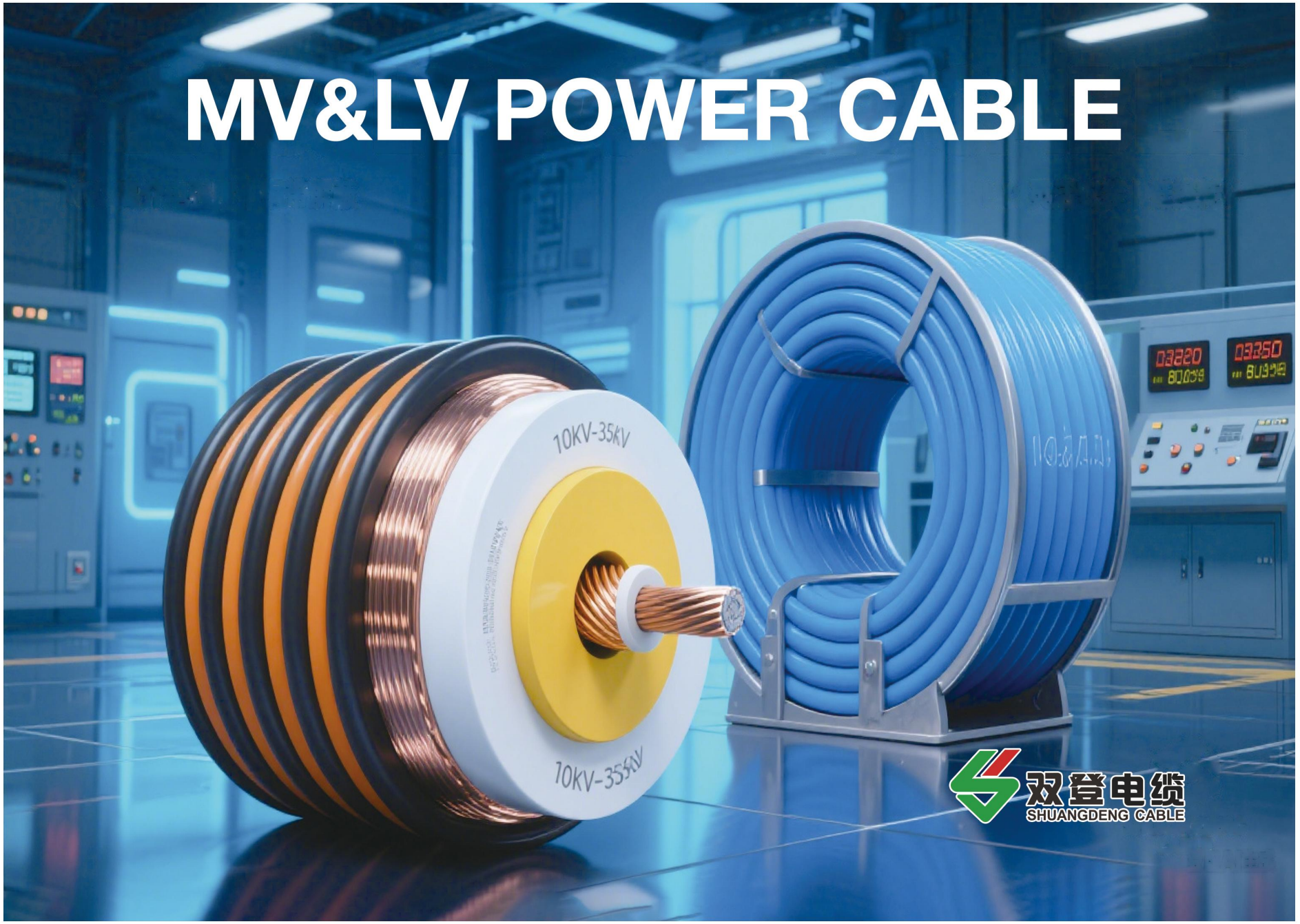
MV&LV POWER CABLE



Shuangdeng MV and LV Power Cable Product Manual

Reliable Power Transmission for Medium and Low - Voltage Networks

❶ Product Overview

Shuangdeng MV (Medium - Voltage) and LV (Low - Voltage) Power Cables are meticulously designed to meet the diverse power transmission requirements of urban grids, industrial facilities, and residential complexes. With a commitment to safety, efficiency, and durability, these cables combine high - quality materials and advanced manufacturing technologies. Whether for power distribution in buildings, industrial plants, or utility networks, our cables ensure stable electrical performance and long - term reliability.

❷ Core Features & Benefits

Feature	Technical Advantage	Application Benefit
High - Quality Conductors	Constructed from high - purity oxygen - free copper or aluminum conductors, ensuring low resistance and minimal power loss.	Significantly improves the efficiency of power transmission, reducing operational costs.
Superior Insulation	Utilizes cross - linked polyethylene (XLPE) for MV cables and PVC or XLPE for LV cables, providing excellent electrical insulation and heat resistance.	Prevents electrical leakage, enhances safety, and allows for continuous operation in various temperature conditions.
Mechanical Strength	Reinforced structures with optional armor layers (such as steel tape or wire armor) for enhanced protection against mechanical damage.	Ideal for underground installations, direct burial, and areas with high mechanical stress, ensuring cable integrity.
Weather and Corrosion Resistance	Specialized sheath materials, including LSZH (Low - Smoke Zero - Halogen) for indoor use and PE (Polyethylene) or PVC for outdoor applications, resist moisture, chemicals, and UV radiation.	Suitable for both indoor and outdoor environments, extending the service life of the cable in harsh conditions.
Electromagnetic Compatibility	Shielded designs (copper tape or braid shielding) for MV cables effectively reduce electromagnetic interference (EMI) and radio - frequency interference (RFI).	Ensures stable operation of sensitive electrical equipment and communication systems in the vicinity.

❸ Product Specifications

3.1 Conductor

· Material:
  MV Cables: Oxygen - free copper (≥99.99% conductivity) or high - purity aluminum
  LV Cables: Oxygen - free copper or aluminum
  Structure: Stranded conductors (Class 2 for MV, Class 5/6 for flexible LV applications) in compliance with IEC 60228
· Cross - sections:
  MV Cables: 35mm² - 630mm² (single - core) and multi - core configurations (1 and 3 cores)
  LV Cables: 1.5mm² - 630mm² (single - core) and multi - core configurations (1-5 cores)

3.2 Insulation & Sheath

· Insulation:
  MV Cables: XLPE with thicknesses according to IEC 60502 standards
  LV Cables: PVC (standard for general use) or XLPE (for higher performance and temperature resistance)
· Sheath:
  Indoor: LSZH for low - smoke and flame - retardant properties
  Outdoor: PE or PVC for weather and UV resistance
  Color coding: Compliant with IEC 60445 and customizable for specific customer needs

3.3 Electrical Characteristics

· Rated voltage:
  MV Cables: 3.6/6kV, 6/10kV, 8.7/15kV, 12/20kV, 18/30kV
  LV Cables: 0.6/1kV
· Capacitance: ≤0.2μF/km (at 50Hz) for MV cables, ≤0.1μF/km for LV cables
· Insulation resistance: ≥10000MΩ·km (20°C)
· Current - carrying capacity: Up to 1200A (depending on cable size, voltage class, and ambient temperature)

❹ Application Scenarios

Medium - Voltage Applications:
· Urban power distribution networks
· Industrial parks and manufacturing plants
· Substations and transformer connections
· Renewable energy projects (solar farms, wind farms)

Low - Voltage Applications:

· Residential buildings and commercial complexes
· Shopping malls, hospitals, and educational institutions
· Data centers and telecommunications facilities
· Street lighting and public infrastructure projects

5 Compliance & Certifications

· International standards: IEC 60502, IEC 60227, GB/T 12706 (China national standard), CE
· Environmental compliance: RoHS 3.0, REACH
· Optional certifications: TÜV, SGS, ISO 9001

6 Installation & Maintenance

6.1 Installation Guidelines

· Minimum bending radius:
  MV Cables: 15× cable diameter (without armor), 20× (with armor)
  LV Cables: 10× cable diameter (static), 15× (dynamic)
· Ensure proper grounding and insulation during installation
· For underground installation, use appropriate trench protection and backfilling materials
· Maintain a safe distance from other underground utilities and structures

6.2 Storage Conditions

· Store in a dry, well - ventilated area with temperatures between - 10°C and + 40°C
· Keep cable reels in an upright position to prevent sheath deformation
· Protect from direct sunlight, moisture, and chemical substances

7 Customization Options

· Specialized cables for high - temperature environments (up to +150°C)
· Armored cables with different types of armor (steel tape, wire armor, aluminum armor)
· Custom - designed multi - core cables with specific voltage ratings and conductor arrangements
· Tailored cable lengths and unique color - coding systems for easy identification