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ZENEN
ELECTRIC POWER

Product Guide

ZENEN ELECTRIC
Make Cable Connections More Reliable



Aerial bundle cable electrical fittings

ZHEJIANG ZENEN ELECTRIC POWER EQUIPMENT CO LTD

General of insulation piercing connector(IPC)

1.1 Piercing connector, simple installation, need not strip the cable coat.

1.2 Moment nut, piercing pressure is constant, keep good electric connection and make no damage to lead.

1.3 Self-seam frame, wetproof, waterproof, and anti-corrosion, extend the using life of insulated lead and connector

1.4 Adopted special connecting tablet, apply to joint of Cu(Al) and Cu(Al) or Cu and Al

1.5 Small electric connecting resistance, connecting resistance less than 1.1 times of the resistance of branch conductor with the same length.

1.6 Special insulated case body, resistandce to illumination and environmental aging, the insulation strength can up to 12KV

1.7 Arc surface design, apply to connection with the same(different) diameter, wide connection scope(0.75mm2~400mm2)

(Performance testing)

2.1 Mechanical performance: the grip force of the wire clamp is 1/10 bigger than the break force of the lead. It comply with GB2314-1997

2.2 Temperature rise performance: under the condition of big current, the temperature rise of connector is less than that of connection lead.

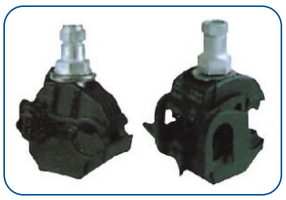
2.3 Heat circle performance: conforms to GB/T2317.3-2000, the heat circle trial standard for electric fitting.

2.4 Waterproof insulation performance: conforms to the relevant requirements in Part 2 of GB/T13140.4-1998,

2.5 Resistance to corrosion performance: under the condition of SO_2 and salt fog, it can do three times of fourteen days circle testing.

2.6 Environmental aging performance: under the circumstance of ultraviolet, radiation, dry and moist, expose if with change of temperature and heat impulse for six weeks.

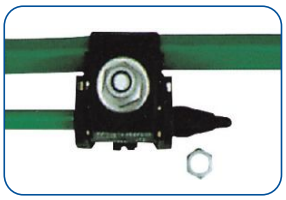
2.7 Fire-proof performance: insulation material of the connector withstands glowing filament test. Conform to the requirements in Chapter4-10 of GB/T5169.4



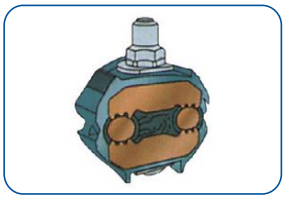
Insulation Piercing Connectors(IPC)



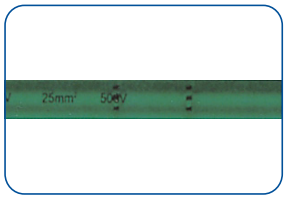
Special nut and moment nut



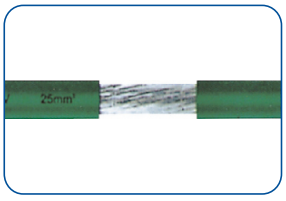
Appearance diagram of installation



Section diagram of piercing effect



Piercing effect of insulated coat

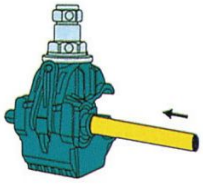


Piercing effect of wire core

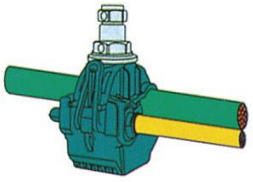
(Simple installation)



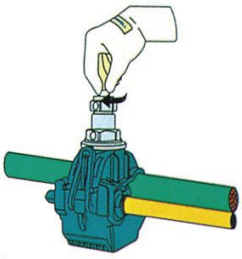
Adjust the connector nut to suitable location.



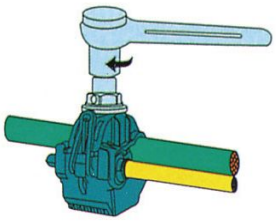
Put the branch wire into the cap sheath fully.



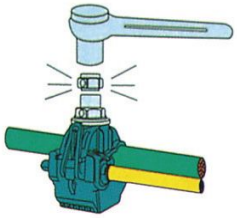
Insert the main wire, if there are two lays of insulated lay in the main cable, should strip a certain length of the first in length of the fist insulated lay from inserted end.



Turn the nut by hand, and fix the connector in suitable location.



Screw the nut with the sleeve spanner.



Screw the nut continually until the top part is cracked and dropped down.

The reason of choosing insulation piecring connector (IPC)

3.1 Simple installation

Con be branch of cable without stripping the insulated coat and joint is completely insulated. Make branch in the random location of cable without cutting off the main cable. Simple and reliable installation, just need sleeve spanner, can be installed with on live line.

3.2 Safe use

The joint has good resistance to distortion, quake, fire, wet, electrochemical corrosion and aging, need no maintenance. Has been used successfully for 30 years.

3.3 Economical cost

Small installation space, save the cost of bridge and land construction. In structural application, there need no terminal box, junction box and return wire of cable, save cable cost. The cost of cables and clamps is lower than other power supply system.

Insulation piercing connectors







Product type and application scope

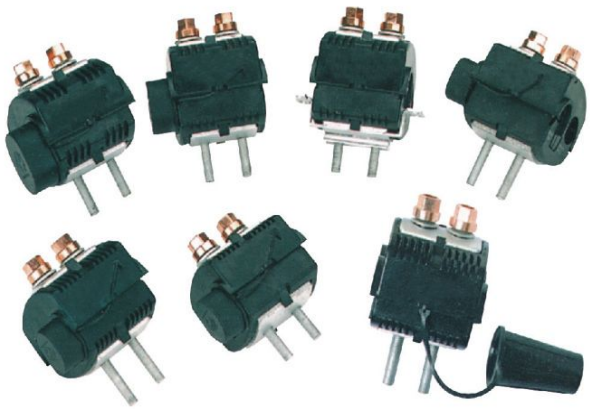
1KV Series products (Low voltage series)

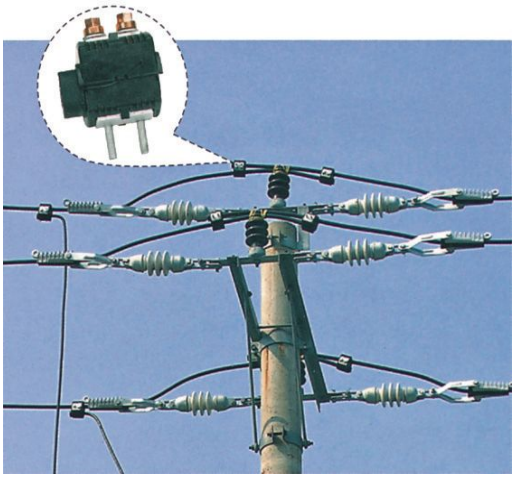
Modle	Main line section	Branch section	Nominal current	Outline size	Weight	Piercing depth
ZN101	1.5-2.5	1.5-10	55	27×41×62	55	1.5-2
ZNEP	16-95	1.5-10	55	27×41×62	55	1-2
ZN2-95	16-95	4-35(50)	157	46×52×87	160	1.5-2
ZN2-150	50-150	6-35(50)	157	46×52×87	162	1.5-2.5
ZN3-95	25-95	25-95	214	50×61×100	198	1.5-2
ZN4-150	50-150	50-150	316	50×61×100	219	1.5-2.5
ZN6	120-240	25-120	211	52×68×100	360	1.5-2.5
ZN7	150-240	10-25	102	52×68×100	336	1.5-2.5
ZN240	95-240	95-240	425	83×130×130	1040	1.5-2.5

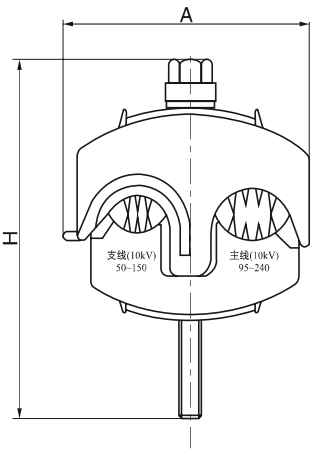
10 Piercing connector (10kV)

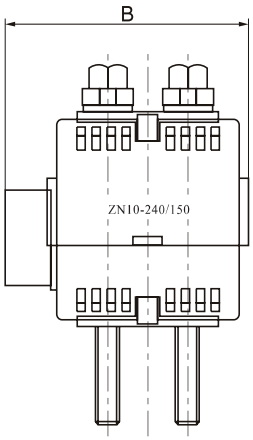
Application

Application to branch connection and succession for 10kV insulated overhead distribution systems.









Technical Data

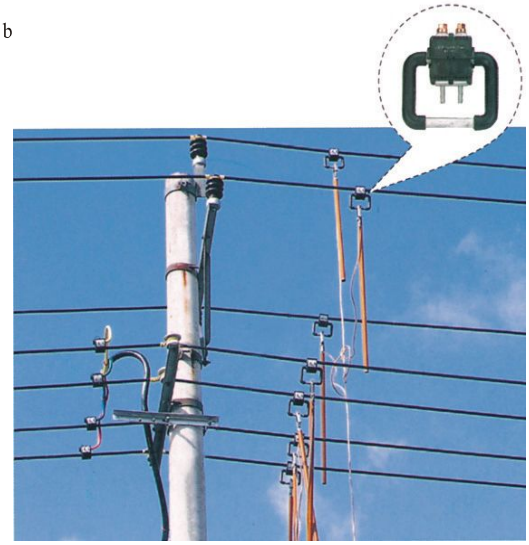
Modle	Applicable cable(mm^2)		Dimensions(mm)			Nominal Current(A)	Bolt No. (Piece)	Main application
	Main line	Branch line	A	B	H			
ZN10-300/300	150~300	150~300	100	85	136	600	2	The connection of main circuitries, the connection of main circuitry and branch circuitry.
ZN10-300/150	150~300	35~150	92	83	118	342	2	
ZN10-240/240	95~240	95~240	90	85.5	113	476	2	
ZN10-240/150	95~240	50~150	85.5	83	113	342	2	
ZN10-240/50	95~240	16~50	76	83	113	162	2	
ZN10-185/50	95~185	16~50	78.5	80.5	113	162	2	
ZN10-95/70	25~95	16~70	68	82.5	97.5	207	2	

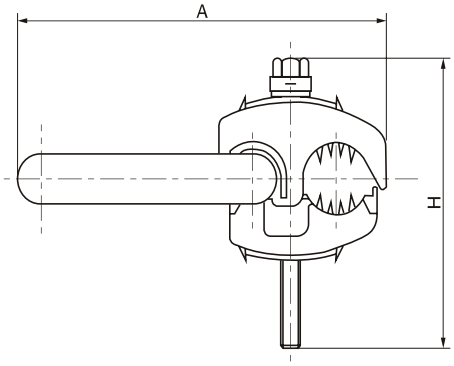
Piercing grounding protection(10kV)

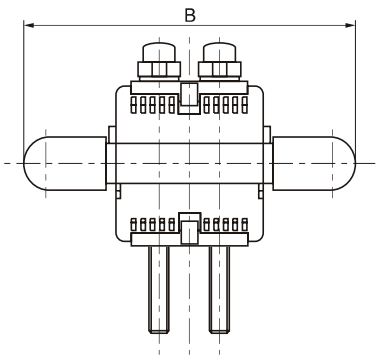
Application

Application to grounding protection during electric power construction for 10kV or b









Technical Data

Modle	Applicable voltage(kV)	Applicable cable(mm^2)	Dimensions(mm)			Nominal Current(A)	Bolt No. (Piece)	Main application
			A	B	H			
ZNF10-300/150	10	150~300	167.5	140	118	600	2	The grounded safety protection of main circuitry when electric power construction.
ZNF10-240/150	10	150~240	160	140	113	476	2	
ZNF10-185/95	10	95~185	158	140	113	399	2	
ZNF10-95/25	10	25~95	148.5	140	98	257	2	

Insulated piercing connector



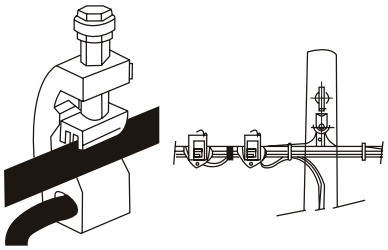
PI-71



CD-71



PC-150





P-71



P-72



P-150



P-151

Material: High strength aluminium alloy, anti-UV plastic

A broad usage in the low voltage insulation lines, leading the branch connection to the main conductor. T-connection of low voltage insulation wire service and cable branch connection for building distribution system. The material for the inside body is high strength aluminum alloy, and the insulation cover is used polyvinyl chloride(PVC). The connectors with specially designed contact teeth, are suitable for the connection of aluminum. Put the main conductor and branch conductor parallel into the teeth grooves of the clamp, tighten the bolts, pierce the insulation of two conductors to make the conductors connect.

The insulation cover functions as waterproof and sealing perfectly.

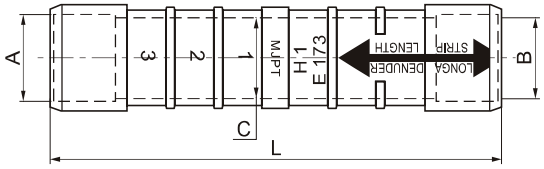
At the breaking force of the conductor, the connector will not be distorted and broken. At the rated current and short circuit, rising temperature of the connector should be less than the connecting conductor.

Modle	Main Conductor Cross-section(mm^2)	Tap Conductor Cross-section(mm^2)
PI-71	35-95	4-54
CD-71	35-95	4-54
PC-150	35-150	4-50
P-71	35-95	4-50
P-72	35-95	2×(4-50)
P-150	70-150	2×(4-54)
P-151	16-150	6-95

Pre-insulated sleeve



MJPT



Modle	Cable Size (mm^2)		Plastic Sleeve Diameter(mm)	Length (mm)
	A	B	C	L
MJPT 16/16	16	16	20	98.5
MJPT 25/25	25	25	20	98.5
MJPT 35/35	35	35	20	98.5
MJPT 50/50	50	50	20	98.5
MJPT 70/70	70	70	20	98.5
MJPT 95/95	95	95	20	98.5

Material: Aluminum alloy

Product property:MJPT is designed to connect the insulated cable (include ABC cable) in aerial distribution network. It is in accordance with NFC33 -021. The sleeve is with some tension.

And its cap can prevent the water into the barrel. It is colored differently to distinguish the cable sizes.

Marked with type, cable size, die size, inner cable length and number of crimping.

Suspension clamp



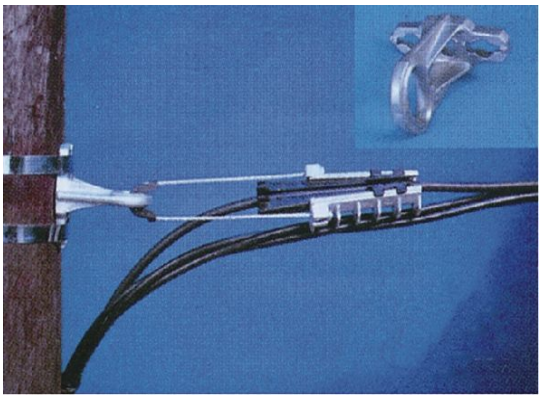


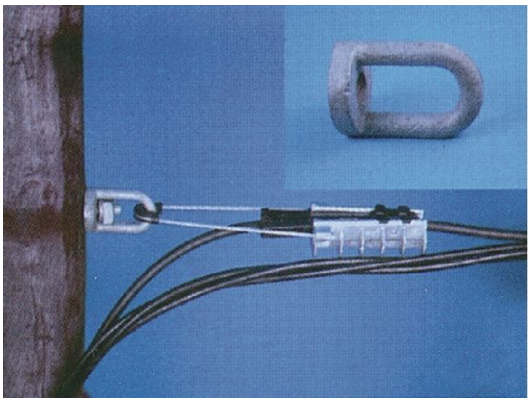


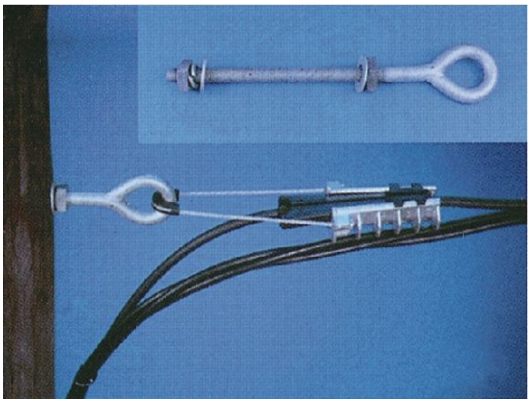


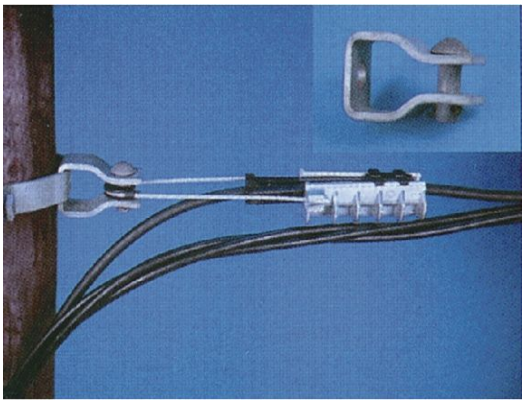


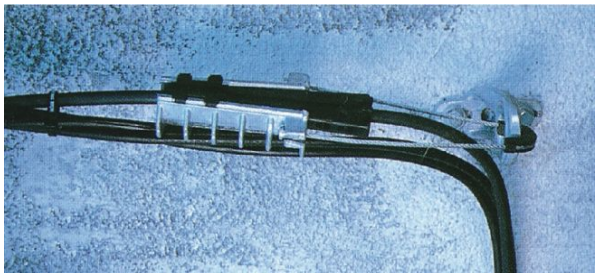


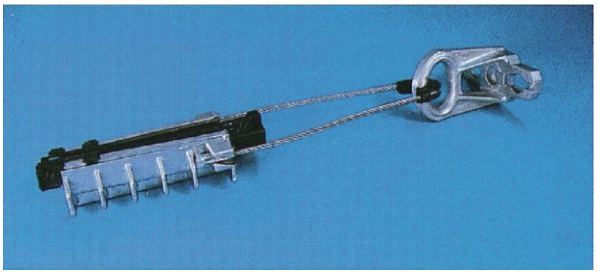


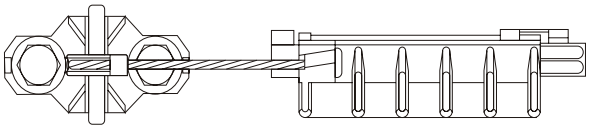


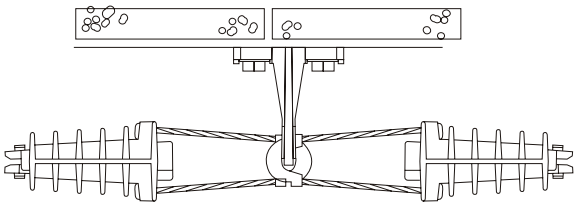


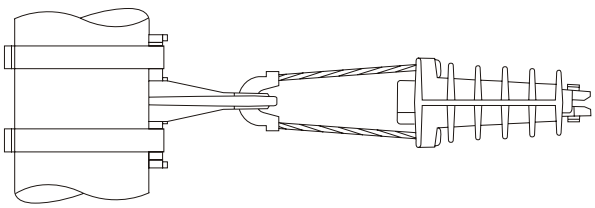


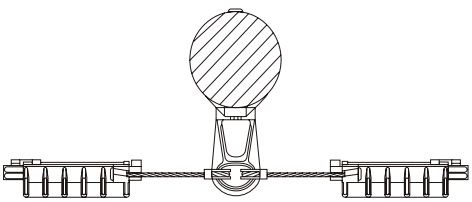












Anchoring clamp

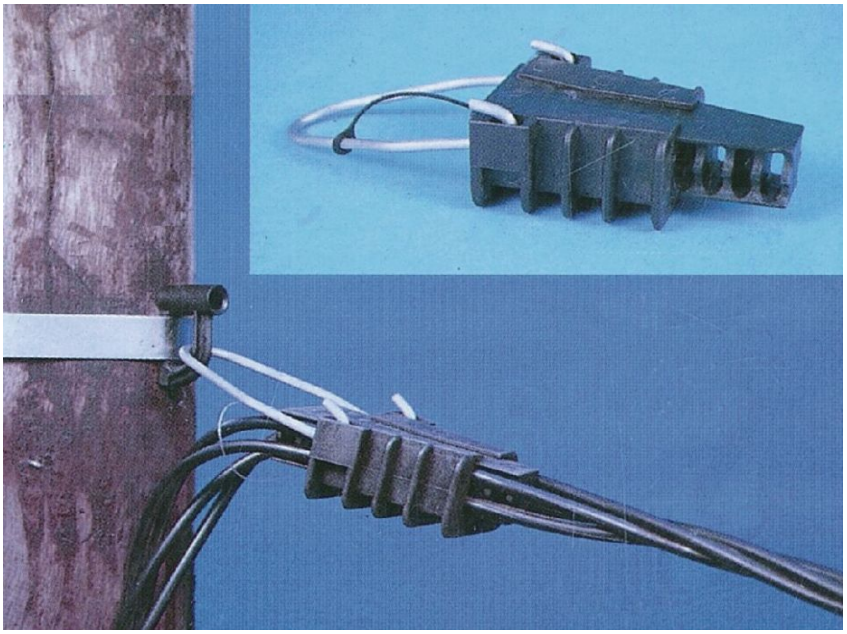







Material: Nylon plus fiber glass

Product property: They plastic anchoring clamp is suitable for insulated low-voltage ABC cable. It is also suitable for multiple conductors. Easy installation and perfect insulated function. It is in accordance with the NFC 33-042.



JNS Four(two)–core bunched cable strain clamp series

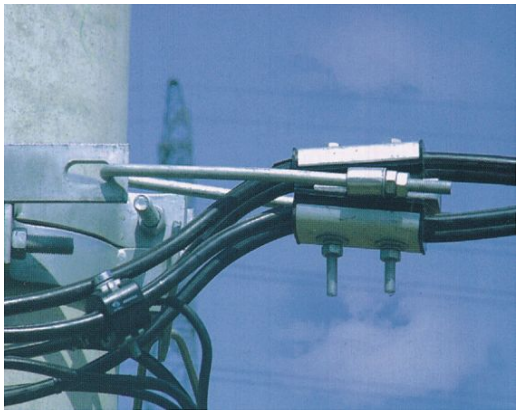
Application

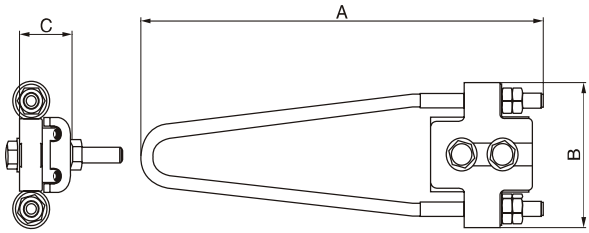
JNS series four-core bunched cable strain clamp series are fully used for fixing or tightening 1kV and less than 1kV overhead four(two)-cores bunched cable at ends of circuit.

Function and Features

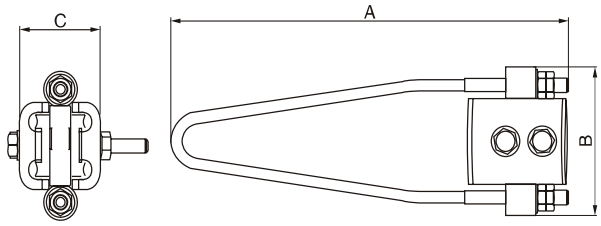
1. It adopts four(two)-core paralled groove paralled gap structure. Put the four insulation cables into clamp according to circuit design without peeling off the coat, then tighten the bolt to bunch it.
2. For inner block and filling pole with high strength, anti-climate resistance insulation plastic, it can be used for a long term;
3. Adoptting wedge type self-tighten structure, after tightening the ring, it will be fixing, and get a quite big grasp strength.







JNS two-core bunched cable train clamp series



JNS four-core bunched cable train clamp series

Technical Data

Modle	Applicable Voltage(kV)	Applicable conductor(mm^2)	Dimensions(mm)			Note
			A	B	C	
JNS-1A-4	1kV	4×16-4×50mm^2	270	90	52	Four cores
JNS-2A-4		4×70-4×120mm^2	295	100	70	
JNS-1A-2	1kV	2×16-2×50mm^2	270	90	33	Two cores
JNS-2A-2		2×70-2×120mm^2	295	100	44	

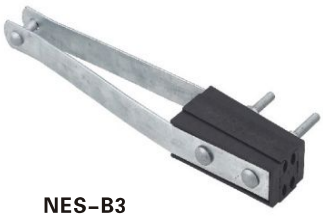
Anchoring clamp



NES-B1



NES-B2



NES-B3



NES-B4

Material: Mild steel, nylon plus fiber glass

Product property: It is used to terminate 4-core of aerial bundle conductor. Its function is fixing and tightening the insulation conductor.

Modle	Conductor Cross-section(mm^2)
NES-B1	4×(16-50)
NES-B2	4×(70-120)
NES-B3	4×(16-50)
NES-B4	4×(70-120)

Anchoring clamp



ZN156, ZN157 and ZN158 used for the anchoring of a 2 or 4 core overhead cable to poles or walls by means of standard hooks.



Tension clamp for the anchoring of 2 or4 core overhead cables to poles or walls by standard hooks. Tension clamp is equipped with a spring to make the installation easier.

Modle	Conductor Cross-section(mm^2)
ZN156	4×(16-25)
ZN157	2×(16-25)
ZN158	4×(16-25)
ZN160	2×(16-25)
ZN161	4×(16-25)

Anchoring bracket





Material: High strength aluminium alloy by casting
Product property: Anchoring ABC cables with neutral messenger on poles (wood, concrete etc.....), Excellent in industrial and saline environment. Fixed by 2× (14mm or 16mm) bolts or 2 stainless straps 0.75× 20mm. It is in accordance with NFC 33-040.





The universal hook SM96, SM97 and SM98 is used with bands in pole installations and with screws in wall installations.The hook is delivered without screws.

Anchoring clamp



PAM-06



PAM-07



PAM-08



DR1400



DR1500



DR1600



JBG-1

Material: High strength aluminium alloy, nylon plus fiber glass, stainless steel
Product property: They are characterized by high mechanical stability, reduced dimensions for easier handling, high mechanical and climatic resistance. Cable gripping device in insulating material ensures the double insulation of the neutral core and avoids damage to sheath, secured parts, no tools required. Stainless steel bail with two marbles compressed on the end, the is conception allows an easier locking on the body of the clamp. They are in accordance with NFC 33-041.

Modle	Cross-section(mm^2)
PAM-06	16-20
PAM-07	16-25
PAM-08	16-25
DR1400	50-70
DR1500	50-70
DR1600	50-70
JBG-1	50-70

Type 304 Stainless Steel Band

1. Band and buckle can be quickly formed to suit virtually any diameter.
2. Applications include hose clamps, pipes, signs, cables, especially where superior strength is required.
3. Dispensers-Handy plastic dispensers available with certre turn facility and pocket for buckles.
4. Excellent corrosioin resistance.





Portable Dispensers

Type 304 Stainless Steel

Modle	Width		Thickness		Weight	
	Im.	mm	Im.	mm	lbs	kg
ZNB1450	1/4	6.35	0.020	0.50	1.76	0.80
ZNB3850	3/8	9.53	0.020	0.50	2.64	1.20
ZNB1276	1/2	12.70	0.030	0.76	5.50	2.50
ZNB5876	5/8	15.88	0.030	0.76	7.04	3.20
ZNB3476	3/4	19.05	0.030	0.76	8.27	3.76

Availble in mill coil lengths. All size in standard cardboard packing.

Type 304 Stainless Steel

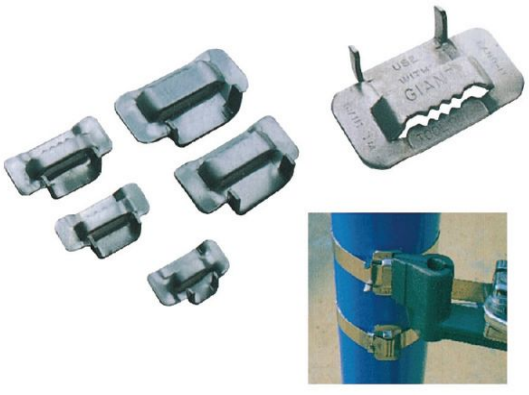
Modle	Width		Thickness		Weight	
	Im.	mm	Im.	mm	lbs	kg
ZNBD3850	3/8	9.53	0.020	0.50	3.08	1.40
ZNBD1276	1/2	12.70	0.030	0.76	5.94	2.70
ZNBD5876	5/8	15.88	0.030	0.76	7.48	3.40
ZNBD3476	3/4	19.05	0.030	0.76	8.71	3.96

Customers can assign different colors for different sizes.

Stainless Steel Buckle

Tooth type

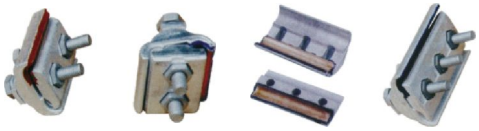
Modle	For band width		Thickness
	Inch	mm	mm
ZNBT14	1/4	6.35	0.8
ZNBT38	3/8	9.53	1.0
ZNBT12	1/2	12.70	1.2
ZNBT58	5/8	15.88	1.2
ZNBT34	3/4	19.05	1.5
ZNBT1	1	25.40	1.8
ZNBT114	1 1/4	32.50	2.0



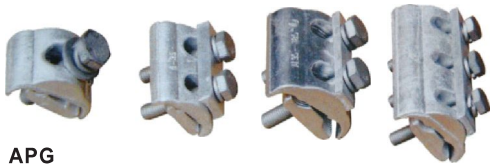
Copper-aluminium, aluminium parallel groove clamp



CAPG-A



CAPG-B CAPG-C



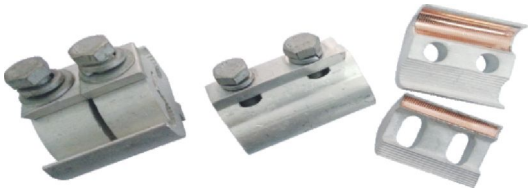
APG

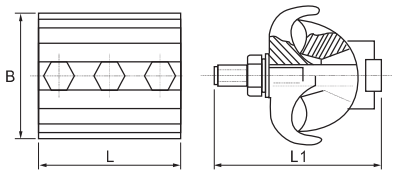
CAPG type Copper-Aluminium parallel groove clamp

Model	Wire range(mm^2)	Bolts Qty.
CAPG-A1	Cu 6-50mm^2 Al 16-70mm^2	Single bolt
CAPG-A2	Cu 10-95mm^2 Al 25-150mm^2	Single bolt
CAPG-B1	Cu 6-50mm^2 Al 16-70mm^2	Double bolts
CAPG-B2	Cu 10-95mm^2 Al 25-150mm^2	Double bolts
CAPG-C	Cu 35-240mm^2 Al 35-300mm^2	Tri-bolts

APG-Type Aluminium parallel groove clamp

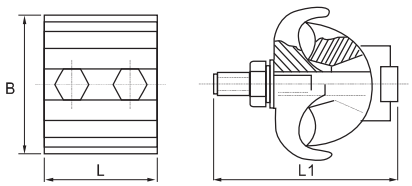
Model	Wire range(mm^2)	Bolts Qty.
APG-A1	Al 16-70mm^2	Single bolt
APG-B1	Al 16-35mm^2	Double bolts
APG-B2	Al 16-70mm^2	Double bolts
APG-B3	Al 16-150mm^2	Double bolts
APG-B4	Al 30-300mm^2	Double bolts





Al specific form parallel-groove clamp

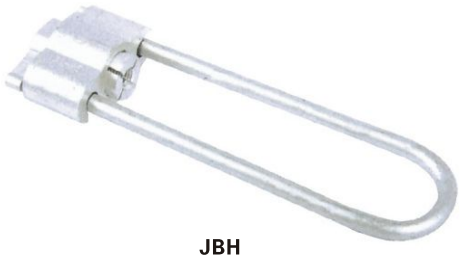
Model	Applicable conductor model(mm^2)	Dimensions(mm)			Bolts Qty.
		L	L1	B	
JBL-10~70 2-bolts	10~70	43	45	36	2
JBL-10~70 3-bolts		63	45	36	3
JBL-35~120 2-bolts	35~120	46	50	45.5	2
JBL-35~120 2-bolts		67	50	45.5	2
JBL-35~120 3-bolts		67	50	45.5	3
JBL-50~240 2-bolts	50~240	47	70	63.5	2
JBL-50~240 2-bolts		70	70	63.5	2
JBL-50~240 3-bolts		70	70	63.5	3
JBL-185~400 2-bolts	185~400	70	70	74	2
JBL-185~400 3-bolts		90	70	74	3



Cu-Al specific form parallel-groove clamp(Explosive welding)

Model	Applicable conductor model(mm^2)	Dimensions(mm)			Bolts Qty.
		L	L1	B	
JBTL-35~120 2-bolts	35~120	45	40	48	2
JBTL-35~120 3-bolts		70	40	48	3
JBTL-50~240 2-bolts	50~240	45	70	60	2
JBTL-50~240 3-bolts		70	70	60	3

Dead end clamp



JBH

Material: High strength aluminium alloy
Product property: JBH is used for the anchoring of the uninsulated messengers by means of hooks to either a pole or a wall. The clamp is a unit without loose parts.

Modle	Cross-section (mm^2)	Failure Load (kN)
JBH-1	16	4.0
JBH-2	25	6.6
JBH-3	35	9.3
JBH-4	50	13.2
JBH-5	70	15.0

Bolted type strain clamp



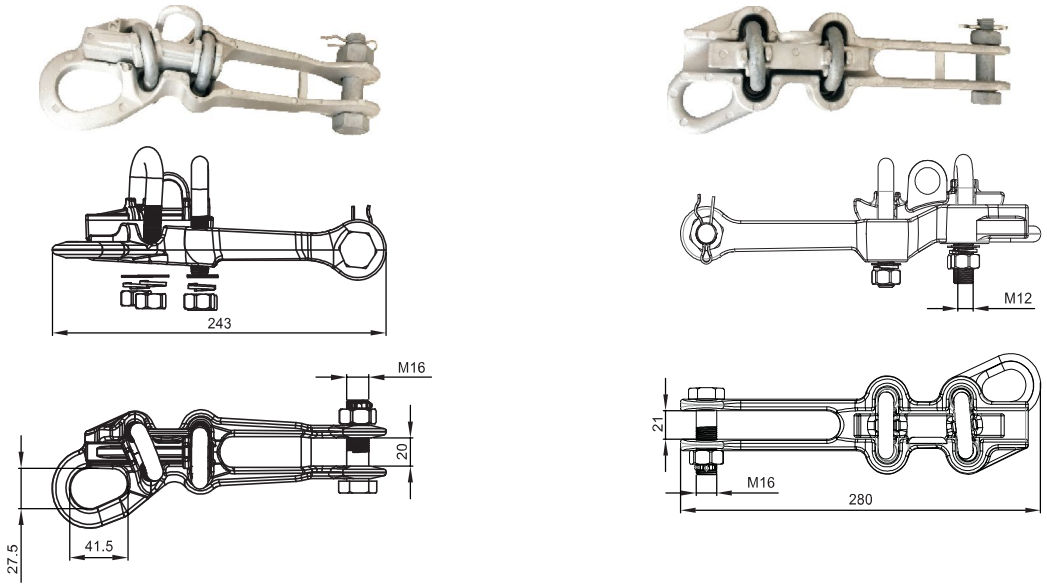
NLL

Material: High strength aluminium alloy by casting
Product property: NLL is suitable for aerial line up to 35kV, fixing stranded aluminum wire, steel-cored aluminum strand on the strain pole, or aerial insulated aluminum conductor. Smooth surface makes a long service life. Easy installation. No waste of electric energy.

Modle	Conductor Diameter (mm)	Specification		U-bolted	Failure Load (kN)
		1kV (mm^2)	10kV (mm^2)		
NLL-1	5.0-14.0	16-70	16-70	2×M12	40
NLL-2	5.0-16.0	16-95	16-95	2×M12	50
NLL-3	10.1-18.5	50-150	50-150	3×M12	70
NLL-3A	14.1-23.0	120-240	120-240	3×M12	75
NLL-4	18.1-27.0	185-300	185-300	4×M14	85

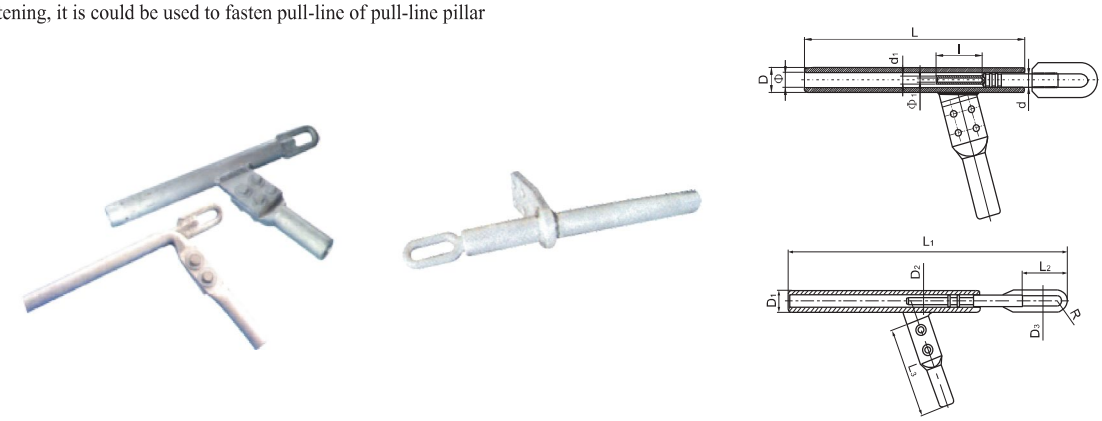
NLZ series of Al-alloy extension wire-clamp(straight-line type)

The body and keeper are made of hot-dip galvanised malleable iron.cotter-pin is made of stainless steel.Other parts are made of hot-dip galvanized steel.



NY series of extension wire-clamp(hydraulic type)

The extension wire-clamp is used to fasten lead or lighting-protection line onto non-straight pillar's extension insulator so as to play a role in anchor-fastening, it is could be used to fasten pull-line of pull-line pillar



Modle	Conductor (mm)	Dimensions(mm)							Gripping power (KN)
		D_1	D_2	D_3	L_1	L_2	R	L_3	
NY-50/30	LGJ-50/30	32	16	16	330	60	8.5	180	41
NY-60/35	LGJ-60/35	32	16	16	450	60	8.5	180	46
NY-70/40	LGJ-70/40	32	16	16	450	50	8.5	180	55
NY-95/55	LGJ-95/55	34	22	18	406	50	11.0	210	74
NY-95/140	LGJ-95/140	45	30	24	605	80	15.0	245	163
NY-150/20	LGJ-150/20	30	14	16	510	55	8.0	285	44
NY-150/35	LGJ-150/35	32	16	16	475	55	9.0	210	61
NY-185/30	LGJ-185/30	32	16	16	460	55	9.0	295	62
NY-185/45	LGJ-185/45	34	18	16	495	60	10.0	240	76
NY-240/30	LGJ-240/30	36	16	18	455	55	10.0	225	72
NY-240/40	LGJ-240/40	36	16	18	469	55	10.0	225	78
NY-240/55	LGJ-240/55	36	20	18	481	55	11.0	225	97
NY-300/15	LGJ-300/15	40	14	16	441	50	11.0	265	65
NY-300/20	LGJ-300/20	40	14	18	465	55	11.0	265	72

Modle	Conductor (mm)	Dimensions(mm)							Gripping power (KN)
		D_1	D_2	D_3	L_1	L_2	R	L_3	
NY-300/25	LGJ-300/25	40	14	18	465	55	11.0	265	78
NY-300/40	LGJ-300/40	40	16	18	487	55	11.0	265	88
NY-300/50	LGJ-300/50	40	18	18	510	65	12.0	265	98
NY-300/70	LGJ-300/70	42	22	20	545	70	12.0	265	122
NY-400/20	LGJ-400/20	45	14	18	486	55	13.0	280	84
NY-400/25	LGJ-400/25	45	14	18	496	55	13.0	280	91
NY-400/35	LGJ-400/35	45	16	20	524	65	13.0	280	99
NY-400/50	LGJ-400/50	45	20	20	537	65	13.0	280	117
NY-400/65	LGJ-400/65	48	22	22	538	70	13.0	280	123
NY-400/95	LGJ-400/95	48	26	26	631	80	14.0	280	163
NY-500/35	LGJ-500/35	52	16	20	65	617	14.0	275	114
NY-500/45	LGJ-500/45	52	18	20	70	627	14.0	275	122
NY-500/65	LGJ-500/65	52	22	22	70	657	15.0	275	146
NY-630/45	LGJ-630/45	60	18	22	70	675	16.0	300	141
NY-630/55	LGJ-630/55	60	20	22	70	675	16.0	300	156

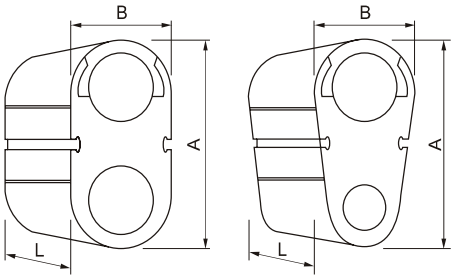
Connector press type O



CPTO type



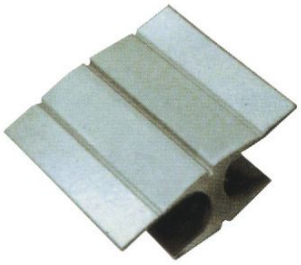
CPTO type

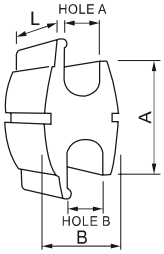


Specification for CPTO type

Modle	Hole1 mm²	Hole2 mm²	Dimensions(mm)		
			A	B	L
CPTO 10-16/10-16	10-16	10-16	18.8	10.5	35.3
CPTO 10-35/10-16	25-35	10-16	22.8	14.5	37.7
CPTO 10-35/16-35	25-35	25-35	26	14	38.6
CPTO 50-70/10-16	50-70	10-16	29.5	19.5	37
CPTO 50-70/16-35	50-70	25-35	28.4	20	38
CPTO 50-70/50-70	50-70	50-70	33.8	20	45.5
CPTO 70-150/50-70	70-150	50-70	44	23.6	60.3
CPTO 70-150/70-150	70-150	70-150	49	23.6	60.3
CPTO 150-240/70-150	150-240	70-150	54.8	30.3	65
CPTO 150-240/150-240	150-240	150-240	62.4	30.3	75.5

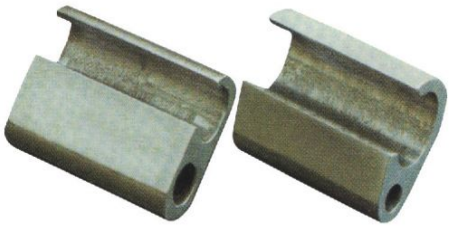
Connector press type H

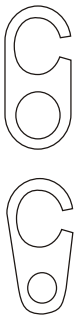




CPTO type

Connector press CPTG type





Specification for CPTH type

Modle	Hole1 mm²	Hole2 mm²	Dimensions(mm)		
			A	B	L
CPTH 35-35	16-35	16-35	17.5	23.8	38
CPTH 35-70	16-35	35-70	17.8	26	46
CPTH 70-70	35-70	35-70	20.6	30.5	47
CPTH 120-120	70-120	70-120	22.7	36.5	52
CPTH 70-150	35-150	70-150	23	34.5	70
CPTH 150-150	70-150	70-150	25.4	39.5	70
CPTH 70-240	35-70	120-240	28	42	90
CPTH 150-247	70-150	120-240	32	46	90
CPTH 240-240	120-240	120-240	32	52	90
CPTH 300-300	150-300	150-300	32	52	100

Specification for CPTG type

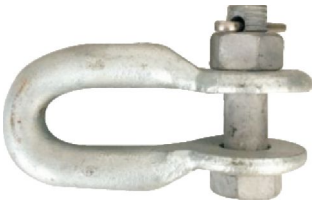
Modle	Hole1 mm²	Hole2 mm²	Dimensions(mm)		
			A	B	L
CPTG 10-16/10-16	16-35	16-35	17.5	23.8	38
CPTG 16-35/10-16	16-35	35-70	17.8	26	46
CPTG 16-35/16-35	35-70	35-70	20.6	30.5	47
CPTG 50-70/10-16	70-120	70-120	22.7	36.5	52
CPTG 50-70/16-35	35-150	70-150	23	34.5	70
CPTG 50-70/50-70	70-150	70-150	25.4	39.5	70
CPTG 70-150/50-70	35-70	120-240	28	42	90
CPTG 70-150/70-150	70-150	120-240	32	46	90
CPTG 150-240/70-150	120-240	120-240	32	52	90
CPTG 150-240/150-240	150-300	150-300	32	52	100



Pig tail Bolt



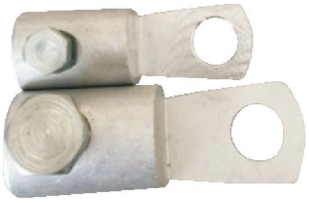
Eye bolt



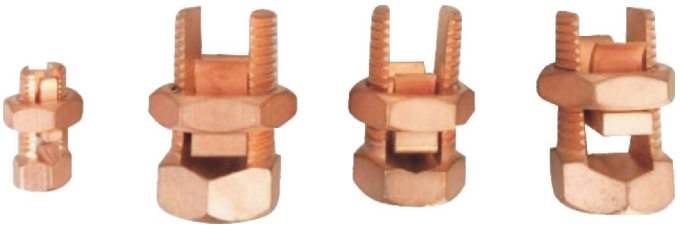
Shackles



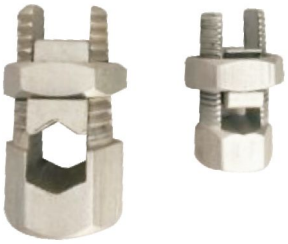
D-holder



Bolt type terminal



Line Tap Brass



Line Tap Aluminium

Proximity switch

Proximity switch is used to detection of parts of size and speed,it is provided with realiable operation,long service life,low-power,high precision,high frequency operation and adapt to bad power supply environment.



Photoelectric switch

Photoelectric switch is used to detect project basic performance through light shelter and reflection ,meanwhile, have some loops.The project that can be detected is not limited to metal but all with reflected light.





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