of XLPE cables when the prefabricated cables are connected with electrical switch gears. The phase-splitting accessory, developed with new cold shrinkage and expansion technology, does not have a terminal, consists of a branch glove and a cold shrinkable tube, and is easy for installation. This type of accessories of a same specification is applicable to cables of different diameters.



■ 热缩电缆终端及分相配件 / Heat shrinkable cable terminal and phase-splitting accessory 型号 / Type :



■ 概述 / Summary :

热缩电缆终端采用全新辐照技术生产, 一种规格可适应多种电缆线径, 安装简便、快捷。

The heat shrinkable cable terminal is developed with new irradiation technology, easy and convenient for installation. A terminal of a same specification is applicable to cables of different diameters.

热缩电缆分相附件主要用于预制式电缆接头与电气设备连接时, 作为 XLPE 三芯电缆分相处理的配件。区别在于没有内置应力管和伞群配件。

The heat shrinkable cable accessory is mainly used for phase splitting of XLPE three-core cables when the prefabricated cables are connected with electrical equipments. The difference is that it does not has built in stress tube and parachute cluster accessories.



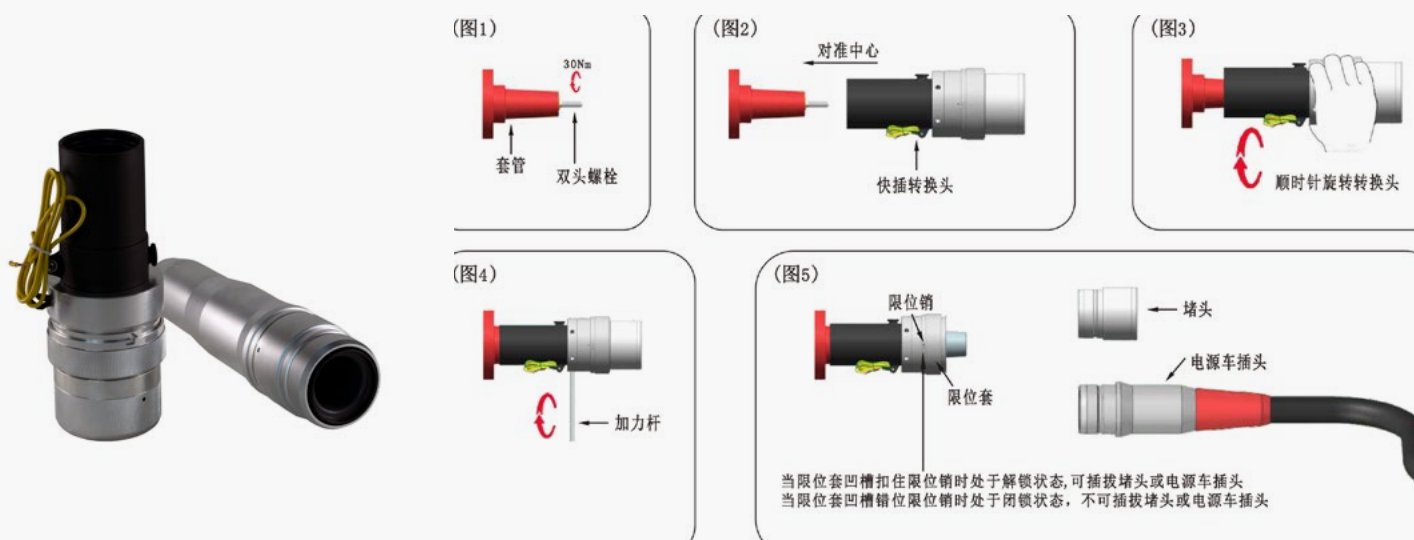


400A 应急电源快插

400A emergency power quick-connect

产品介绍：

应急电源快插主要用于由中压发电车、旁路开关车等应急车辆提供临时供电电源，满足日常不停电作业检修及抢修工作。需要取电时只需把堵头取出，将电源车电缆插头插入接口旋转卡扣固定，取电完毕再将电缆插头拨下，装上堵头进行绝缘封堵，整个过程简便快捷。（插拔时务必确保套管不带电）



拆装步骤：

A、应急电源快速插座的安装

- 1、取下箱体套管的防尘盖或保护帽，并擦拭干净套管，u 将双头螺栓拧紧在套管上（图 1）
- 2、待套管清洁剂挥发完全，在套管外表面和快插转换头内表面均匀涂抹硅脂膏。
- 3、将转换插头对准套管螺栓推入（图 2），当转换头开始被螺栓抵住时，抓住转换头开始顺时针旋转皮时转换头通过螺栓向前上紧（图 3）。
- 4、当转换头旋转快到底时，用随配的金属杆插入转换头的侧孔中作为加力杆旋转紧固（图 4）。
- 5、旋转限位套使得限位套凹槽对准并扣住限位销，向前推限位套并扣住限位销，此时自锁机构处于解锁状态可拨下快插堵头（图 5），插入插针工装（T2 铜 $\varnothing 14\text{ mm}$ ），测量回路电阻 $< 65\ \mu\Omega$ 。
- 6、将转换头接地线做牢靠接地处理，至此应急电源快插插座安装完毕。

B、电源车电缆插头的拆装

- 1、确认备用套管不带电后，旋转限位套使得限位套凹槽对准限位销，向前推限位套并扣住限位销，此时自锁机构处于解锁状态（图 5）。
- 2、拔出绝缘堵头，放置在干净地方。如果堵头因为长期未插拔导致难拔出，可边顺时针旋转堵头边往外拨。
- 3、拔出绝缘堵头后，将快插套管和电源车插头用清洁纸擦拭干净，待清洁剂挥发完全后均匀涂抹硅脂膏，将电源车插头插入插座内并用力推到底，往后拉并转动限位套使得凹槽与限位销错位，此时自锁机构处于闭锁状态，可准备进行取电。
- 4、取电完毕后，确认套管不带电。旋转限位套使得限位套凹槽对准限位销，向前推限位套并扣住限位销，此时自锁机构处于解锁状态，可拔出电源车电缆插头。
- 5、插入绝缘堵头并用力推到底，往后拉并转动限位套使得凹槽与限位销错位，此时自锁机构处于闭锁状态，插座重新回到绝缘封堵状态。

名称: 无线测温系统

型号: BBCA-WTM-15

■ 产品介绍

系统采用无源无线测温方式。测温传感器内置于绝缘塞内，传感器采用低功耗设计的高压电场感应取电及无线通信技术。无线模块采用 2.4G 无线传输技术将温度数据传给数据采集器（控制主机），控制主机经过分析处理后，可以通过 485 (modbus) 将数据传输给 D T U 或后台系统。设备管理人员可通过手机 APP、网页等后台系统实时查阅导体运行温度，分析并诊断各测点处设备的安全状态，制定检修维护计划。现场作业人员可通过现场显示主机查看各测点温度信息。



■ 系统功能

- :: 温度监测：在监控系统上集中显示被测各点的温度值。
- :: 报警功能：实际测量到的参数值超过以下三类报警值时进行声光报警，并推送至手机短信。
 - (1) 各监测点温度值超过设定的报警值时进行报警。
 - (2) 实测 A、B、C 三相温差比较超过设定值进行报警。
 - (3) 各监测点温度突变值大于设定值时进行报警。
- :: 故障显示：被测设备温度点的位置非正常工作时显示故障。
- :: 系统自检：系统具备自检功能，可自动上报故障、错误信息，如：传感器丢失、装置掉电等故障。
- :: 数据库功能：存储所有被测点的各个时刻的温度值，以便进行历史查询历史曲线显示。
- :: 权限管理：可进行权限设置。运行数据的设定、修改等需经有使用权限的系统操作人员操作方生效。
- :: 远程通信：系统提供 RS485、以太网、GPRS 等通讯方式，以满足远程通信。
- :: 电子地图：操作简便、界面友好的电子地图准确反映了系统各采集站、采集点地理位置的分布和实时监测数据。
- :: 示警平台扩展：可与我司研发的配电室综合监控系统相融合，形成多平台示警保障。

■ 技术参数

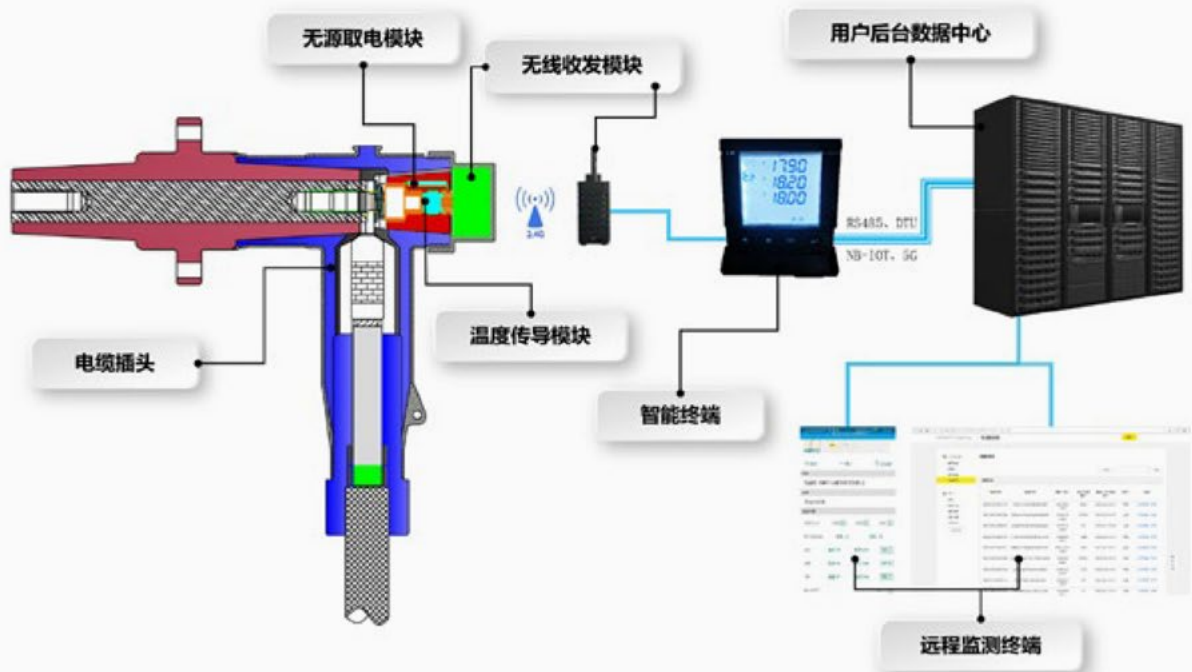
- | | |
|--|---|
| <ul style="list-style-type: none"> :: 数据采集器（控制主机）参数： <ul style="list-style-type: none"> 无线功率：5dBm 频率范围：2.4Hz 功耗：<1W 测温通道：8 路（可根据需求选择，最多 8 路） :: 接收天线技术参数： <ul style="list-style-type: none"> 频率范围：2.4HZ 典型增益：5dBi | <ul style="list-style-type: none"> :: 无线传感器技术参数 <ul style="list-style-type: none"> 测试距离：可以满足环网柜测温需要求，空旷传输大于 50 米。 使用寿命：5~10 年。 测度范围：-40 ~ +150℃ 测温精度：± 2 °C |
|--|---|



名称: 无线测温系统

型号: BBCA-WTM-15

■ 安装示意图



■ 技术特点

- :: 无源无线: 传感器采用电压取能方式, 无需其它供电。
- :: 抗强电 (磁) 场: 采用 2.4GHz 进行传输, 多频点跳频机制, 杜绝工频电力电磁波影响。
- :: 抗工频磁场干扰: 满足 GB/T 17626.6-2006 X、Y、Z 三方位磁场强度为 100A/m、频率为 50Hz 的磁场干扰试验。
- :: 静电放电干扰: 满足 GB/T 17626.2 规定的 IV 级 (接触放电 8kV) 静电放电干扰试验。
- :: 抗射频感应场的传导骚扰干扰: 满足 GB/T 17626.6-2008 试验。
- :: 抗电快速瞬变脉冲群干扰: 满足 GB/T 17626.4-2008 $\pm 4\text{kV}$ 脉冲电压、5kHz 脉冲频率的快速瞬变脉冲群干扰试验。
- :: 抗脉冲磁场干扰: 满足 GB/T 17626.11-2006 X、Y、Z 三方位磁场强度为 300A/m 的脉冲磁场干扰试验。
- :: 抗射频电磁场辐射干扰: 满足 GB/T 17626.3-2006 80-1000MHz 射频电磁场辐射干扰试验。
- :: 抗浪涌 (冲击) 干扰: 装置电源端口和通讯端口能满足 GB/T 17626.4-2008 差模 2kV 抗浪涌 (冲击) 干扰试验。
- :: 抗电压暂降、短时中断和电压变化干扰: 满足 GB/T 17626.11-2006 试验等级为 80% ($U_t\%$)、250 周期的电压暂降干扰试验。



名称: 智能井盖

型号: BBCA-SMC-20

■ 产品介绍

本系统基于 NB-IOT 物联网技术、传感器基础、地理信息技术、计算机网络技术及其他无线通信技术，可实现对市政井盖的数字化管理。

系统平台由后台服务器、井盖监控系统、手机 APP 端等组成。系统将每个井盖监控设备进行编码，采集井盖的开启及关闭信号，通过 NB 及 4G 网络上传到监控中心软件平台，结合人机交流界面，能够使用户直观、方便的实时监控辖区内井盖的状态，及井内的各项参数，为智慧城市的建设提供了有力的支持。

■ 技术参数:

- :: 防护等级 GB4208 IP68
- :: 防爆型式 隔爆外壳保护

■ 性能参数:

- :: 电源
- :: 电池容量: 20Ah
- :: 最大持续电流 150mA
- :: 最大脉冲电流: 300mA
- :: 额定电压: 3.6V×2
- :: 电池待机寿命: 满足井盖工作 5 年的需要



■ EMC 电磁兼容性:

- :: 静电放电 IEC 61000-4-2 Level 4
- :: 射频电磁场辐射抗扰度 IEC 61000-4-3 Level 3
- :: 电快速瞬变脉冲群 IEC 61000-4-4 Level 4
- :: 浪涌冲击 IEC 61000-4-5 Level 3
- :: 射频电磁场传导抗扰度 IEC 61000-4-6 Level 5



名称: 智能井盖

型号: BBCA-SMC-20

■ 材料参数:

- :: 材质: 高强度玻璃钢树脂
- :: 承载能力: $\geq 34\text{KN}$
- :: 内盖与支座缝宽: 4mm
- :: 内盖厚度: 15mm
- :: 内盖外径: $\varphi 700 \pm 2\text{mm}$
- :: 内盖颜色: 橙黄色
- :: 锁具材质: 304 不锈钢
- :: 锁具结构: 3 轴
- :: 开关次数: 大于 10000 次

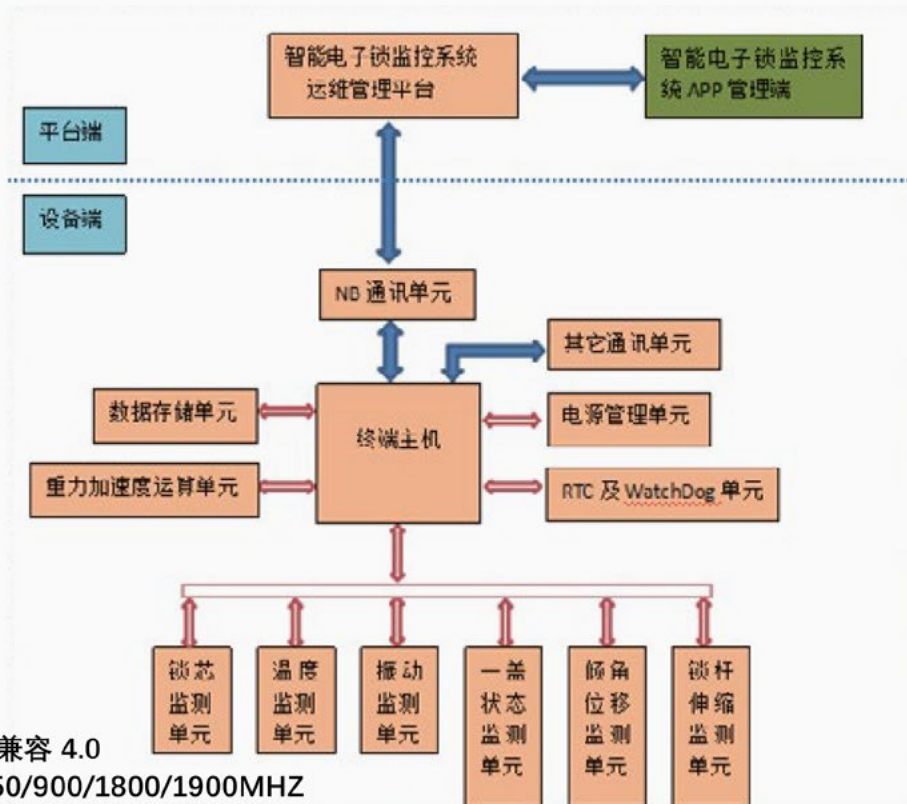
■ 通信模块参数:

- :: 蓝牙模块工作模式: 主从模式, 兼容 4.0
- :: 调制解调器频率范围: GSM: 850/900/1800/1900MHZ
- :: 天线频率: 824-896/806-960 MHZ
- :: 天线输入阻抗: 50 Ω
- :: 天线增益: 12dBi
- :: 天线驻波比: ≤ 1.5
- :: 天线接口形式: SMA Male

■ 工作环境:

- :: 环境温度: 户外 $-35^{\circ}\text{C} \sim +55^{\circ}\text{C}$; 户内 $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$
- :: 湿热条件: 温度 40°C / 相对湿度 93%、15%~93% 不结露
- :: 盐雾条件: 48 小时中等盐雾
- :: 大气压力范围: 86~106kPa
- :: 海拔高度: ≤ 3000 米;
- :: 抗地震能力: 地面水平加速度 0.3g, 垂直加速度 0.15g 同时作用
- :: 设备设计最大风速 35m/s

■ 示意图





名称: 配电室综合监控系统

型号: BBCA-IMS-PDR-20

■ 产品介绍

- :: 一款适应配电室和变电站综合监控应用的高性能监控系统,专为中低压配电网资产管理设计研发。
- :: 主控制器经过计算处理,避免发生不必要的损失。
- :: 系统基于低功耗的 32 位 ARM 嵌入式芯片,大容量存储器,提供便捷的嵌入式 WEB 服务,通过采样接口采集各种传感器的数据信息,状态信息,无需依赖网络、上位机软件即可完成供配电的空调、漏水、温湿度、红外、门禁、视频图像等进行集中监控管理报警功能。主机为各种传感器提供工作电源,停电状态下能够使用内置的后备电源独立为主机和传感器提供电。
- :: 通过液晶显示屏实时显示配电室环境的情况,并通过网络或短信方式告知值班人员。
- :: 支持 GPRS APP 手机浏览管理,也可以直接使用 IE 浏览器进行监控管理,系统内建完善的 TCP/IP 功能,可实现灵活组网或跨平台无缝集成。
- :: 可与我司研发的无线测温系统相融合,形成多平台示警保障。

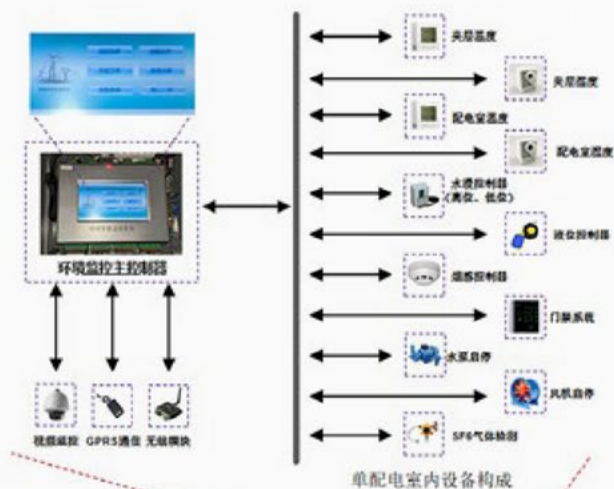
■ 使用条件

- :: 系统工作环境:
 - 环境温度: $-20^{\circ}\text{C} \sim +40^{\circ}\text{C}$;
 - 平均相对湿度: 不大于 95% ($+25^{\circ}\text{C}$);
 - 大气压力: $80\text{kPa} \sim 106\text{kPa}$;
- :: 中继器贮运条件:
 - 高温: $+60^{\circ}\text{C}$;
 - 低温: -40°C ;
 - 平均相对湿度: 95% ($+25^{\circ}\text{C}$);
 - 振动: 加速度 50m/s^2 ;
 - 冲击: 峰值加速度 500m/s^2 。



名称: 配电室综合监控系统

型号: BBCA-IMS-PDR-20



■ 技术特点

- :: 进线开关柜断路器开闭合监控
- :: 进线开关柜电压监控
- :: 配电室温度、湿度监测
- :: 夹层温度、湿度监测
- :: 配电室水位高度监测，支持高水位低水位电极报警，报警时信息中可知液位深度；
- :: 夹层水浸点，高位、低位监测，水深报警值可设定，超过高水位时可设定持续报警值；
- :: 支持高水位低水位电极报警，报警时信息中可知液位深度；
- :: 配电室烟感监测
- :: 配电室门禁控制状态监测
- :: 配电室水泵启动停止监测和控制，接受远方控制信号以启动或停止水泵功能；
- :: 配电室风机启动停止监测和控制，接受远方控制信号以启动或停止风机功能；
- :: 配电室有害气体 SF6 浓度监测（选配）
- :: GPRS 通讯传输
- :: RS485 通讯接口，接受远方控制进行数据上传功能；
- :: 支持多个硬节点和 DTU 通讯，实现系统报警、溢水报警及水泵状态指示等功能；
- :: 支持本地显示和操作功能，查看实时数据及设置参数，可查询历史数据及报警信息；
- :: 数据通信同时支持 4G 自适应无线通信和光纤两种模式，具备 RS485 通信能力；
- :: 数据通信能与配电自动化系统对接，支持 IEC101 和 IEC104 通讯规约；
- :: 支持定点抓拍及图像上传功能；
- :: 设备可通过手机 APP 功能查看设备状态及现场数据。

