COMPANY BROCHURE

Eastful Group Co., Ltd.

Your preferred designer, manufacturer and global supplier of electrical and industrial solutions

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Neural Network Cables

The Neural Network Cables, jointly developed by Eastful Group and Chongqing University with full intellectual property rights, enhance traditional wire and cable systems by adding five specific sensing functions: "temperature sensing," "fault detection," "breakage detection," "partial discharge monitoring," and "current sensing." Combined with GIS (Geographic Information System), they enable precise positioning of installed cable locations on satellite maps.

Application

Neural network cables are suitable for highways, bridges, rail transit, places with high safety and power supply stability requirements, tunnels, urban power supply systems, factories, etc.

Five Sensing Functions

Temperature Sensing
Real-time monitoring and visualization of cable temperature.
Early warning of temperature abnormalities and potential overload.
Providing insights for power dispatching and extends cable service life.

Fault Detection
Real-time monitoring and location identification of cable faults.
Minimizing downtime and repair costs caused by cable explosions or sabotage.

Partial Discharge Monitoring
Real-time detection by utilizing high-frequency current.
Preventing insulation breakdown by accurately monitoring partial discharge phenomena.

Current Sensing
Real-time monitoring of the cable current for power measurement and energy metering.
Programmable with high accuracy, suitable for various automation applications.

Breakage Detection
Real-time monitoring of the cable vibration to prevent damage from rough construction or theft.
Integrated with security systems for enhanced protection.

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Compared to traditional wires and cables, the high-performance, century-long life wires and cables, developed by Eastful Group offer superior benefits to residents and businesses. They not only provide convenience but also effectively promote social progress, environmental protection, and resource conservation, thereby contributing to sustainable development.

Advantages

These wires and cables offer substantial capacity, minimal power loss, and heat generation.

Featuring a triple-layer co-extrusion design, they ensure superior electrical insulation, waterproofing, and moisture resistance. This design protects the steel conductor from oxidation, maintains stable electrical performance, and enhances aging resistance.

They prioritize safety with flame-retardant, non-corrosive materials that do not emit harmful gases when burned. These wires and cables meet single-pole non-flammability requirements and extinguish quickly after exposure to open flames.

Our century-long life wires and cables are low-smoke, halogen-free, flame-retardant, non-toxic, and resistant to high temperatures. They do not release harmful gases or substances when burned, thereby avoiding "secondary pollution."

By employing electron irradiation for cross-linking during production, these wires and cables eliminate oil and water, preventing water tree formation and ensuring reliable electrical performance. With improved cross-linked material properties, they maintain long-term operational temperatures ranging from 90°C to 125°C, withstanding short circuits up to 250°C for 5 seconds. Their service life exceeds 70 years.

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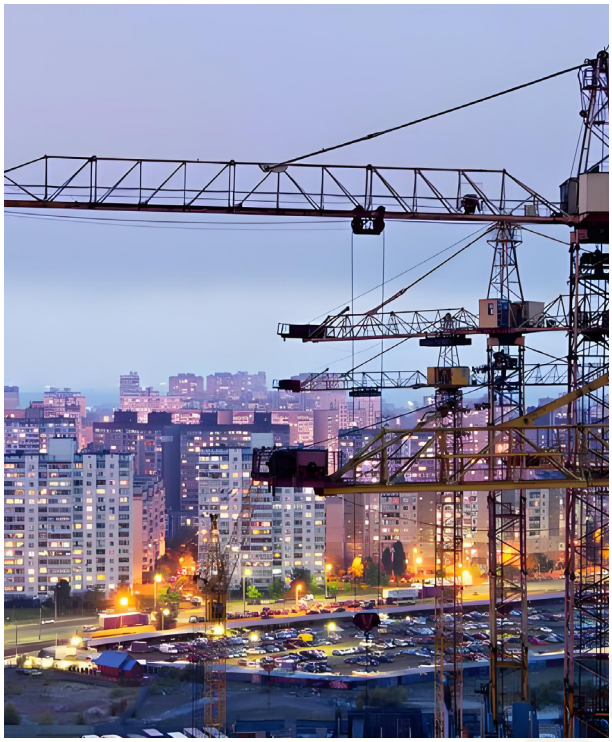

Aluminum Alloy Power Cables

Aluminum alloy power cables utilize advanced compression and stranding techniques, along with annealing treatment, to overcome the limitations of traditional aluminum cables. These cables feature aluminum alloy conductors, offering improved bending performance, creep resistance, and corrosion resistance. With conductivity at 61.8% of copper and about one-third of copper's weight, they provide equivalent carrying capacity at half the weight, reducing installation costs and equipment wear. Widely applicable in residential, commercial, and industrial settings, including metallurgy and aerospace, these cables find use in various applications such as home appliances and automotive sectors. They boast enhanced corrosion resistance due to rare earth additives, improved mechanical properties, superior flexibility, and increased creep resistance, ensuring safer and more reliable performance.

Electric Vehicle Charging Cables

Electric vehicle charging cables, designed for connecting charging devices to infrastructure, prioritize insulation, aging, and heat resistance, as well as low smoke and flame retardancy for safety. They serve both vehicle-mounted and infrastructure-mounted purposes in locations such as roads, malls, and parking lots, featuring a conductor of Type 5 or 6 tinned or bare copper, Thermoplastic Elastomer (TPE) insulation, and sheath, mesh PP rope filling, and non-woven fabric bag strap, with operating temperatures ranging from -40 to +50°C, rated voltages of AC450/750V and DC 1.0kV, a bending radius of ≥5D, and withstand voltage tests of AC cable 3.5kV/15min and DC cable 8.4kV/15min, alongside acid and alkali resistance and tear resistance specifications.

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Cold-resistant and Low-temperature Resistant Cables

Eastful has developed cold-resistant and low-temperature-resistant cables to combat cracking in alpine conditions, ensuring uninterrupted cable line laying and safe operation. These cables are ideal for various industries, including wind power generation, solar energy, and oil drilling, as well as environments like refrigerated warehouses, offering flexibility and performance even in severe cold. They come in grades such as -30°C, -40°C, -50°C, etc., tailored to specific low-temperature environments to prevent cable hardening and cracking.

Twist-resistant Flexible Cables for Wind Power

As the wind power industry expands, there's a rising need for flexible cables customized for wind power, crucial for specialized turbine components enduring frequent twisting between the nacelle and tower. These cables, designed for wind power equipment rated at 1.8/3kV and below, excel in low temperatures, ultraviolet, and oil resistance, crucial for wind farm longevity. Featuring excellent cold resistance (-25°C, -40°C, and -55°C), robust oil resistance, and exceptional torsion resistance (10,000 torsion cycles), they ensure reliable electrical energy or signal transmission in wind turbines.

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Photovoltaic Power Cables

The photovoltaic power cable, tailored for solar energy installations, stands out with remarkable resistance to environmental stressors like cracking, heat, and extrusion. It ensures secure, eco-friendly power transmission with halogen-free, low-smoke, and flame-retardant properties. Rated for 0.6/1kV and suitable for dry or wet environments up to 90°C, it's dubbed the "green energy cable" for its association with solar energy. It's ideal for both indoor and outdoor use, boasting a service life exceeding 25 years, withstanding harsh weather conditions, and offering UV resistance. Notable characteristics include ozone and weather resistance, halogen-free design, acid and base resistance, flame resistance, and double insulation for short circuit resilience up to 200°C.

Mineral Insulated Cables

Mineral Insulated cables ensure uninterrupted power and communication in critical environments like high-rise buildings, hospitals, and transport hubs, withstanding extreme temperatures up to 250°C and maintaining power during fires. They're vital in infrastructure like power plants, high-temperature industries, and densely populated areas. These cables feature reliable insulation, high-purity copper rods for superior conductivity, and compressed magnesium oxide insulation for corrosion prevention. With excellent fire resistance and waterproofing, they offer durability and environmental friendliness, making them essential for safety and reliability in challenging conditions.

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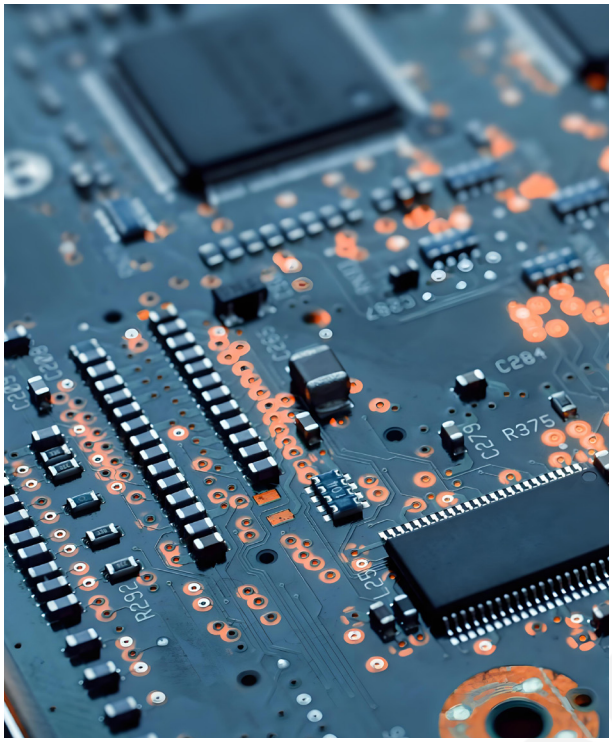

Frequency Conversion Cables

The cable design adheres to GB/T3956 standards, employing Class 1 and Class 2 conductors for optimal performance. With cross-linked polyethylene insulation, it offers excellent mechanical properties and temperature resistance. The cable features superior shielding, ensuring strong anti-interference and low radiation. It boasts low working capacitance and impedance, along with good electromagnetic compatibility. The asymmetrical three-core structure enhances phase balance and pulse voltage resistance, reducing electromagnetic interference in the power grid. Ideal for inverter systems in various industries such as paper, metallurgy, and mining.

Marine Wires and Cables

Marine wires and cables serve diverse purposes in power, lighting, control, signal, and communication transmission across various vessels and offshore structures. They encompass vessel power, lighting, control, communication cables, and more, catering to needs in rivers, seas, and offshore environments. With fire-resistant options available, they are suitable for flammable areas. These cables are chosen for their robust protection against electromagnetic interference, offering enhanced mechanical protection, and crafted with halogen-free, fire-retardant materials to ensure utmost safety and asset protection against fire hazards.

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Low-voltage Cables for Road Vehicles

Low-voltage cables for road vehicles play a crucial role in automotive electrical systems, facilitating power transmission, signal transmission, and control within vehicles. Given the complex working conditions inside cars—vibrations, friction, ozone, oil contamination, extreme temperatures, and electromagnetic radiation—these cables must be heat-resistant, cold-resistant, wear-resistant, oil-resistant, and interference-resistant to ensure driving safety. Once crimped with contact terminals (connectors), these cables are bundled with outer plastic insulators or an additional metal shell to form an automotive wiring harness. This harness serves as the fundamental conduit for transmitting electric energy and communication signals within vehicles.

High-voltage Cables for Road Vehicles

High-voltage cables for road vehicles are designed to meet the evolving needs of electric vehicles, which are gradually replacing traditional fuel vehicles. These cables are engineered to withstand challenging conditions and prioritize user safety. Key features of high-voltage cable products for road vehicles include flexibility, with a bending radius of less than 6D, and resistance to extreme temperatures, oil, acids, alkalis, water, abrasion, and cracking. They also boast excellent flame retardant properties and maintain good electrical conductivity with minimal temperature rise. Additionally, all materials used comply with the latest ROHS environmental standards.

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Rail Transit Cables

Eastful Group's rail transit cable, specifically the DC feed return cable, meets both flame retardant class A and B1 standards. It boasts excellent encrustation, is halogen-free, emits low smoke (or smokeless), and is rated flame retardant class A. Additionally, it features water-blocking, waterproofing, rodent-proofing, termite-proofing, non-toxicity, and UV resistance. These attributes effectively mitigate damage from external factors, enhancing cable safety. Widely deployed in busy environments like subways and light rails, these cables ensure stable power transmission operations.

AC Plug Cords for Household

AC plug cords for household and similar purposes are versatile for indoor and outdoor use, with rated voltages ranging from 50V to 440V and currents not exceeding 32A. They find applications in various household appliances such as computers, desk lamps, fans, hair dryers, refrigerators, washing machines, air conditioners, and TVs. Featuring an oxygen-free copper wire core for high current capacity, nickel-plated pins for corrosion resistance, and a secure connection between the wire and plug, these cords are durable and reliable. Their polymer material construction is heat-resistant, flame-retardant, and abrasion-resistant, ensuring safety and longevity. With a one-piece molding and anti-slip design, they are easy to plug and unplug, providing wear and tear resistance for long-term use.

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Aerospace Cables

This cable meets basic requirements for being lightweight, small in diameter, and resistant to high temperatures, wear, fuel oil, lubricants, and other chemicals, as outlined in the national military standard GJB 773A-2000. It utilizes various conductor materials including tin-plated copper (alloy), silver-plated copper (alloy), and nickel-plated copper (alloy) wires with restricted use temperatures, insulating materials such as PTFE and ETFE copolymer, shielding materials like tin-plated round (flat) wire, silver-plated round (flat) copper wire, and nickel-plated round (household) silver wire, and sheath materials including extruded FEP, PVDF, or ETFE sheaths.

Submarine Cables

This cable is specially designed for tough marine conditions, featuring halogen-free, low smoke and toxicity emissions, flame retardant properties, and resistance to sludge buildup. It can handle extreme temperatures from 125℃ to -40℃, making it versatile for different environments. Its soft, small, and lightweight design ensures easy handling and installation. Moreover, it offers weather resistance, strong mechanical strength, and outstanding electrical performance.It is crafted through a comprehensive production process involving drawing, annealing, tin plating, twisting, extrusion insulation, spark inspection, cross-linking, cable formation, wrapping, extruding inner layers, braiding, sheath extrusion, printing, cross-linking again for enhanced durability, thorough inspection, and final warehousing.

Railway Signal Cables

The cable is carefully designed for optimal performance and durability, featuring a TR-type soft round copper wire conductor and PE insulation material. It includes a shielding layer of aluminum-plastic composite tape or aluminum sheath for signal integrity and waterproofing. With a galvanized steel strip armor layer, it's protected against impacts. Its outer sheath, made of various materials, meets halogen-free low-smoke flame retardant B1 standards. Operating from -40℃ to +60℃, it stays reliable in different conditions. It follows strict bending radius guidelines, with non-armored cables needing at least 10 times their diameter and armored ones at least 15 times to ensure flexibility and longevity.

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