ANHUI FEICHUN SPECIAL CABLE CO., LTD.

安徽飞纯特种电缆有限公司

TECHNICAL SPECIFICATION SHEET

SINGLE CORE COPPER FLEXIBLE EARTHING CABLE

16 MM² | CLASS 5 FLEXIBLE CONDUCTOR

Product Description

High-flexibility single core copper earthing cable with 16mm² cross-sectional area. Specifically designed for electrical grounding and bonding applications. Features Class 5 flexible stranded copper conductor for superior flexibility and ease of installation. Ideal for equipment earthing, protective conductor connections, and electrical safety grounding systems.

PRIMARY SPECIFICATIONS

Cable Designation	1CX16MM² Earthing Cable
Number of Cores	Single Core (1C)
Conductor Cross-Section	16mm²
Conductor Material	Bare Copper or Tinned Copper
Conductor Class	Class 5 (Flexible Multi-Strand)
Number of Strands	126 strands × 0.40mm (typical configuration)
Insulation Color	Green/Yellow (Earth) G/Y
Cable Application	Earthing / Grounding / Protective Conductor

ELECTRICAL CHARACTERISTICS

Rated Voltage	450/750V (Earthing Application)
DC Resistance at 20°C	≤1.15 Ω/km (Maximum)
Current Carrying Capacity	Approximately 70-85A (depending on installation conditions)
Maximum Conductor Temperature	90°C (PVC Insulation) 105°C (Silicone Rubber Insulation)
Insulation Resistance	≥5 MΩ·km at 20°C
Test Voltage	2.5kV AC for 5 minutes
Conductor Conductivity	≥100% IACS (International Annealed Copper Standard)

CABLE CONSTRUCTION

Cross-Sectional Structure

1. **CONDUCTOR:** Class 5 flexible copper multi-strand, 16mm², bare or tinned copper
2. **INSULATION:** PVC compound (standard) or Silicone Rubber (high-temp variant)
3. **COLOR CODING:** Green/Yellow striped per IEC 60446 and GB 7947 earthing standards

PHYSICAL PROPERTIES

Nominal Conductor Diameter	Approximately 4.5mm
Approximate Overall Diameter	6.5-7.5mm (depending on insulation thickness)
Approximate Cable Weight	180-220 kg/km
Minimum Bending Radius	6 x Overall Diameter (flexible installation) 4 x Overall Diameter (fixed installation)
Operating Temperature Range	-15°C to +90°C (PVC) -40°C to +105°C (Silicone)
Installation Temperature	Minimum 0°C (PVC) / -25°C (Silicone)
Flexibility Rating	Class 5 - Flexible for frequent movement

⚠ Safety & Installation Notice

EARTHING CABLE - PROTECTIVE CONDUCTOR ONLY

This cable is specifically designed for earthing and protective conductor applications. It must ONLY be used for grounding purposes and should never carry operational current. Always ensure proper termination with approved earthing terminals and maintain continuity throughout the entire grounding system. Regular inspection and testing of earth continuity is mandatory per local electrical safety regulations.

APPLICATIONS & FEATURES

Equipment Earthing
Grounding of electrical equipment, machinery, and metal enclosures

Main Earthing Terminals
Connection to main earth bars and distribution boards

Lightning Protection
Grounding conductor for lightning protection systems

High Flexibility
Class 5 stranding allows tight bends and easy routing

Panel & Cabinet Bonding
Interconnection of electrical panels and control cabinets

Substation Grounding
Earth grid connections in electrical substations

Industrial Equipment
Earthing of motors, transformers, and generators

Equipotential Bonding
Creating equipotential zones in sensitive installations

TECHNICAL ADVANTAGES

Superior Flexibility	Class 5 conductor with 126 fine strands ensures excellent flexibility for complex routing and tight installations
Low Resistance Path	High-purity copper ensures minimum resistance for effective fault current dissipation
Corrosion Resistance	Optional tinned copper conductor provides enhanced protection in corrosive environments
Easy Identification	Standard green/yellow color coding ensures immediate recognition as protective conductor
Durability	PVC insulation provides mechanical protection and long service life
Termination Ease	Flexible stranding allows easy crimping and connection to terminals

STANDARDS & COMPLIANCE

Manufacturing Standard	IEC 60227, GB/T 5023
Conductor Standard	IEC 60228 Class 5, GB/T 3956
Color Identification	IEC 60446, GB 7947 (Earthing - Green/Yellow)
Testing Standard	IEC 60245, GB/T 5023
Fire Performance	IEC 60332-1 (Single vertical flame test)
Electrical Safety	IEC 60364 (Electrical installations of buildings)

INSTALLATION GUIDELINES

Termination Methods	Crimp terminals, compression lugs, or approved earthing clamps
Connection Surfaces	All connections must be clean, tight, and free from corrosion
Support Spacing	Maximum 300mm horizontal, 400mm vertical
Joint Protection	All joints must be mechanically and electrically secure
Routing Requirements	Keep earthing cables as short and straight as possible
Testing After Installation	Earth continuity test required - resistance should be <0.5Ω

QUALITY ASSURANCE

Every meter of earthing cable manufactured by Anhui Feichun Special Cable Co., Ltd. undergoes stringent quality control procedures. Testing includes DC resistance measurement of the conductor, insulation resistance verification, high voltage withstand testing, and dimensional inspection. All cables are supplied with comprehensive test certificates documenting conductor resistance and insulation integrity. Our manufacturing facility operates under ISO 9001 quality management system and ISO 14001 environmental management system certifications. Batch traceability is maintained throughout production to ensure complete quality documentation.

飞纯电缆

FEICHUN SPECIAL CABLES

Website Address www.reelingcable.com www.feichuncables.com
Whatsapp Account + 86 13855123218
Email Address Zihao.yang@feichuncables.com & Ziyu.huang@feichuncables.com