







Guaranteeing superior performance and qualityin cables





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YouJia ZhongBang Cable Co., Ltd.

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Mineral insulated fire resistant cable

The company has more than 200 employees

20

Annual production capacity of 2 billion RMB

100

More than 100 cooperative clients

#### [ BUILDING A CENTURY-OLD ZHONGBANG ]

Yujia Zhongbang Cable Co., Ltd. is located in the Sima Industrial Zone of Ningjin County, Hebei Province, and specializes in the production of electric wires and cables. The company covers an area of 36,000 square meters and employs over 200 people, including 36 technical personnel and 13 with college degrees or higher. With a registered capital of 301.16 million yuan, the company has an annual production capacity exceeding 2 billion yuan.

The company primarily manufactures the "Zhongbang" series of cable products, including cross-linked power cables, PVC power cables (fire-resistant, flame-retardant, low-smoke, halogen-free, and low-smoke low-halogen), all-plastic control cables (braided shielded, copper tape shielded), steel core aluminum stranded wires, aluminum stranded wires, and plastic-coated copper wires, offering more than 1,000 models and specifications.

The products are certified with the National Industrial Product Production License and CCC certification, and the company has passed the ISO9001:2008 international quality management system certification. The products are widely used in North and South China and are exported to countries and regions such as Vietnam, Mongolia, Russia, the Middle East (Dubai), and Bangladesh.

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## CULTURE

## ROOTED IN THE CABLE BUSINESS ADHERING TO QUALITY FIRST INNOVATING FOR BRAND GROWTH

#### **Corporate Philosophy**

Integrity, Practicality, Perseverance, Virtue

### **Corporate Mission**

People-Oriented, Quality First, Brand Priority, Customer Above All

#### **Corporate Spirit**

Professionalism and Quality for Excellent Service

#### **Corporate Motto**

Kindness, Gratitude, Practicality, Innovation

### **Corporate Slogan**

Rooted in All Nations, Path Underfoot, Success in Career, Prosperity in Brand

### Vision and Strategy

Establish the Cable Business, Adhere to Quality First, Innovate the Brand Path, Build a Century-Old Zhongbang

#### Values

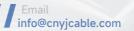
People First, Enterprise Second, Unified Prosperity, Collective Success

#### Work Style

Harmony in People, Integrity in Heart, Discipline in Action, Emphasis on Practicality, Pursuit of Efficiency

## Management Philosophy

Focus and Unity, Standardized Management, Pursuit of Excellence, Common Development







## PATENT CERTIFICATES -

















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### **Mining Product Certificate**











10

#### **Product Testing Report**

















### YouJia ZhongBang Cable Co., Ltd.

Our company owns a large domestic comprehensive cable production workshop, with internationally advanced production equipment, numerous experts, skilled operators, and professional technical personnel for product research, development, design, manufacturing, and on-site engineering services.

## **PATENT CERTIFICATES** -















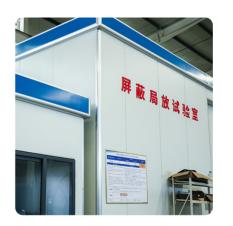






### **DETECTION EQUIPMENT**

















## **APPLICATIONS** -

[ 001 Power Industry ]
Supporting power grid and renewable energy

[ 002 Telecommunications ] Supporting base stations, data, and small devices

[ 003 Transportation ] Ensuring energy transmission for transit and EVs

[ 004 Construction ]
Ensuring power and fire safety for high-rises

[ 005 Mining and Industry ]
Strengthening industrial power and data











## PARTNER BRANDS

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【友嘉众邦电缆有限公司》

START 2007

## **SERVICES** -

## **BASED ON OUALITY, ROOTED LOCALLYMOVING TOWARDS A GLOBAL CABLE BRAND**

The market is our space to survive, and customer satisfaction is our endlesssource. We aim to provide what our customers need most. Our service coversthe entire country, and our value grows with customer demand. Our satisfaction comes from long-term customer trust, understanding that watercan both carry the boat and capsize it.

## **COOPERATION PROCESS-**

**Initial Communication & Requirement Confirmation** 



001

**Provide Customized** Solutions & Quotation



002

**Contract Signing** 



003

**Production & Quality** Control



004

**Shipping & Logistics** Delivery



**Installation & Technical** Support.



006

**After-Sales Service** 



007

Ongoing Cooperation & Feedback



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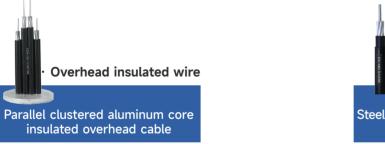
## **PRODUCTS** -

Power cables (for urban grids/industrial power supply), overhead conductors (high-voltage transmission), wires (for home distribution), control cables (automation systems), photovoltaic cables (solar power stations), mining cables (mine power supply), branch cables (high-rise buildings), computer cables (signal transmission) and fire-resistant cables (for nuclear/chemical plants). All products are internationally certified, with fire retardant, weather resistance, and safety as core advantages, covering energy, construction, and industrial fields.







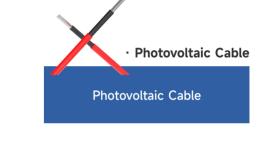




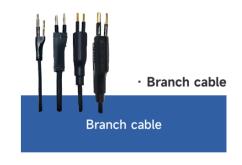


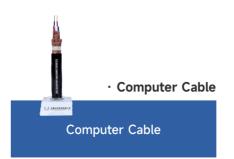




















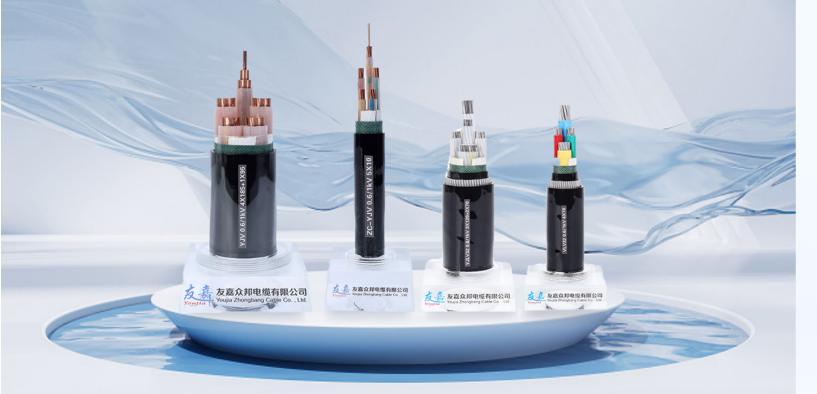
## LOW VOLTAGE POWER CABLE

· Categorization: Power Cable

Low-voltage cables are mainly used in power transmission and distribution systems with an AC rated voltage of 0.6/1kV and below. They are suitable for various installation methods such as overhead, direct burial, and pipeline laying. They have the characteristics of strong weather resistance, safety, reliability, economy and high efficiency.

#### [Application Scenarios]

- Building power distribution: VV/YJV cables are used for indoor power trunk lines and socket lines.
- Industrial Power: YJV22 (armored type) is suitable for factory and mine power systems.
- Outdoor overhead: JKLYJ cable is used for overhead lines on electric poles (span < 50m).
- Industrial Power: YJV22 (armored type) is suitable for factory and mine power systems.
- Subway, tunnel: Flame retardant cable (ZR series)
- Fire pumps, emergency lighting: Fire-resistant cables (NH series)











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#### [Product Categories]

Туре	Model Examples	Main Features	Typical Applications
PVC insulation	VV (copper core) VLV (aluminum core)	Low cost, good flexibility, acid and alkali resistance	Building power distribution, indoor wiring
Cross-linked polyethylene insulation	YJV (copper core) YJLV (aluminum core)	High temperature resistance (90° C), high current carrying capacity	Industrial power, high temperature environment
Overhead insulated cable	JKLYJ (aluminum core) JKYJ (copper core)	Strong UV resistance and weather resistance	Outdoor overhead lines and rural power grid reconstruction
Flame retardant/fire resistant	ZR-VV、NH-YJV	Flame retardant (ZC class), fire resistant (950° C/90min	Fire protection systems, high-rise buildings

#### [General electrical parameters]

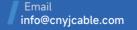
- 1. Rated voltage: 0.6/1kV
- 2. Conductor Material: 3Copper (Cu) or aluminum (Al)
- 3. Conductor cross-section range: Copper core: 1.5~630mm²; Aluminum core: 16~800mm²
- 4. Insulation Material: PVC (polyvinyl chloride) or XLPE (cross-linked polyethylene)
- 5. Insulation thickness: 0.8~2.0mm (depending on the section and standard)
- Sheath Material: PVC/PE (black weather-resistant type optional)
- 7. Sheath Thickness: 1.2~2.5mm
- 8. Long term working temperature: PVC: 70°C; XLPE: 90°C
- 9. Short circuit withstand temperature: PVC: 160° C (5s); XLPE: 250° C (5s)

#### [Mechanical and Environmental Performance]

- In terms of bending radius, the bending radius of multi-core cables needs to be ≥ 6 times the cable diameter, while that of single-core cables requires ≥ 4 times the cable diameter.
- In terms of tensile strength, PVC insulated cables must reach ≥ 12.5MPa, and XLPE insulated cables must reach ≥ 10MPa
- In terms of weather resistance, the cable needs to pass a 1000-hour UV aging test
- There are many options for flame retardant grades, and you can choose ZC flame retardant type or ZA halogenfree and low-smoke type according to your needs.

#### [Current carrying capacity reference (ambient temperature 30° C, copper core cable)]

- In terms of bending radius, the bending radius of multi-core cables needs to be ≥ 6 times the cable diameter, while that of single-core cables requires ≥ 4 times the cable diameter.
- In terms of tensile strength, PVC insulated cables must reach ≥ 12.5MPa, and XLPE insulated cables must reach ≥ 10MPa
- In terms of weather resistance, the cable needs to pass a 1000-hour UV aging test
- There are many options for flame retardant grades, and you can choose ZC flame retardant type or ZA halogenfree and low-smoke type according to your needs.







## MEDIUM VOLTAGE POWER CABLE

· Categorization: Power Cable

Medium voltage cables are suitable for 6kV~35kV medium and high voltage power transmission systems, and are mainly used in urban power grids, industrial power supply, new energy power generation (wind power, photovoltaic) and other fields. They have the characteristics of high insulation strength, high temperature resistance, and anti-interference, and can meet a variety of laying methods such as direct burial, tunnels, cable trenches, and overhead.

#### [Application Scenarios]

- Urban power grid:10kV YJV cable is used for underground pipe corridors and substation outgoing lines.
- Industrial power supply:35kV YJV22 armored cable is used for high voltage power distribution in steel mills and chemical plants.
- New energy power generation:Photovoltaic power station: PV1-F 1.8kV/3kV DC cable. Wind farm: twist-resistant wind power cable.
- Special environment:Submarine cable (waterproof type YJQF41). Mining high voltage cable (MYJV42, impact resistant).











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#### [Product Categories]

Туре	Model Examples	Main Features	Typical Applications
Cross-linked polyethylene insulation (XLPE)	YJV (copper core) YJLV (aluminum core)	High temperature resistance (90° C), high current carrying capacity	Urban power grid, substation outgoing line
Armored Type	YJV22 YJLV22	Steel belt armor, compression and impact resistance	Direct burial, tunnel laying
Flame retardant/fire resistant	ZR-YJV NH-YJV	Flame retardant (Class A/B/C), fire resistant (950° C/3h)	Subways, high-rise buildings, chemical plants
Waterproof	YJSV YJLSV	Longitudinal water- blocking structure, excellent moisture-proof performance	Underwater, wet environment

#### [General electrical parameters]

- 1. Rated voltage: 6kV / 10kV / 20kV / 35kV
- 2. Conductor Material: Copper (Cu) or Aluminum (Al)
- 3. Conductor cross-section range: Copper core: 25~1000mm<sup>2</sup> Aluminum core: 35~1200mm<sup>2</sup>
- 4. Insulation Material: XLPE (cross-linked polyethylene)
- 5. Insulation Thickness: 3.4mm (10kV) 、4.5mm (35kV)
- 6. Shielding: Copper tape shield (≥ 35mm²) or copper wire shield (<35mm²)
- 7. Sheath Material: PVC / PE / LSZH (Low Smoke Zero Halogen)
- 8. Sheath Thickness: 2.0~3.5mm (depending on voltage level)
- 9. Long term working temperature: 90° C (XLPE)
- 10. Short circuit withstand temperature: 250° C (5s)

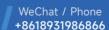
#### [Mechanical and Environmental Performance]

- In terms of bending radius, the bending radius requirement for single-core cable is ≥ 15 times the cable diameter, and for multi-core cable is 12 times the cable diameter.
- In terms of tensile strength, XLPE insulation must reach ≥ 12MPa, and the sheath must also meet ≥ 10MPa
- In terms of weather resistance, it needs to pass the 3.5U o test. For example, a 10kV cable needs to withstand a 21kV voltage for 5 minutes.
- Partial discharge: At a voltage of 1.5U ₀, the partial discharge should be ≤ 10pC.
- There are abundant choices of flame retardant grades, and you can choose ZA halogen-free type, ZB low-smoke type or ZC ordinary flame retardant type according to actual needs.

#### [Current carrying capacity reference (10kV XLPE copper core cable, ambient temperature 25° C)]

- When the cable cross-section is 70mm<sup>2</sup>, the current carrying capacity of air laying can reach 250A, and the current carrying capacity of direct burial laying is 210A.
- When the cable cross-section is 150mm<sup>2</sup>, the current carrying capacity for air laying can reach 380A, and the current carrying capacity for direct burial laying is 320A
- When the cable cross-section is 300mm<sup>2</sup>, the current carrying capacity for air laying can reach 580A, and the current carrying capacity for direct burial laying is 480A







# PARALLEL CLUSTERED ALUMINUM CORE INSULATED OVERHEAD CABLE

· Categorization: Overhead insulated wire

1kV overhead insulated conductors (rated voltage 0.6/1kV) are mainly used for urban distribution networks, rural power grid transformation, and overhead transmission lines, and are suitable for overhead laying of poles. Compared with bare conductors, they have the advantages of safe insulation, strong weather resistance, and convenient installation, which can reduce conflicts between trees and wires and improve power supply reliability.

#### [Application Scenarios]

- Urban distribution network: Overhead lines on electric poles (such as JKLYJ-185mm²).
- Rural power grid: Rural power grid transformation, power supply in fields (light JKLYJ/Q-50mm²).
- Industrial Area: Factory overhead power distribution (copper core JKYJ-120mm²).
- Coastal Areas: Corrosion-resistant aluminum alloy conductor (JKLHYJ).
- Windy Areas: Reinforced conductors (such as steel core aluminum stranded wire + insulation layer).











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#### [Product Categories]

Model	Name	Conductor	Insulation Materials	Features
JKLYJ	Aluminum core cross-linked polyethylene insulated wire	Aluminum	None	Economical, suitable for general environment
JKYJ	Copper core cross-linked polyethylene insulated wire	Copper	None	High conductivity, large current carrying capacity

#### [General electrical parameters]

- 1. Rated voltage: 0.6/1kV
- 2. Conductor Material: Aluminum (Al), copper (Cu), aluminum alloy (AAAC)
- 3. Conductor cross-section range: Aluminum core: 16~400mm²; Copper core: 10~300mm²
- 4. Insulation Material: XLPE (cross-linked polyethylene) or HDPE (high-density polyethylene)
- 5. Insulation Thickness: 1.0~2.5mm (depending on the section and standard)
- 6. Outer diameter range: 6.0~25.0mm (depending on the cross section and insulation thickness)
- 7. Long term working temperature: -40° C ~ +90° C (XLPE)
- 8. Short circuit withstand temperature: 250° C (5s)

#### [Mechanical properties]

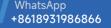
- The tensile strength of the conductor is clearly specified. The aluminum core must reach or exceed 95MPa, and the copper core must be no less than 210MPa.
- Regarding the elongation at break, the aluminum conductor must not be less than 15%, and the standard for copper conductor is higher, requiring it to reach 25% or above.
- When the conductor is bent, the allowable bending radius must be no less than 10 times its own diameter.
- The standard setting for maximum use tension is 20% of the rated tensile strength (RTS).
- In general, various performance indicators of wires, from tensile strength, elongation at break, to allowable bending radius and maximum tensile force, have strict and specific requirements to ensure their performance and safety.

#### [Current carrying capacity reference (ambient temperature 30° C, XLPE insulation)]

- When the cable cross-section is 70mm², the current carrying capacity of air laying can reach 250A, and the current carrying capacity of direct burial laying is 210A.
- When the cable cross-section is 150mm², the current carrying capacity for air laying can reach 380A, and the current carrying capacity for direct burial laying is 320A
- When the cable cross-section is 300mm², the current carrying capacity for air laying can reach 580A, and the current carrying capacity for direct burial laying is 480A







# STEEL CORE INSULATED OVERHEAD CABLE

· Categorization: Overhead insulated wire

1kV overhead insulated conductors (rated voltage 0.6/1kV) are mainly used for urban distribution networks, rural power grid transformation, and overhead transmission lines, and are suitable for overhead laying of poles. Compared with bare conductors, they have the advantages of safe insulation, strong weather resistance, and convenient installation, which can reduce conflicts between trees and wires and improve power supply reliability.

#### [Application Scenarios]

- Urban distribution network: Overhead lines on electric poles (such as JKLYJ-185mm²).
- Rural power grid: Rural power grid transformation, power supply in fields (light JKLYJ/Q-50mm²).
- Industrial Area: Factory overhead power distribution (copper core JKYJ-120mm²).
- Coastal Areas: Corrosion-resistant aluminum alloy conductor (JKLHYJ).
- Windy Areas: Reinforced conductors (such as steel core aluminum stranded wire + insulation layer)













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#### [Product Categories]

Model	Name	Conductor	Insulation Materials	Features
JKLYJ	Aluminum core cross-linked polyethylene insulated wire	Aluminum	None	Economical, suitable for general environment
JKYJ	Copper core cross-linked polyethylene insulated wire	Copper	None	High conductivity, large current carrying capacity

#### [General electrical parameters]

- 1. Rated voltage: 0.6/1kV
- 2. Conductor Material: Aluminum (Al), copper (Cu), aluminum alloy (AAAC)
- 3. Conductor cross-section range: Aluminum core: 16~400mm²; Copper core: 10~300mm²
- 4. Insulation Material: XLPE (cross-linked polyethylene) or HDPE (high-density polyethylene)
- 5. Insulation Thickness: 1.0~2.5mm (depending on the section and standard)
- 6. Outer diameter range: 6.0~25.0mm (depending on the cross section and insulation thickness)
- 7. Long term working temperature: -40° C ~ +90° C (XLPE)
- 8. Short circuit withstand temperature: 250° C (5s)

#### [Mechanical properties]

- The tensile strength of the conductor is clearly specified. The aluminum core must reach or exceed 95MPa, and the copper core must be no less than 210MPa.
- Regarding the elongation at break, the aluminum conductor must not be less than 15%, and the standard for copper conductor is higher, requiring it to reach 25% or above.
- When the conductor is bent, the allowable bending radius must be no less than 10 times its own diameter.
- The standard setting for maximum use tension is 20% of the rated tensile strength (RTS).
- In general, various performance indicators of wires, from tensile strength, elongation at break, to allowable bending radius and maximum tensile force, have strict and specific requirements to ensure their performance and safety.

#### [Current carrying capacity reference (ambient temperature 30° C, XLPE insulation)]

- When the conductor cross-section is 50 square millimeters, the current carrying capacity of the aluminum core conductor is 180 amps and the current carrying capacity of the copper core conductor is 230 amps.
- For a conductor with a cross-section of 95 mm2, the current carrying capacity of an aluminum core can reach 250 amps, while the current carrying capacity of a copper core is even higher, at 320 amps.
- When the conductor cross-section increases to 185 square millimeters, the aluminum core conductor can carry a current of 380 amps, and the current carrying capacity of the copper core conductor is further increased to 480 amps.
- Overall, with the same cross-section, the current carrying capacity of copper core conductors is higher than that
  of aluminum core conductors, and as the cross-section increases, the current carrying capacity of both shows an
  increasing trend.







## **OVERHEAD INSULATED WIRE**

· Categorization: Overhead insulated wire

1kV overhead insulated conductors (rated voltage 0.6/1kV) are mainly used for urban distribution networks, rural power grid transformation, and overhead transmission lines, and are suitable for overhead laying of poles. Compared with bare conductors, they have the advantages of safe insulation, strong weather resistance, and convenient installation, which can reduce conflicts between trees and wires and improve power supply reliability.

#### [Application Scenarios]

- Urban distribution network: Overhead lines on electric poles (such as JKLYJ-185mm²).
- Rural power grid: Rural power grid transformation, power supply in fields (light JKLYJ/Q-50mm²).
- Industrial Area: Factory overhead power distribution (copper core JKYJ-120mm²).
- Coastal Areas: Corrosion-resistant aluminum alloy conductor (JKLHYJ).
- Windy Areas: Reinforced conductors (such as steel core aluminum stranded wire + insulation layer).











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#### [Product Categories]

Model	Name	Conductor	Insulation Materials	Shielding	Features
JKLYJ	Aluminum core cross-linked polyethylene insulated wire	Aluminum	XLPE	None	Economical, suitable for general environment
JKYJ	Copper core cross-linked polyethylene insulated wire	Copper	XLPE	None	High conductivity, large current carrying capacity
JKLYJ/Q	Lightweight aluminum core overhead insulated conductor	Aluminum	XLPE	None	High tensile strength
JKLYJ/B	Semi-conductive shielding type	Aluminum	XLPE	Have	Improved electric field distribution

#### [General electrical parameters]

- 1. Rated voltage: 0.6/1kV
- 2. Conductor Material: Aluminum (Al), copper (Cu), aluminum alloy (AAAC)
- 3. Conductor cross-section range: Aluminum core: 16~400mm²; Copper core: 10~300mm²
- 4. Insulation Material: XLPE (cross-linked polyethylene) or HDPE (high-density polyethylene)
- 5. Insulation Thickness: 1.0~2.5mm (depending on the section and standard)
- 6. Outer diameter range: 6.0~25.0mm (depending on the cross section and insulation thickness)
- 7. Long term working temperature: -40° C ~ +90° C (XLPE)
- 8. Short circuit withstand temperature: 250° C (5s)

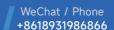
#### [Mechanical properties]

- The tensile strength of the conductor is clearly specified. The aluminum core must reach or exceed 95MPa, and the copper core must be no less than 210MPa.
- Regarding the elongation at break, the aluminum conductor must not be less than 15%, and the standard for copper conductor is higher, requiring it to reach 25% or above.
- When the conductor is bent, the allowable bending radius must be no less than 10 times its own diameter.
- The standard setting for maximum use tension is 20% of the rated tensile strength (RTS).
- In general, various performance indicators of wires, from tensile strength, elongation at break, to allowable bending radius and maximum tensile force, have strict and specific requirements to ensure their performance and safety.

#### [Current carrying capacity reference (ambient temperature 30° C, XLPE insulation)]

- When the conductor cross-section is 50 square millimeters, the current carrying capacity of the aluminum core conductor is 180 amps and the current carrying capacity of the copper core conductor is 230 amps.
- For a conductor with a cross-section of 95 mm2, the current carrying capacity of an aluminum core can reach 250 amps, while the current carrying capacity of a copper core is even higher, at 320 amps.
- When the conductor cross-section increases to 185 square millimeters, the aluminum core conductor can carry a current of 380 amps, and the current carrying capacity of the copper core conductor is further increased to 480 amps.
- Overall, with the same cross-section, the current carrying capacity of copper core conductors is higher than that
  of aluminum core conductors, and as the cross-section increases, the current carrying capacity of both shows an
  increasing trend.







YOUJIA ZHONGBANG CABLE

## **WIRING**

· Categorization: Wiring

Cables for fixed wiring are low-voltage power distribution lines used for fixed laying inside buildings. They are suitable for installation of power, lighting and other circuits with AC rated voltages of 450/750V and below. They are characterized by good flexibility, safety, reliability and easy installation.

#### [Application Scenarios]

- Internal power distribution in residential buildings, office buildings, etc.
- Lighting circuit and socket circuit installation
- Internal wiring of electrical equipment
- Temporary power supply area (RVV and other soft wires are required)











### [Product Categories]

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Model	Name	Conductor	Insulation	Jacket	Use
BV	Copper core PVC insulated wire	Copper	PVC	None	Fixed installation
BVR	Copper core PVC insulated flexible wire	Copper	PVC	None	Where flexibility is required
BLV	Aluminum core PVC insulated wire	aluminum	PVC	None	Fixed installation
BVV	Copper core PVC insulated sheathed wire	Copper	PVC	PVC	Surface mounted wiring
RVV	Copper core PVC insulated sheathed wire	Copper	PVC	PVC	Mobile appliance connection

#### [Specifications]

- 1. Rated voltage: 300/500V or 450/750V
- 2. Conductor structure: Core hard wire (BV/BLV): Class 1 conductor. Stranded cord (BVR/RVV): Class 2 or Class 5 conductor
- 3. Insulation Thickness: 0.6-2.0mm (depending on the cross section)

#### [Technical Parameters]

#### Electrical properties

- Conductor DC resistance: Conductor DC resistance
- Insulation resistance: ≥ 0.036MΩ·km (at 70°C)
- Withstand voltage test: 2000V/5min without breakdown

#### Mechanical properties

- Tensile Strength: ≥ 12.5N/mm² (insulation)
- Elongation at break: ≥ 125% (insulation)
- Bending properties: RVV can pass 8 times diameter bending test

#### Temperature characteristics

- Long term working temperature:70°C
- Short-term overload temperature: 105°C (no more than 8h)
- Short circuit temperature: 160°C (no more than 5s)

#### [Selection Guide]

#### Conductor selection

- · Copper Core: Good conductivity and high reliability
- · Aluminum Core: Good economy, suitable for fixed high current lines

#### Insulation selection

- Ordinary PVC: General Environment
- Flame retardant PVC (ZR-BV): Fire protection requirements
- Heat-resistant PVC (105° C): High temperature environment

#### Sheath selection

- Without sheath (BV): Pipe laying
- With sheath (BVV): Surface mounted use







YOUJIA ZHONGBANG CABLE

## **CONTROL CABLE**

· Categorization: Control Cable

Control cables are used for connecting wires of control, monitoring and protection circuits of electrical equipment and instrumentation systems. They are suitable for control and signal transmission occasions with AC rated voltage of 450/750V and below. They have the characteristics of strong anti-interference ability, convenient laying, safety and reliability.

#### [Application Scenarios]

- In factory automation control scenarios, it is recommended to use KVVP type cables, which have antielectromagnetic interference properties and can effectively ensure stable signal transmission.
- · KVV type cable is suitable for building automation system, which is economical and practical, and can meet functional requirements while controlling costs.
- · Internal wiring of mechanical equipment, KVVR type cable has the advantage of good flexibility, which facilitates flexible wiring in a small space
- · In places like subways and tunnels where there are dense crowds and high fire safety requirements, the flame retardant and low smoke characteristics of WDZ-KVV22 cables can reduce smoke hazards in the event of an accident.
- · In the petrochemical environment, KYJV type cables can operate stably under complex and harsh working conditions due to their oil and corrosion resistance.











#### [Product Categories]

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Model	Name	Conductor	Insulation	Jacket	Shield	Armor
KVV	Copper core PVC insulated PVC sheathed control cable	Copper	PVC	PVC	None	None
KVVP	Copper core PVC insulated PVC sheathed shielded control cable	Copper	PVC	PVC	Copper wire braid	None
KVV22	Copper core PVC insulated PVC sheathed steel tape armored control cable	Copper	PVC	PVC	None	Steel belt
KVVR	Copper core PVC insulated PVC sheathed control flexible cable	Copper	PVC	PVC	None	None

#### [Specifications]

- 1. Rated voltage: 450/750V
- 2. Conductor cross section: 0.5-10mm<sup>2</sup>
- 3. Core number range: 2-61 core
- 4. Conductor structure:

Rigid conductor (Class 1): Single solid copper conductor

Flexible conductor (Class 2/Class 5): Stranded copper conductor

5. Insulation Thickness: 0.6-1.2mm (according to GB/T 9330)

#### [Mechanical properties]

- Tensile strength requirements: ≥ 12.5N/mm² (insulation)
- Elongation at break requirements: ≥ 125% (insulation)
- Bending radius requirements: ≥ 6D (unarmored)/ ≥ 12D (armored)

#### [Environmental characteristics]

- Operating Temperature: -15°C ~ +70°C
- Short circuit temperature: 160°C (5s)
- Flame retardant properties: Pass GB/T 18380.3 (optional)

#### [Selection Guide]

Laying requirements

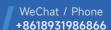
- Bridge laying: Filling rate <40%
- Direct burial depth: ≥ 0.7m (need to lay sand and cover bricks)
- Bending Radius: ≥ 6 times the cable diameter

Wiring requirements

- Bridge laying: Filling rate <40%
- The shield layer needs to be grounded at one end
- Multi-stranded flexible wires require crimping terminals

• Avoid laying cables parallel to power cables (spacing >0.3m), and lay cables of different voltage levels in separate slots.







## PHOTOVOLTAIC CABLE

· Categorization: Photovoltaic Cable

Photovoltaic cables are special cables used in solar photovoltaic power generation systems. They are mainly used for DC power transmission between photovoltaic modules and between modules and inverters. The products have excellent weather resistance, UV resistance, high and low temperature resistance and other characteristics, and are suitable for harsh outdoor environments.

#### [Application Scenarios]

- In photovoltaic systems, PV1-F cables are recommended for inter-module connections. The typical specification is 4mm<sup>2</sup> and there are two colors, red and black, to distinguish the lines.
- For the connection between the string and the combiner box, the H1Z2Z2-K cable is an ideal choice. Its typical specification is 6mm<sup>2</sup> and it has double insulation characteristics to ensure safe and stable connection.
- For rooftop photovoltaic systems, it is recommended to use PV-WDZ type cables with flame-retardant 10mm<sup>2</sup> specifications to ensure power safety in complex rooftop environments.
- In the construction of photovoltaic power stations, PV1-F type cables are also applicable, but 35mm<sup>2</sup> orange cables will be used to meet the larger current transmission requirements of the power station.
- · Different application locations are matched with cables of corresponding models and specifications according to their environment and transmission requirements, so as to ensure the efficient and safe operation of the photovoltaic system.

#### [Voltage Level]

- DC 1.8kV (connection between modules)
- DC 0.6/1kV (array to inverter)











#### [Product Categories]

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Model	Name	Standard
PV1-F	Cross-linked polyolefin insulated cable for photovoltaic use	TUV 2 PfG 1169
H1Z2Z2-K	Cross-linked polyolefin insulated sheathed cable for photovoltaic use	EN 50618
PV-WDZ	Halogen-free low-smoke flame-retardant photovoltaic cable	GB/T 33594

#### [Technical Parameters]

#### Conductor

- Material: Tinned copper conductor (anti-oxidation)
- Section: 2.5-35mm<sup>2</sup> (commonly used 4mm<sup>2</sup>, 6mm<sup>2</sup>)
- Structure: Category 5 stranded (high flexibility)

#### Insulation and sheath

- Insulation material index: Cross-linked polyolefin (XLPO)
- Sheath material index: Halogen-free cross-linked polyolefin
- · Sheath thickness index: 0.5-1.0mm
- Outside diameter tolerance index: ±0.1mm

#### Electrical properties

- Conductor resistance standard value: ≤ 5.09Ω/km (4mm<sup>2</sup>)
- Withstand voltage test standard value 6.5kV/5min (1.8kV level)
- Insulation resistance standard value  $\geq 1000 M\Omega \cdot km$ Environmental characteristics
- Temperature range: -40°C ~ +120°C
- UV protection index: Passed 3000 hours QUV test
- Acid and alkali resistance indicators: Pass pH 2-12 solution test
- Flame retardant grade: IEC 60332-1 (optional V0

#### [Product Features]

#### Special material formula

- · Anti-UV and antioxidant added to the insulation layer
- The sheath has passed the 1000-hour xenon lamp aging test

#### Outstanding safety performance

- Passed TUV certified tracking test (> 600V)
- Halogen-free formula (toxicity index ≤ 5 when burning)
- Waterproof type (KVVP2-22) passed IP67 test Installation Advantages
- Bending radius ≥ 4D at 90°C
- Maximum allowable DC system voltage: 1.8kV Long life design
- Expected service life: 25 years (outdoor)
- Passed -40°C low temperature impact test

#### [Selection Guide]

#### Select by current

• When the module current does not exceed 10A, it is recommended to use a 4mm<sup>2</sup> cable with a maximum laying length of 100m. For a current range of 10-15A, a 6mm<sup>2</sup> cable is suitable, with a maximum length of 80m. For a current range of 15-20A, a 10mm<sup>2</sup> cable should be used, with a maximum length of 50m. Properly matching the cable cross-section and length ensures the efficient operation of the circuit system.

#### Select by environment

- General environment: PV1-F
- Alpine areas: -40°C Special Type
- Fire prevention places: PV-WDZ

#### Color classification

- positive electrode: red
- · negative electrode: black
- · Grounding: Yellow Green







## MINING POWER CABLE

· Categorization: Mining power cable

Mining power cables are special cables designed for coal mines, metal mines and other mining environments. They have excellent flame retardancy, mechanical shock resistance and corrosion resistance. The products comply with mining safety regulations and are suitable for underground fixed laying or mobile equipment power supply.

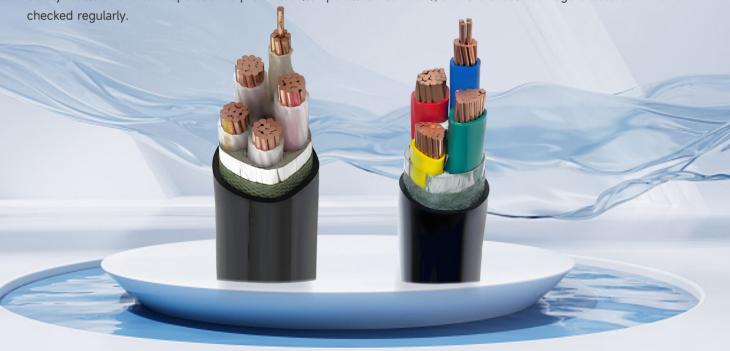
#### [Application Scenarios]

- · For underground main power supply, it is recommended to use MYJV22 cable, with typical specifications of
- · When the coal mining machine is powered, MCPTJ type cable is suitable, and the typical specifications are
- For power supply of tunneling equipment, MYP type cable is recommended, with typical specifications of
- The lighting system is suitable for MYQ type cables, with typical specifications of 3×4+1×2.5

#### [Installation Guidelinesl]

- Fixing the cable: Allowable drop ≤ 45°
- Mobile Cable: Minimum bending radius ≥ 15D
- Suspension spacing: ≤ 3m (horizontal)/1.5m (vertical)
- · Connection requirements: Use explosion-proof junction boxes, the shielding layer must be reliably grounded, and the joints must be waterproofed

• Safety matters: Overload operation is prohibited (temperature rise <70K), and the sheath damage should be











#### [Product Categories]

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#### · Fixed laying of cables

Model	Name	Voltage level	Features
MYJV	Cross-linked polyethylene insulated power cable for mining	8.7/10kV	Flame retardant class A
MYJV22	Mining steel belt armored power cable	8.7/10kV	Good compression resistance
MYP	Mobile shielded rubber sheathed cable for mining	0.38/0.66kV	Soft and resistant to bending

#### · Cables for mobile devices

Model	Name	Voltage level	Features
MYQ	Light rubber sheathed cable for mining	0.3/0.5kV	Lightweight
MCP	Coal mining machine shielded rubber sheathed cable		High tensile strength
MCPTJ	Coal mining machine metal shielded cable	3.6/6kV	Anti-interference

#### [Technical Parameters]

Conductor structure

- Material: Tinned copper conductor (anti-oxidation)
- Section range: 4-400mm<sup>2</sup>
- Conductor Type: Fixed cable: Class 2 stranded conductor. Mobile cables: Category 5 ultra-flexible conductors

Mechanical properties

• Tensile strength index: ≥ 12.5MPa (fixed)

- Wear resistance index: ≥ 50,000 times (mobile)
- Bending radius indicators: ≥ 6D (fixed)/15D (mobile) Safety performance
- Flame retardancy standards:
- GB/T 18380.3 Class A
- Antistatic standards: Surface resistance ≤ 1×10 <sup>8</sup> Ω
- · Oil resistance standards: Passed IRM902 oil test

#### [Selection Guide]

Select by voltage

 660V system: MYP/MYQ • 10kV system: MYJV/MYJV22 According to the laying method

· Fixed installation: MYJV series

Mobile device: MCP/MCPTJ

Special Requests

- High tensile strength: reinforced MCPJR
- Oil resistant: Polyurethane sheath type

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## **BRANCH CABLE**

· Categorization: Branch cable

Branch cable (pre-branch cable) is a factory-prefabricated power distribution system, which consists of a trunk cable and multiple branch cables connected through a dedicated branch connector. The product has the characteristics of easy installation, high reliability, and space saving. It is particularly suitable for places that require multi-point power supply, such as high-rise buildings and large commercial complexes.

#### [Installation Guidelinesl]

- Fixed spacing: ≤ 1.5m (trunk)/1.0m (branch) load-bearing bracket needs to bear 20 times the weight of the cable
- Horizontal laying: The maximum allowed span is 3m (less than 300mm²), and guide rollers are installed at the turns.
- Special treatment: Fire blocking is done when crossing fire partitions, grounding resistance  $\leq 4\Omega$











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#### [Product Categories]

#### · Classification by insulation material

Model	Name	Features	
YFD-YJV	Cross-linked polyethylene insulated branch cable	Temperature resistance 90°C , large current carrying capacity	
YFD-VV	PVC insulated branch cable	Low cost, suitable for general environment	

#### · Classification by branch structure

Туре	Schematic diagram	Applicable scenarios
Single point branch	00	Standard floor power distribution
Multi-point branch	00	Core tube vertical power distribution
Reducing branch	○——○ (Big → Small)	Variable cross-section power supply

#### [Technical Parameters]

#### Conductor system

- Main cable cross section: 25-630mm²
- Branch cable cross section: 4-300mm<sup>2</sup>
- Conductor Material: Annealed copper (resistivity ≤ 0.017241Ω·mm²/m)
- Branch point spacing: Standard 3m (customizable)

#### Insulation properties

- In terms of cable performance parameters, there are differences in insulation resistance between YFD-YJV and YFD-VV cables. The insulation resistance standard of YFD-YJV cable is ≥ 1000MΩ km, while that of YFD-VV cable is ≥ 500MΩ km. The former has more advantages in insulation performance.
- In terms of withstand voltage, the YFD-YJV cable needs to withstand a voltage of 3.5U o +2kV for 5 minutes, and the withstand voltage requirement of the YFD-VV cable is 3U o +2kV/5min. The standard setting of the withstand voltage performance of the YFD-YJV model cable is more stringent.
- In terms of partial discharge parameters, the partial discharge of YFD-YJV cable needs to be controlled at ≤ 10pC, while that of YFD-VV cable is ≤ 20pC, which shows that YFD-YJV cable is better in reducing partial discharge phenomenon.
- The comparison of these parameters shows that the two types of cables, YFD-YJV and YFD-VV, have their own standards in key performance indicators such as insulation, withstand voltage and partial discharge, and users can choose according to specific needs.
- Mechanical properties
- Branch joint breaking force: ≥ 60% of the main cable breaking force
- Bending Radius: ≥ 12D (trunk)/8D (branch)
- Flame retardant grade: Category A (optional B1 level)







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[Application Scenarios]

· Categorization: Computer Cable

**COMPUTER CABLE** 

Computer cables are signal transmission cables designed for automation control systems and computer measurement and control networks. They are suitable for digital signal transmission with a rated voltage of 300/500V or below. The products have excellent anti-interference performance, transmission stability and easy installation, and are widely

• In DCS systems, DJYVP2-22 cables offer strong anti-electromagnetic interference for stable signal transmission in complex environments. For industrial Ethernet, DJYVP-821.0 cables support CAT5e performance, enabling highspeed data communication. DJYVRP cables, with high flexibility, are ideal for servo control systems with frequent

movement. In nuclear power control, DJYJP cables, with radiation resistance, meet strict safety standards. Each

cable model is tailored to specific technical needs, ensuring reliable performance in various applications.

used in DCS systems, PLC control and other occasions that require high-precision signal transmission.

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Model	Name	Structural features	Shielding method	
DJYVP	Polyethylene insulated copper wire braided shielded cable	Twisted pair structure	Partial shielding + overall shielding	
DJYPV	Polyethylene insulated copper foil shielded cable	Twisted pair structure	Sub-shielding	
DJYVRP	Polyethylene insulated soft core shielded cable	Multi-strand soft conductor	Double shield	
DJYJP	High temperature resistant computer cable	Fluoroplastic insulation	Triple Shielding	

#### [Typical Applications]

- Conductor: Oxygen-free copper wire (0.2-2.5mm²
- insulation: PE/XLPE/FEP(Thickness 0.3-0.8mm)
- shield: Sub-shielding: Aluminum foil/Copper foil (coverage ≥ 90%). Total shield: copper wire braid (density ≥
- jacket: Sub-shielding: Aluminum foil/Copper foil (coverage > 90%). PVC/LSZH (thickness 1.0-1.8mm)

#### [Technical Parameters]

#### Electrical properties

• The working capacitance should not exceed 110pF/m (measured at 1kHz). Capacitance unbalance should be  $\leq$  3pF/100m (measured at 1kHz). The characteristic impedance is 120±15 $\Omega$  (measured at 1MHz). The attenuation constant should be  $\leq 0.25$ dB/m (measured at 10MHz). Insulation resistance should be  $\geq 5000$ M $\Omega \cdot$ km (measured at 20°C). These standards ensure stable and reliable electrical equipment performance under specific conditions.

#### Transmission performance

 At 1MHz, the maximum attenuation is 2.1dB/100m, with near-end crosstalk ≥ 60dB for low loss and antiinterference. At 10MHz, attenuation increases to 6.8dB/100m, and crosstalk standard is ≥ 50dB, balancing signal loss and crosstalk. At 100MHz, attenuation rises to 22.0dB/100m, with crosstalk ≥ 40dB, posing higher challenges for signal control and anti-interference. As frequency increases, attenuation increases and crosstalk requirements decrease, reflecting different signal characteristics and performance needs across frequency bands.

Mechanical environmental performance

Bending radius ≥ 8D (fixed installation)/12D (mobile use)

Tensile strength ≥ 10N/mm<sup>2</sup> (sheath)

Operating temperature: -40°C ~ +70°C (PVC sheath) /-60°C ~ +200°C (FEP insulation)

Flame retardant grade IEC 60332-1 (IEC 60332-3 Class C optional)





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太 嘉 友嘉众邦电缆有限公司











[Product Categories]

· Classification by insulation material

Model	Name	Structural features	Shielding method
DJYVP	Polyethylene insulated copper wire braided shielded cable	Twisted pair structure	Partial shielding + overall shielding
DJYPV	Polyethylene insulated copper foil shielded cable	Twisted pair structure	Sub-shielding
DJYVRP	Polyethylene insulated soft core shielded cable	Multi-strand soft conductor	Double shield
DJYJP	High temperature resistant computer cable	Fluoroplastic insulation	Triple Shielding

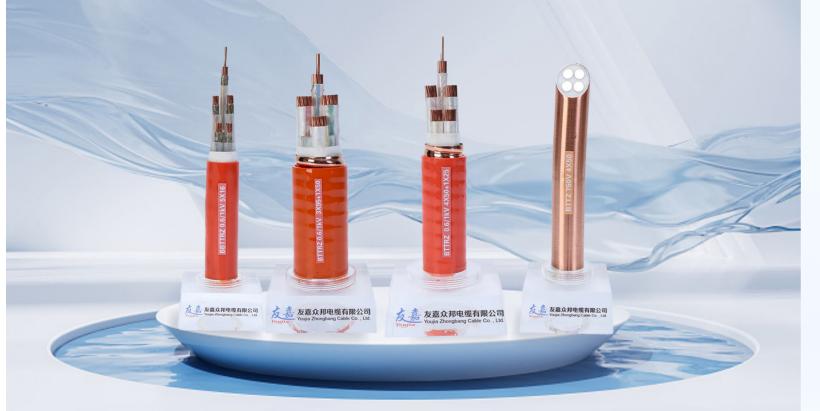
# MINERAL INSULATED FIRE RESISTANT CABLE

· Categorization: Mineral insulated fire resistant cable

Mineral insulated fireproof cable is a special cable that uses magnesium oxide (MgO) as insulation material and copper tube as sheath. It has excellent characteristics such as fire resistance, high temperature resistance, explosion-proof, smokeless and non-toxic. The product complies with international standards such as BS 6387 and GB/T 13033, and is the first choice cable for key places such as fire protection systems and emergency power supply.

#### [Typical Applications]

- conductor:Annealed copper (round/sector)
- insulation: High density magnesium oxide powder (BTTZ) or mica tape (NG-A)
- jacket:Copper tube (BTTZ, thickness 0.5-1.2mm)
- Aluminum tube + PVC outer sheath (NG-A)
- Section range:1.5-400mm<sup>2</sup> (single core) / 1.5-25mm<sup>2</sup> (multi-core)











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#### [Product Categories]

model	Name	conductor	Insulation	Jacket	Temperature grade
BTTZ	Heavy copper core and copper sheath	Copper	Magnesium Oxide	copper	250°C
BTTVZ	Lightweight copper core and copper sheath	Copper	Magnesium Oxide	copper	105°C
NG-A	Lightweight copper core copper sheathed cable	Copper	Mica tape	aluminum	950°C
YTTW	Flexible copper sheathed cable	Copper	Mica tape	copper	1000°C

#### [Technical Parameters]

- 1. The insulation resistance should be ≥ 1000MΩkm under the test condition of 20°C to ensure good insulation performance.
- 2. The voltage withstand test uses industrial frequency and requires a voltage of 3.5kV for 5 minutes to test the equipment's ability to withstand voltage. Core number range: 2-61 core
- 3. The standard value of working capacitance is specified as ≤ 120pF/m. This test needs to be performed at a frequency of 1kHz to measure its capacitance characteristics under working conditions.Insulation Thickness: 0.6-1.2mm (according to GB/T 9330)

#### [Product Features]

- Passed 1000°C /3h fire resistance test (traditional cables only need 90min)
- Smokeless and non-toxic when burning (smoke density ≤ 5%)
- Copper sheath waterproof and explosion-proof (IP68 protection grade)

#### [Installation Guidelines]

- A hydraulic end capping machine must be used
- Moisture-proof sealing should be done immediately after cutting
- Flame retardant properties: Pass GB/T 18380.3 (optional)

#### [Selection Guide]

- Choose according to fire resistance requirements
- When faced with direct burial or underwater laying conditions, BTTZ cable becomes an ideal choice due to its copper sheath sealing characteristics. This sealing structure can effectively resist soil corrosion and water penetration, ensuring long-term and stable operation of the cable.
- In the bridge laying scenario, NG-A cable stands out with its lightweight feature. Its lightweight material is not only easy to install and carry, but also reduces the bearing pressure of the bridge and improves the laying efficiency and safety.
- YTTW cables are perfectly adapted to the needs of cable laying in mobile places due to their flexibility. Even in
  the case of frequent movement and bending, they can maintain good electrical performance and reduce the risk
  of failure caused by mechanical stress.







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