



Cold-shrink Cable Accessories

COOPER Power Systems



Company and Division Introduction



- Cooper Industries, nearly 200 years of history, is a global manufacturer, headquartered in USA Houston, and own manufacturing facilities in 23 countries. The Company has seven operating divisions with leading market share positions of world-class products and brands. Cooper introduces most advanced manufacture equipment, process monitoring and quality control technology, strictly according to international quality standards so as to guarantee every product to be most excellent and reliable.
- Cooper Power Systems, as one of the major pillar industries of Cooper Industries headquartered at Milwaukee City, Wisconsin, is famous for its market leadership and technical innovation, which provides most economic and effective system solutions for worldwide power utilities, industries and enterprises and public institutions in the aspect of power distribution and power management. Its products include transformers, VCB, RMU, overhead switches, Capacitors, voltage regulators, transformer components, MRPs, arresters, Cutouts, Disconnectors, smart grid solutions and so on. All over the world, Cooper Power Systems has more than 20 factories and sales offices.
- In the early 1990s, Cooper Power Systems entered China, and first introduced American standard power distribution solutions and products, which has brought about unique power distribution schemes for rural and urban power grid reconstruction in China, and greatly promoted the development of China power distribution. In 1995, it established the PingDingShan Edison Electronics and Technology Co., Ltd., which is engaged in the production and distribution of excellent power distribution products such as Reclosers, Circuit Breakers, Overload Switchgear, Ring Main Unit, Sectors etc., and has made great contribution to the rural and urban power grid reconstruction in China.
- In 2004, Cooper (China) Co., Ltd. and Shanghai Power Transmission and Distribution Co., Ltd, a subsidiary of Shanghai Electric Group, established Cooper Shanghai Power Capacitor Co., Ltd. the megamerger joint venture, which manufacture and sell 50kvar-1000kvar power capacitor unit (including internal fuses, external fuses and no fuse), and simultaneously provides complete sets of capacitor equipment, and which has provided most excellent compensation equipment to improve power supply quality of China power network and reduce line losses.
- In February, 2005, Cooper (China) Co., Ltd. invested USD30 million in establishing Cooper Electronic Technology (Shanghai) Co., Ltd., which localized manufacture MRPs, arresters, switches and other power distribution products with leading positions in the world. This company has first-class production line and management mechanism in the world, has obtained ISO9000 Certificate, and implemented lean manufacturing and management process and 100% quality control system so that its products such as cable accessories have equivalent quality to that of American factory.
- In September, 2007, Cooper Power Systems and Nature Science & Technology Co., Ltd., a famous domestic enterprise at Cixi, Ningbo, established Cooper Nature (Ningbo) Electric Co., Ltd. by joint investment, which aims at expanding the localized production of switch production line with leading position in the world, guaranteeing that products have American advanced technology, and providing personalized products and services for customers.
- At present, Cooper Power Systems has Edison Electric R & D Center, the Asia and Pacific R & D Center, and strong technical R & D strength. It will deeply study the electric power system in China, and research and develop new high-tech products suitable for China in the light of actual power network structure and demand of China. In order to better serve China electric power, it will continuously increase its investment in China, further expand its business in China and unceasingly introduce latest products and technologies into China. It insists on the product concept of "Smart solutions, Reliable power, Everywhere", and looks forward to making even greater contribution to the power utilities in China.



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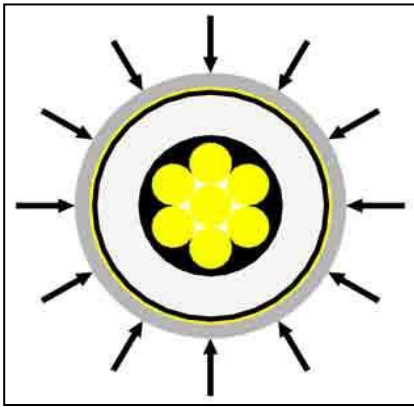
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COOPER Cold-shrink Cable Accessories

Features and Benefits

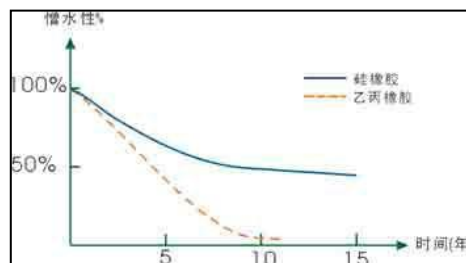
- No fire and special installation tools needed, easy to install and timesaving. More suitable for inflammable and explosive places
- High expanding ratio assure the constant interface pressure between the cable insulation and condshrink tubes. Eliminate the partial discharge caused by the interface voids.



Advantages

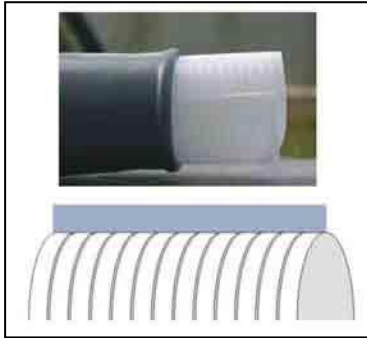
Materials

- Imported liquid silicone rubber has an excellent dielectric strength. Excellent aging and corona resistances.
- Excellent hydrophobicity increase surface resistance and flashover voltages of terminations.
- High permanent set value, coldshrink products have a 24 months maximum shelf life.



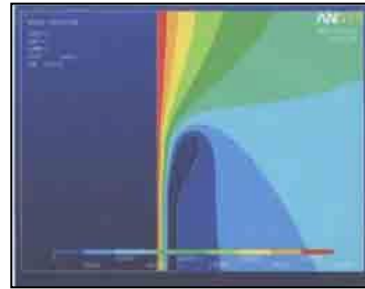
Expanding

- Trackless expanding technique make sure there are not mechanical expanding track after supporting core removed, eliminate the running risks.



Design

ANSYS as the computer aided design software, makes coldshrink cable accessories have reasonable electrical fields.



Routine test

- 100% routine test. X-ray, PD and AC withstand tests.



Standards

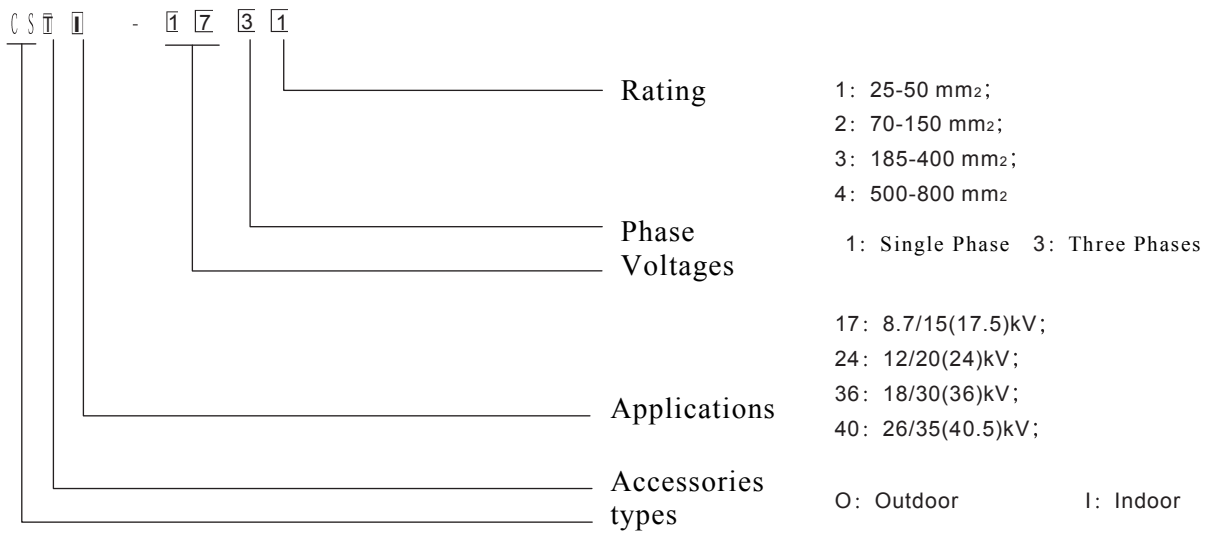
- GB12706.4, IEC60502.4 and other standards.

COOPER Coldshrink Cable Accessories

17.5kV-40.5kV Coldshrink Ordering Info

Ordering Info

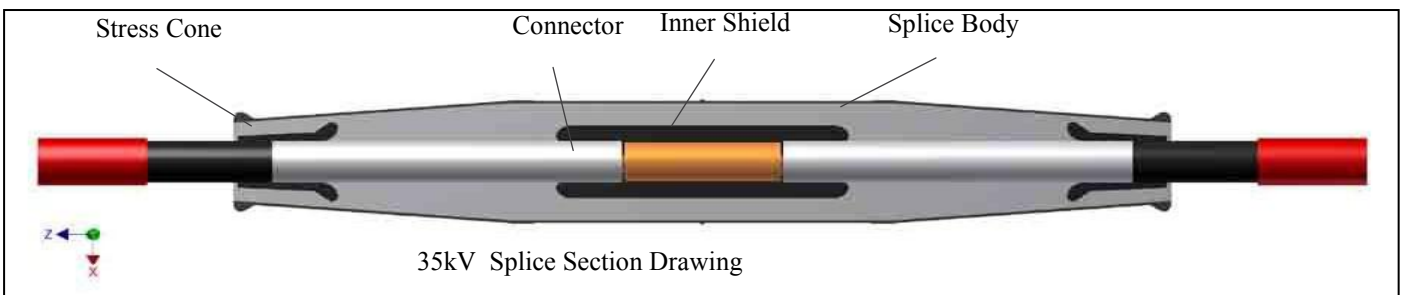
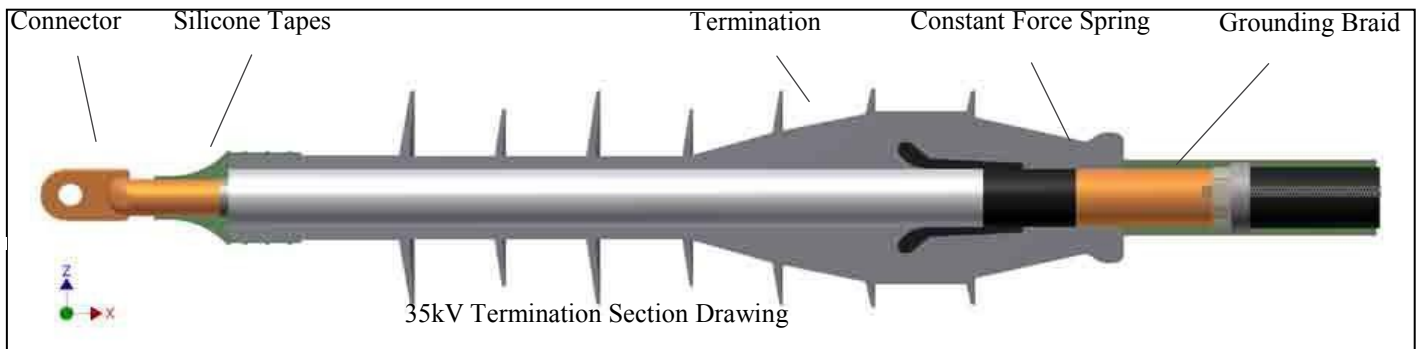
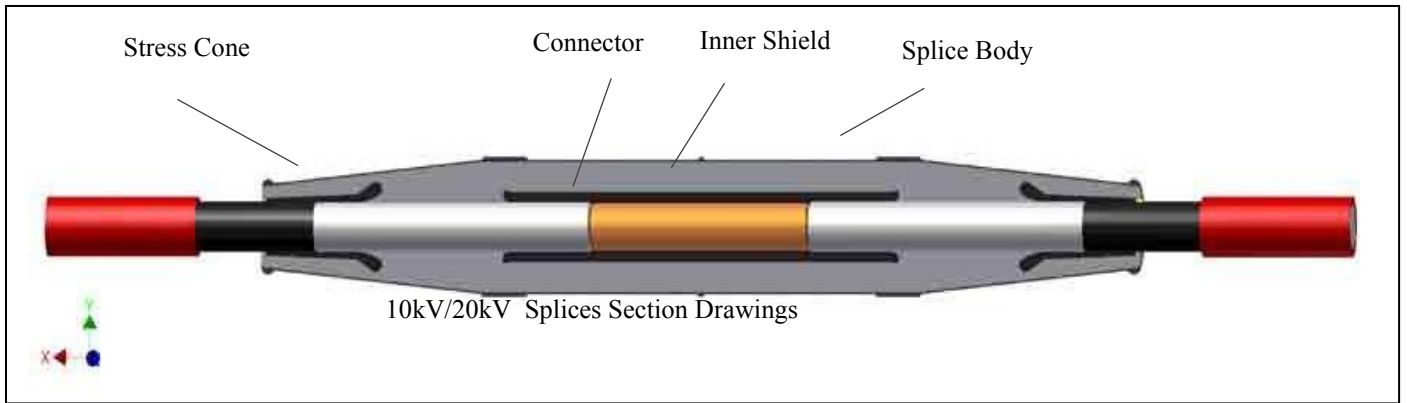
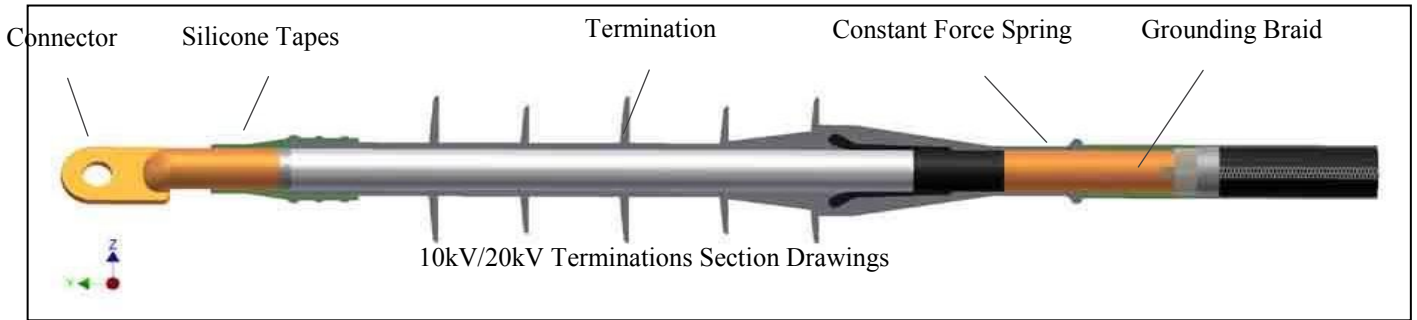
- For example, CSTI-1731 is 17.5kV rating 1(for 3-core 20-50mm² cable) coldshrink indoor termination, details see selection tables.



Type test reports



Section Drawings



8.7/15(17.5)kV Cold-shrink Cable Accessories

8.7/15(17.5)kV Terminations



Selection Table (Termination part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)	Insulation OD (mm)
Indoor Termination	Single Core	CSTI-1711	8.7/15	25-50	16.2-20.2
		CSTI-1712	8.7/15	70-150	20.0-26.4
		CSTI-1713	8.7/15	185-400	26.0-36.8
		CSTI-1714	8.7/15	500-800	36.8-45.0
	Three Cores	CSTI-1731	8.7/15	25-50	16.2-20.2
		CSTI-1732	8.7/15	70-150	20.0-26.4
		CSTI-1733	8.7/15	185-400	26.0-36.8
		CSTI-1734	8.7/15	500-800	36.8-45.0
Outdoor Termination	Single Core	CSTO-1711	8.7/15	25-50	16.2-20.2
		CSTO-1712	8.7/15	70-150	20.0-26.4
		CSTO-1713	8.7/15	185-400	26.0-36.8
		CSTO-1714	8.7/15	500-800	36.8-45.0
	Three Cores	CSTO-1731	8.7/15	25-50	16.2-20.2
		CSTO-1732	8.7/15	70-150	20.0-26.4
		CSTO-1733	8.7/15	185-400	26.0-36.8
		CSTO-1734	8.7/15	500-800	36.8-45.0

Electrical Parameters (Type Test Data)

	CSTI-17	CSTO-17
Max Voltage (Um)	17.5kV	17.5kV
AC withstand	39kV/5min	39kV/5min
Impulse withstand	95kV	95kV
Partial Discharge	< 5pC	< 5pC

8.7/15(17.5)kV Splices



Selection Table (Splice part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)	Insulation OD (mm)
Splice	Single Core	CSS-1711	8.7/15	25-50	16.2-20.2
		CSS-1712	8.7/15	70-150	20.0-26.4
		CSS-1713	8.7/15	185-400	26.0-36.8
		CSS-1714	8.7/15	500-800	36.8-45.0
	Three Core	CSS-1731	8.7/15	25-50	16.2-20.2
		CSS-1732	8.7/15	70-150	20.0-26.4
		CSS-1733	8.7/15	185-400	26.0-36.8
		CSS-1734	8.7/15	500-800	36.8-45.0

Electrical Parameters (Type Test Data)

	CSS-17
Max Voltage (Um)	17.5kV
AC withstand	39kV/5min
Impulse withstand	95kV
Partial Discharge	< 5pC

12/20(24)kV Cold-shrink Cable Accessories

12/20(24)kV Terminations



Selection Table (Termination part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)	Insulation OD (mm)
Indoor Termination	Single Core	CSTI-2411	12/20	35-70	19.0-23.8
		CSTI-2412	12/20	95-185	23.0-30.6
		CSTI-2413	12/20	240-400	30.0-38.8
		CSTI-2414	12/20	500-800	38.0-48.0
	Three Cores	CSTI-2431	12/20	35-70	19.0-23.8
		CSTI-2432	12/20	95-185	23.0-30.6
		CSTI-2433	12/20	240-400	30.0-38.8
		CSTI-2434	12/20	500-800	38.0-48.0
Outdoor Termination	Single Core	CSTO-2411	12/20	35-70	19.0-23.8
		CSTO-2412	12/20	95-185	23.0-30.6
		CSTO-2413	12/20	240-400	30.0-38.8
		CSTO-2414	12/20	500-800	38.0-48.0
	Three Cores	CSTO-2431	12/20	35-70	19.0-23.8
		CSTO-2432	12/20	95-185	23.0-30.6
		CSTO-2433	12/20	240-400	30.0-38.8
		CSTO-2434	12/20	500-800	38.0-48.0

Electrical Parameters (Type Test Data)

	CSTI-24	CSTO-24
Max Voltage (Um)	24kV	24kV
AC withstand	54kV/5min	54kV/5min
Impulse withstand	125kV	125kV
Partial Discharge	< 5pC	< 5pC

18/30(36)kV Cold-shrink Cable Accessories

18/30(36)kV Terminations



Selection Table (Termination part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)	Insulation OD (mm)
Indoor Termination	Single Core	CSTI-3611	18/30	35-70	19.0-23.8
		CSTI-3612	18/30	95-185	23.0-30.6
		CSTI-3613	18/30	240-400	30.0-38.8
	Three Cores	CSTI-3631	18/30	35-70	19.0-23.8
		CSTI-3632	18/30	95-185	23.0-30.6
		CSTI-3633	18/30	240-400	30.0-38.8
Outdoor Termination	Single Core	CSTO-3611	18/30	35-70	19.0-23.8
		CSTO-3612	18/30	95-185	23.0-30.6
		CSTO-3613	18/30	240-400	30.0-38.8
	Three Cores	CSTO-3631	18/30	35-70	19.0-23.8
		CSTO-3632	18/30	95-185	23.0-30.6
		CSTO-3633	18/30	240-400	30.0-38.8

Electrical Parameters (Type Test Data)

	CSTI-36	CSTO-36
Max Voltage (Um)	36kV	36kV
AC withstand	81kV/5min	81kV/5min
Impulse withstand	170kV	170kV
Partial Discharge	< 5pC	< 5pC

18/30(36)kV Splices



Selection Table (Splice part numbers according to the cable insulation OD)

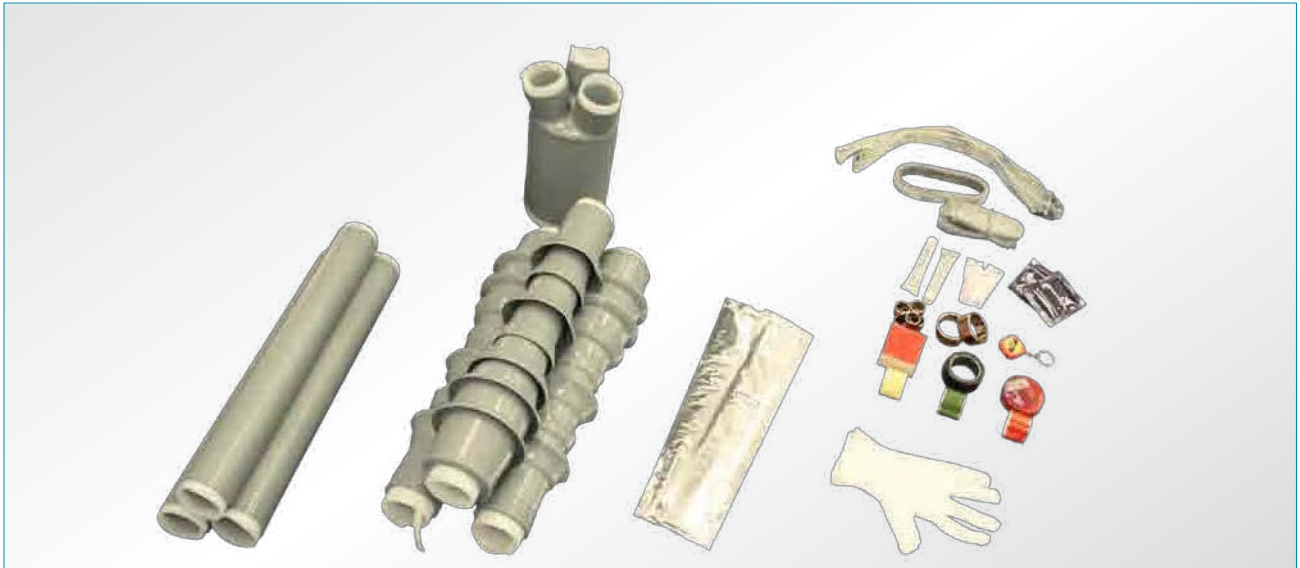
Title	Core	PN	Voltage(kV)	Conductor (mm ²)	Insulation OD (mm)
Splices	Single Core	CSS-3611	18/30	35-70	19.0-23.8
		CSS-3612	18/30	95-185	23.0-30.6
		CSS-3613	18/30	240-400	30.0-38.8
	Three Cores	CSS-3631	18/30	35-70	19.0-23.8
		CSS-3632	18/30	95-185	23.0-30.6
		CSS-3633	18/30	240-400	30.0-38.8

Electrical Parameters (Type Test Data)

CSS -36	
Max Voltage (Um)	36kV
AC withstand	81kV/5min
Impulse withstand	170kV
Partial Discharge	< 5pC

26/35(40.5)kV Cold-shrink Cable Accessories

26/35(40.5)kV Terminations



Selection Table (Termination part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)	Insulation OD (mm)
Indoor Termination	Single Core	CSTI-4011	26/35	50-95	31.3-36.0
		CSTI-4012	26/35	120-185	36.0-41.4
		CSTI-4013	26/35	240-400	41.4-49.6
	Three Cores	CSTI-4031	26/35	50-95	31.3-36.0
		CSTI-4032	26/35	120-185	36.0-41.4
		CSTI-4033	26/35	240-400	41.4-49.6
Outdoor Termination	Single Core	CSTO-4011	26/35	50-95	31.3-36.0
		CSTO-4012	26/35	120-185	36.0-41.4
		CSTO-4013	26/35	240-400	41.4-49.6
	Three Cores	CSTO-4031	26/35	50-95	31.3-36.0
		CSTO-4032	26/35	120-185	36.0-41.4
		CSTO-4033	26/35	240-400	41.4-49.6

Electrical Parameters (Type Test Data)

	CSTI-40	CSTO-40
Max Voltage (Um)	40.5kV	40.5kV
AC withstand	117kV/5min	117kV/5min
Impulse withstand	200kV	200kV
Partial Discharge	< 5pC	< 5pC

26/35(40.5)kV Splices



Selection Table (Splice part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)	Insulation OD (mm)
Splices	Single Core	CSS-4011	26/35	50-95	31.3-36.0
		CSS-4012	26/35	120-185	36.0-41.4
		CSS-4013	26/35	240-400	41.4-49.6
	Three Cores	CSS-4031	26/35	50-95	31.3-36.0
		CSS-4032	26/35	120-185	36.0-41.4
		CSS-4033	26/35	240-400	41.4-49.6

Electrical Parameters (Type Test Data)

CSS- 40	
Max Voltage (Um)	40.5kV
AC withstand	117kV/5min
Impulse withstand	200kV
Partial Discharge	< 5pC

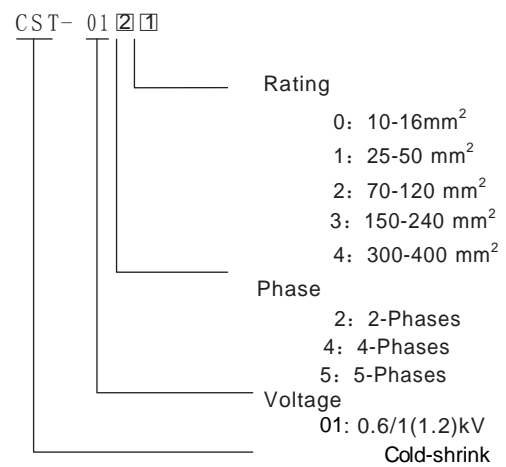
0.6/1(1.2)kV Cold-shrink Cable Accessories

0.6/1(1.2)kV Terminations



Ordering Info

For example, CST-0121 is 1.2kV rating-1(for 25-50mm² cable) cold-shrink indoor termination, details see selection tables.



Termination

Selection Table (Termination part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)
1.2kV Termination	2-phases	CST-0120	0.6/1	10-16
		CST-0121	0.6/1	25-50
		CST-0122	0.6/1	70-120
		CST-0123	0.6/1	150-240
		CST-0124	0.6/1	300-400
	4-phases	CST-0141	0.6/1	25-50
		CST-0142	0.6/1	70-120
		CST-0143	0.6/1	150-240
		CST-0144	0.6/1	300-400
	5-phases	CST-0151	0.6/1	25-50
		CST-0152	0.6/1	70-120
		CST-0153	0.6/1	150-240
		CST-0154	0.6/1	300-400

Electrical Parameters (Type Test Data)

	CST- 01
Max Voltage (Um)	1.2kV
AC withstand	8kV/5min
AC withstand	7.2kV/4h

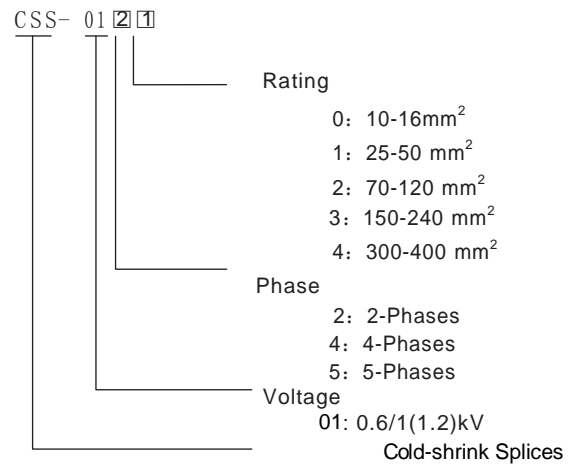
0.6/1(1.2)kV Cold-shrink Cable Accessories

0.6/1(1.2)kV Splices



Ordering Info

For example, CST-0121 is 1.2kV rating-1(for 25-50mm² cable) cold-shrink indoor termination, details see selection tables.



Selection Table (Splices part numbers according to the cable insulation OD)

Title	Core	PN	Voltage(kV)	Conductor (mm ²)
1.2kV Splices	2-phases	CSS-0120	0.6/1	10-16
		CSS-0121	0.6/1	25-50
		CSS-0122	0.6/1	70-120
		CSS-0123	0.6/1	150-240
		CSS-0124	0.6/1	300-400
	4-phases	CSS-0141	0.6/1	25-50
		CSS-0142	0.6/1	70-120
		CSS-0143	0.6/1	150-240
		CSS-0144	0.6/1	300-400
	5-phases	CSS-0151	0.6/1	25-50
		CSS-0152	0.6/1	70-120
		CSS-0153	0.6/1	150-240
		CSS-0154	0.6/1	300-400

Electrical Parameters (Type Test Data)

	CST- 01
Max Voltage (Um)	1.2kV
AC withstand	8kV/5min
AC withstand	7.2kV/4h

Cold-shrink Cable Sealing Kits

3-Core Cable Sealing Kits



Selection Table

Title	PN	Conductor (mm ²)
10kV 3-Core Cable Sealing Kits	SAK624CS01	25-50
	SAK624CS02	70-120
	SAK624CS03	150-240
	SAK624CS04	300-400
10kV 3-Core Cable Sealing Kits (extended tube)	SAK624CS05	25-50
	SAK624CS06	70-120
	SAK624CS07	150-240
	SAK624CS08	300-400

Note: just for Separable Connectors

1-Core Cable Sealing Kits



Selection Table

Title	PN	Conductor (mm ²)
10kV 1-Core Cable Sealing Kits	CSPK01	25-50
	CSPK02	70-150
	CSPK03	185-400

Note: just for Separable Connectors