



INDUSTRIAL POWER CABLE SPECIFICATION

Drilling Rig & Rotary Motor Power Cable - Heavy Duty Reeling Service

SPECIFICATION: 2×4/0AWG (2KV) + 12×14AWG (600V)

PRODUCT DESCRIPTION

Highly flexible industrial reeling cable designed specifically for cable receivers on drilling rigs and rotary motors. This cable is engineered for heavy duty service as a power supply cable for mobile and portable mining equipment including loaders, conveyors, pumps, drills, and cutters where exceptional flex life is required.

Key Features:

- Internal ground check conductor for enhanced safety monitoring
- Suitable for systems requiring continuous ground integrity verification
- Exceptional flexibility for reeling applications - tested to 100,000+ flex cycles
- Oil and sunlight resistant construction per ASTM standards
- Operating voltage up to 2000V with temperature rating -40°C to +90°C

ELECTRICAL RATINGS & PARAMETERS

Conductor Configuration	Voltage Rating	Conductor Size	Quantity	Current Rating (Ampacity)*
Power Conductors	2000V (2KV)	4/0 AWG (107.2 mm²)	2	260A @ 90°C
Control/Auxiliary Conductors	600V	14 AWG (2.08 mm²)	12	15A @ 90°C
Ground Conductors	-	4 AWG (21.15 mm²)	3	70A (reference)
Ground Check Conductor	600V	14 AWG (2.08 mm²)	1	Monitoring only

*Current ratings based on 30°C ambient temperature, single cable in free air per ICEA S-75-381

Operating Temperature Range: -40°C to +90°C

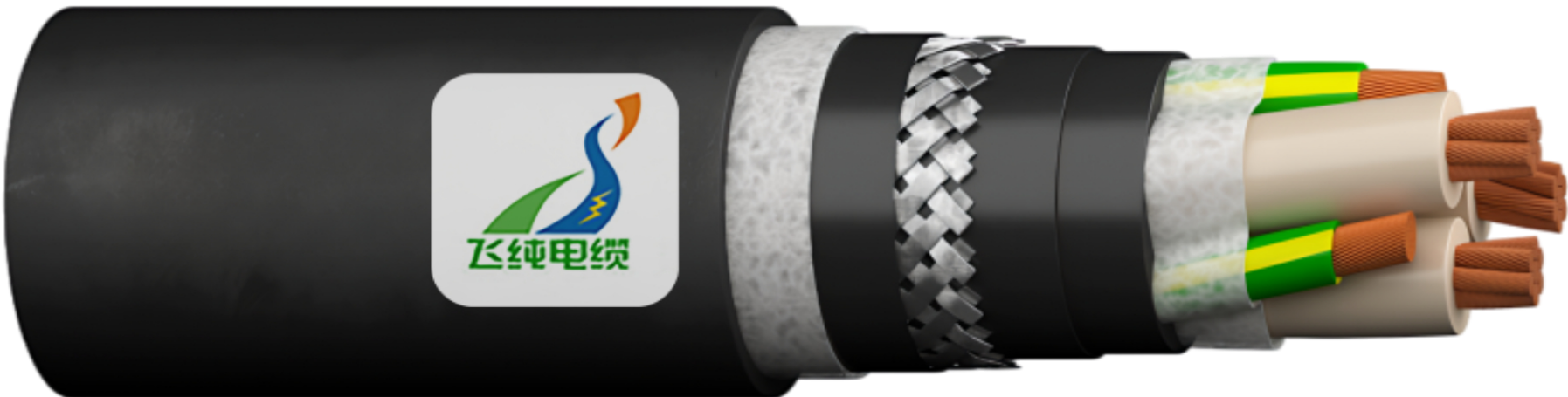
Rated and flexible at extreme temperatures (Wet or Dry conditions)

CONDUCTOR TECHNICAL DATA

Conductor Size	Cross-Section Area	Stranding Configuration	DC Resistance @ 20°C (Max Ω/km)	Conductor Diameter (Approx. mm)
4/0 AWG	107.2 mm² (211.6 kcmil)	Class I: 19×7/0.94mm (1330 strands)	0.176	14.0
14 AWG	2.08 mm² (4160 cmil)	Class I: 41/0.254mm	9.12	2.0
4 AWG (Ground)	21.15 mm² (42000 cmil)	Class I: 133/0.457mm	0.891	6.5

VOLTAGE WITHSTAND & INSULATION PARAMETERS

Parameter	Test Specification	Test Value	Duration
AC Voltage Withstand Test (2KV Conductors)	Per ICEA S-75-381	8,000 VAC	5 minutes
AC Voltage Withstand Test (600V Conductors)	Per ICEA S-75-381	2,500 VAC	5 minutes
DC Voltage Withstand Test (2KV Conductors)	Per UL 44	20,000 VDC	5 minutes
Insulation Resistance (2KV Conductors)	Per ASTM D257 @ 500VDC	Min. 500 MΩ·km @ 20°C	1 minute
Insulation Resistance (600V Conductors)	Per ASTM D257 @ 500VDC	Min. 200 MΩ·km @ 20°C	1 minute
Dielectric Strength of EPR Insulation	ASTM D149 Compound Test	Min. 15 kV/mm	-
Partial Discharge Test	IEC 60885-3	<10 pC @ 1.5× rated voltage	Continuous



MECHANICAL & FLEXIBILITY PARAMETERS

Parameter	Specification	Test Standard
Minimum Bending Radius (Installation)	12 × Overall Cable Diameter (Approx. 600mm / 23.6 inches)	ICEA S-75-381
Minimum Bending Radius (Reeling/Dynamic)	18 × Overall Cable Diameter (Approx. 900mm / 35.4 inches)	ICEA S-95-658
Bending Radius on Reel Drum	Min. 20 × Overall Cable Diameter (Approx. 1000mm / 39.4 inches)	Manufacturer Spec
Flex Cycle Life (Dynamic)	≥100,000 cycles @ 18D bending radius ≥250,000 cycles @ 20D bending radius	UL 1581 / ICEA S-95-658
Tensile Strength (Jacket)	Min. 10.3 MPa (1500 psi)	ASTM D412
Elongation at Break (Jacket)	Min. 300%	ASTM D412
Tear Resistance (Jacket)	Min. 35 kN/m	ASTM D624 Die C
Abrasion Resistance	Passes 50,000 cycles (Type I) >5000 cycles to penetration	ASTM D1242
Cold Bend Test	No cracking at -40°C (Mandrel: 5D)	UL 44 Cold Bend
Impact Resistance at -40°C	No jacket cracking (Impact: 1.5 kg from 1m)	IEC 60811-1-4
Crush Resistance	3000 N load - no conductor damage	IEC 60502-2



FEICHUN SPECIAL CABLES

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PHYSICAL DIMENSIONS & WEIGHT

Parameter	Typical Value	Tolerance
Overall Cable Diameter	50.0 mm (1.97 inches)	±5%
Cable Weight	4.8 kg/m (3.2 lbs/ft)	±8%
Jacket Thickness (Nominal)	3.5 mm (0.138 inches)	±10% / Min. 3.0mm
Insulation Thickness - 4/0 AWG (2KV)	2.29 mm (90 mils)	Per ICEA S-75-381
Insulation Thickness - 14 AWG (600V)	0.76 mm (30 mils)	Per ICEA S-75-381
Standard Reel Length	100m, 200m, 305m (1000ft), 500m	Custom lengths available
Maximum Reel Weight	2500 kg (500m cable + reel)	Varies by reel type

ELECTRICAL CALCULATIONS & PARAMETERS

Parameter	4/0 AWG (2KV)	14 AWG (600V)	Unit
AC Resistance @ 90°C (Max)	0.207	10.72	Ω/km
Inductive Reactance @ 60Hz	0.089	0.118	Ω/km
Capacitance (Conductor to Ground)	0.32	0.15	μF/km
Charging Current @ 60Hz	0.24	0.034	A/km
Impedance @ 60Hz	0.225	10.73	Ω/km
Voltage Drop @ Rated Current	53.8 V/km (260A)	160.8 V/km (15A)	-
Short Circuit Current (1 sec)	14,800 A	1,120 A	Amperes
Inductance	0.237	0.314	mH/km
Power Factor (typical)	0.85 - 0.95	0.85 - 0.95	-

CURRENT CARRYING CAPACITY (AMPACITY) - DETAILED

4/0 AWG Power Conductors (2KV) - Current Ratings:

Installation Method	30°C Ambient	40°C Ambient	50°C Ambient	Ground Burial 25°C Earth
Free Air (Single Cable)	260A	240A	215A	-
On Cable Reel (Active Service)	230A	210A	190A	-
In Conduit/Tray (3 cables)	220A	200A	180A	-
Direct Burial (RHO = 90°C-cm/W)	-	-	-	280A

14 AWG Control Conductors (600V) - Current Ratings:

Installation Method	30°C Ambient	40°C Ambient	50°C Ambient
Free Air (Bundled Cable)	15A	14A	12A
On Cable Reel (Active Service)	13A	12A	10A
In Conduit/Tray	12A	11A	9A

Note: Current ratings are based on conductor temperature of 90°C. Apply correction factors per NEC/ICEA for different soil thermal resistivity or grouping conditions.

BENDING & FLEX PERFORMANCE - DETAILED TESTING

Test Parameter	Test Conditions	Results/Requirements	Standard
Reeling Flex Test	20D bend radius 60 cycles/min Speed: 1.5 m/s	Min. 100,000 cycles without failure No insulation degradation	UL 1581
Dynamic Flex Test	18D bend radius Continuous motion Load: 25% rated current	Min. 250,000 cycles No insulation breakdown Conductor resistance change <3%	ICEA S-95-658
Festoon Flex Test	15D bend radius 40 cycles/min Suspended load: 5× cable weight	Min. 50,000 cycles Conductor resistance change <5% No jacket cracking	Manufacturer Test
Twist Test	±360° rotation per meter 20 cycles/min Tension: 50N	10,000 cycles without damage Electrical continuity maintained	IEC 60227-2-6
Compression Test	Load: 100 kg over 25mm anvil Duration: 24 hours	No conductor damage Jacket recovery >80% Insulation resistance unchanged	ASTM D395
Tensile Flex Test	Axial tension: 15 kg 18D bending radius 30 cycles/min	25,000 cycles without failure No conductor strand breakage	UL 62
Low Temp Flex Test	-40°C chamber 12D bend radius 10 cycles minimum	No cracking, full flexibility maintained Insulation resistance unchanged	IEC 60502-2
Abrasion Cycles	Taber abrader, CS-17 wheel 1000g load 60 RPM	>5000 cycles to jacket penetration Typical: 7000-8000 cycles	ASTM D1242
Bend Test Under Load	90° bend Full rated current Temperature monitored	No hot spots Temperature rise <10K above ambient 1000 cycles minimum	UL 1581

ENVIRONMENTAL RESISTANCE PARAMETERS

Property	Test Method	Performance Requirement
Oil Resistance	ASTM D471 (IRM 903 Oil, 168 hrs @ 100°C)	Max. 10% weight change Max. 15% tensile change Jacket remains flexible
Ozone Resistance	ASTM D1149 (100 pphm, 168 hrs @ 40°C)	No cracking at 20% elongation No surface deterioration
UV/Sunlight Resistance	ASTM G155 (1000 hrs xenon arc exposure)	Retention >80% physical properties No severe discoloration No surface cracking
Water Absorption	ASTM D570 (24 hrs @ 23°C immersion)	<0.5% weight increase Insulation resistance unchanged
Flame Resistance (VW-1)	UL 1581 VW-1 / CSA FT1	Self-extinguishing within 60 sec No dripping of flaming particles Burn length <254mm
Flame Resistance (Vertical Tray)	CSA FT5 / UL 1685	Passes 20-minute burn test Char length <2.5m
Chemical Resistance	ASTM D543 (Various chemicals, 7 days)	Resistant to: acids (pH 2-4), alkalis (pH 10-12), alcohols, diesel, hydraulic oils Weight change <15%
Heat Aging	Air oven aging 158°C for 168 hours	Retention >70% elongation Retention >80% tensile strength No brittleness
Low Temperature Impact	Cold impact test -40°C, 3 strikes	No cracking or splitting Jacket integrity maintained
Humidity Resistance	IEC 60068-2-78 (95% RH, 40°C, 500 hrs)	Insulation resistance >100 MΩ·km No fungal growth No degradation

QUALITY CONTROL & TESTING PARAMETERS

Test Item	Test Frequency	Acceptance Criteria
Conductor Resistance	100% (every drum)	Within ASTM B33 tolerance Max deviation: ±3% from nominal Balance between conductors: <2%
High Voltage Test (AC)	100% (every drum)	2KV conductors: 8000V for 5 min 600V conductors: 2500V for 5 min No breakdown or flashover Leakage current <1mA
Insulation Resistance	100% (every drum)	2KV: >500 MΩ·km @ 500VDC 600V: >200 MΩ·km @ 500VDC Temperature corrected to 20°C
Jacket Thickness	Sample per 100m	Nominal: 3.5mm ± 0.35mm Minimum point: 3.0mm Average of 6 measurements
Overall Diameter	Sample per 100m	50.0mm ± 2.5mm Measured at 3 points 120° apart
Spark Test (Online)	100% inline production	15kV DC continuous monitoring No defects detected Auto-marking system for defects
Jacket Tensile & Elongation	One test per production lot (min. 3 samples)	Tensile: ≥10.3 MPa (1500 psi) Elongation: ≥300% Test per ASTM D412
Cold Bend Test	One test per production lot	No cracks at -40°C Mandrel: 5D Visual inspection under magnification
Flame Test	Type testing + annual verification	Passes VW-1, FT1, FT5 requirements Full compliance certification
Conductor Strand Count	First/last of production run	Per Class I specification ±2% tolerance on strand count Visual + microscopic verification
Concentricity Check	Sample per 200m	Insulation eccentricity <10% Measured via cross-section analysis

Print Line Quality	Visual 100%	Clear, legible markings Interval: every 1 meter UV-resistant ink
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CABLE CONSTRUCTION LAYERS - DETAILED BREAKDOWN

Layer No.	Material/Description	Thickness/Size	Purpose & Function
1	Conductor Core (4/0 AWG) Tinned copper, Class I 1330 strands (19×7/0.94mm)	Ø 14.0mm 107.2 mm²	Current carrying element for power transmission Tinning prevents oxidation
2	Conductor Separator Non-woven polyester tape	0.15mm	Prevents insulation adhesion to conductor Facilitates stripping during termination
3	Primary Insulation EPR compound (2KV grade) Peroxide-cured EPDM	2.29mm (90 mils) For 2KV conductors	Electrical insulation Flexibility retention Thermal stability -40°C to +90°C
4	Insulation Shield (optional) Semi-conductive EPR compound	0.5mm	Electrical stress control for 2KV applications Uniform electric field distribution
5	Core Assembly 2×4/0 AWG + 12×14 AWG + 3×4 AWG grounds + 1×14 AWG GC Cabled in concentric layers	Lay length: 300-350mm (optimized for flex)	Flexible round construction Minimizes stress during bending Maintains conductor spacing
6	Binder Tape Rubber-filled woven fabric tape Single-faced application	0.8mm	Holds core assembly together Fills interstices for round shape Adds mechanical strength
7	Inner Sheath (optional) Neoprene (CR) compound Black color	1.2mm	Additional mechanical protection Enhanced oil resistance Barrier against moisture
8	Outer Jacket CPE thermosetting compound Black, integral mineral-filled UV-stabilized	3.5mm nominal (min. 3.0mm)	Primary environmental protection Abrasion resistance Oil, sunlight, ozone resistance Flame retardance
Total Overall Diameter: Approximately 50mm (1.97 inches)			

CONDUCTORS

- Material: Soft drawn flexible stranded bare or tinned copper per ASTM B-3 and B-33
- Stranding Class: Class I (most flexible) per ASTM B-33 for maximum flex life
- Construction: High strand count with specific lay lengths optimized for repeated flexing
- Tinning: Optional tinned copper provides enhanced corrosion resistance and solderability
- Quality: 99.9% pure electrolytic copper with conductivity ≥100% IACS

SEPARATOR

- Tape separator between conductor and insulation enhances electrical performance
- Prevents insulation adhesion for easier termination and stripping
- Non-hygroscopic material prevents moisture accumulation

INSULATION

- Material: Ethylene-Propylene Rubber (EPR) - Peroxide-cured EPDM formulation
- Standard: Per ICEA S-75-381/NEMA WC 58 Type EP (Ethylene-Propylene)
- Properties: Excellent electrical properties, superior flexibility, outstanding resistance to heat, ozone, weather, and chemicals
- Temperature Rating: Continuous 90°C, Emergency overload 130°C (short duration)
- Dielectric Constant: 2.8-3.2 @ 60Hz ensuring low power loss

COLOR CODE

 Black	Power Conductor / Phase A (2KV)
 White	Power Conductor / Phase B or Neutral (2KV)
 Red	Power Conductor / Phase C (2KV) - if applicable
 Blue, Orange, etc.	Control/Auxiliary Conductors (600V) - 12 total, sequential colors
 Green	Ground Conductors (3× 4 AWG) - Equipment grounding
 Yellow	Ground Check Conductor (1× 14 AWG) - Monitoring circuit

All colors per ICEA/NEMA standards. Custom color codes available upon request.

GROUND CONDUCTORS

- Quantity: Three (3) separate 4 AWG conductors for redundancy and current capacity
- Construction: Soft drawn flexible stranded bare or tinned copper, Class I stranding
- Insulation: Green ethylene-propylene rubber (EPR), same grade as power insulation
- Purpose: Primary equipment grounding for safety per NEC Article 250
- Sizing: Per NEC Table 250.122, adequate for fault current protection

GROUND CHECK CONDUCTOR

- Size: 14 AWG - adequate for monitoring circuit (not current carrying)
- Construction: Soft drawn flexible stranded bare or tinned copper

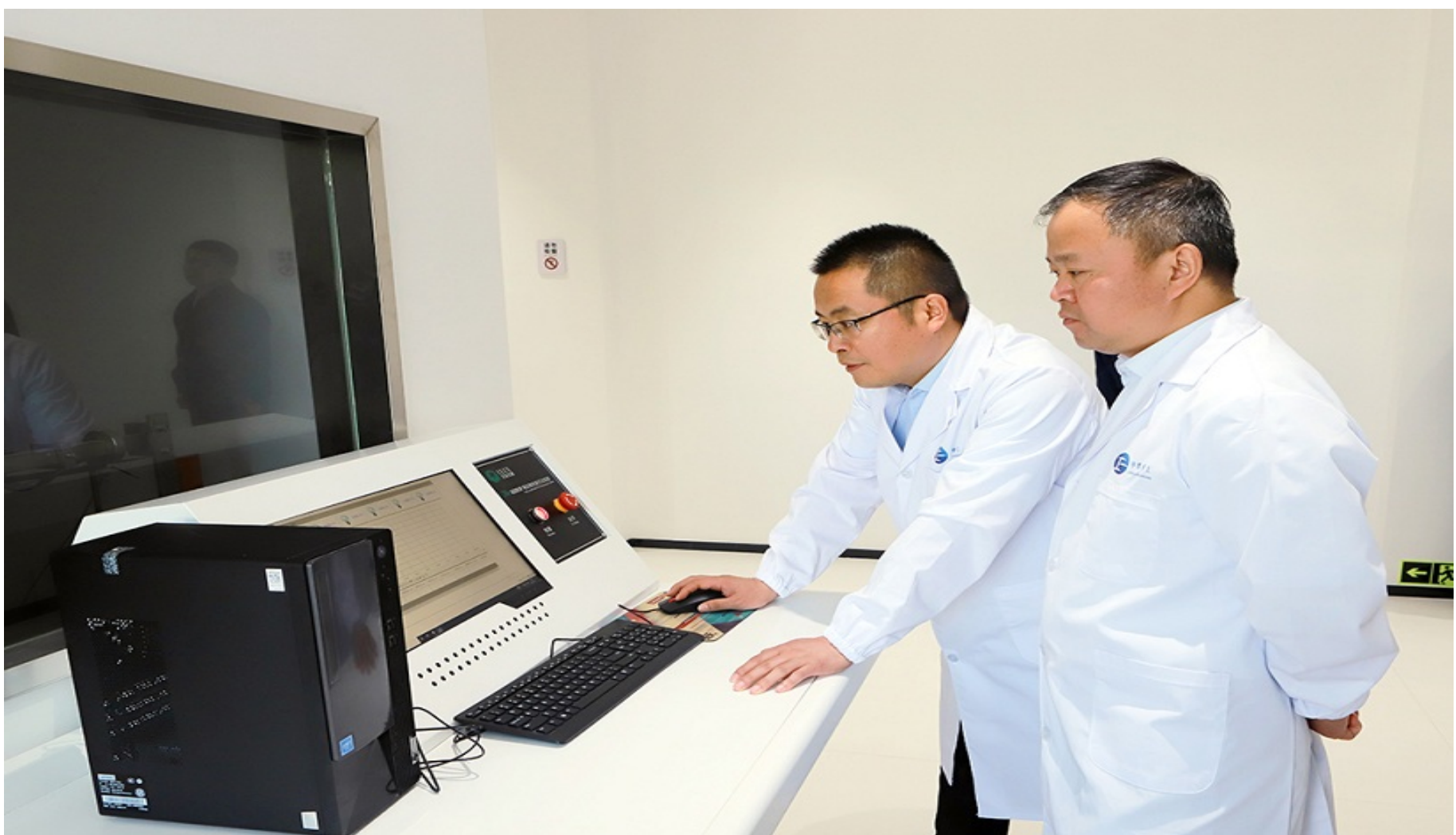
- Insulation: Yellow EPR insulation for high visibility identification
- Purpose: Continuous monitoring of ground circuit integrity for enhanced safety systems
- Application: Critical for systems requiring real-time ground fault detection and personnel protection
- Function: Forms a loop with ground conductors; break in loop triggers alarm/shutdown
- Connection: Connects to ground fault monitoring relay at equipment and power source

ASSEMBLY

- Power, ground check, and ground cores are precision-cabled together to form a symmetrical round core configuration
- Cabling direction alternates between layers to minimize torque during flexing
- Lay length is optimized (300-350mm) for maximum flexibility and minimal stress during reeling operations
- Single-faced rubber-filled binder tape is helically applied over cable assembly with 50% overlap
- Assembly maintains consistent geometry throughout length for uniform electrical characteristics

JACKET

- Material: Black heavy duty CPE (Chlorinated Polyethylene) thermosetting compound
- Type: Integral-filled with mineral fillers for enhanced mechanical properties
- Color: Black with UV stabilizers for outdoor durability
- Properties: Exceptional abrasion resistance (8× standard PVC), outstanding oil resistance, sunlight resistance, and self-extinguishing flame retardance
- Application: Single extrusion pass ensures uniform thickness and adhesion to cable core
- Design: Engineered specifically for severe mechanical stress, extreme temperatures, and harsh environmental exposure
- Temperature Rating: 90°C continuous, suitable for wet or dry locations
- Markings: Sequential meter marks and specification data printed with UV-resistant ink every 1 meter



APPLICATIONS

This cable is specifically engineered for demanding industrial environments requiring exceptional flex life and reliability:

- **Drilling Rigs:** Power supply for rotary tables, drawworks, mud pumps, and top drives in oil/gas drilling operations
- **Mining Equipment:** Mobile and portable mining equipment including continuous miners, shuttle cars, and longwall systems
- **Material Handling:** Front-end loaders, excavators, draglines, and material handling equipment
- **Conveyor Systems:** Power and control for conveyor drives in mining, quarrying, and industrial facilities
- **Pumping Equipment:** High-pressure slurry pumps, dewatering pumps, and hydraulic power units
- **Rock Drills & Cutters:** Rotary drills, percussive drills, tunnel boring machines, and cutting machinery
- **Cable Reel Systems:** Spring-loaded and motor-driven cable reels for mobile equipment power supply
- **Festoon Systems:** Overhead crane and gantry power supply requiring continuous flexing
- **Portable Equipment:** Any application requiring frequent repositioning with continuous power supply
- **Safety-Critical Systems:** Applications requiring ground fault monitoring for enhanced personnel protection

Typical Industries: Oil & Gas, Underground/Surface Mining, Quarrying, Tunneling, Construction, Steel Mills, Ports & Shipyards, Power Generation



COMPLIANCE STANDARDS & CERTIFICATIONS

This cable meets or exceeds the following industry standards and certifications:

UL 44 Thermoset-Insulated Wires and Cables	UL 1650 Portable Power Cable	C(UL) Canadian UL Listing	CSA C22.2 96-13 Portable Power Cables
ICEA S-75-381 Thermosetting Insulated Wire and Cable	NEMA WC 58 Portable and Power Feeder Cables	ICEA S-95-658 Portable and Power Feeder Cables	NEMA WC 70 Power Cables Rated 2000 Volts or Less
ASTM B33 Standard Specification for Tinned Soft or Annealed Copper Wire	ASTM B172 Rope-Lay-Stranded Copper Conductors	FT1 & FT5 Flame Test Certifications	RoHS Restriction of Hazardous Substances

Additional Compliance:

- Oil Resistant per ASTM D471
- Sunlight (UV) Resistant per ASTM G155
- Cold Bend Rated -40°C per UL 44
- Flame Retardant - Self Extinguishing
- Suitable for Wet or Dry Locations
- MSHA Accepted (when specified)



SAFETY FEATURES & DESIGN ADVANTAGES

- **Ground Check Conductor System:** Provides continuous monitoring of ground circuit integrity with dedicated yellow conductor. Critical for personnel safety in hazardous mining and drilling environments where equipment grounding is essential.
- **Multiple Ground Paths:** Three separate 4 AWG ground conductors ensure redundant safety systems and adequate fault current capacity. Exceeds single ground requirements for enhanced protection.
- **High Visibility Color Coding:** Clear, standardized conductor identification reduces installation errors, speeds troubleshooting, and minimizes maintenance downtime. Yellow ground check conductor is immediately recognizable.
- **Enhanced Mechanical Protection:** 3.5mm heavy duty CPE jacket protects against abrasion, impact, crushing, and tearing. Significantly extends service life in harsh environments compared to standard PVC or rubber jackets.
- **Extreme Temperature Performance:** Maintains full electrical and mechanical integrity from -40°C to +90°C. EPR insulation remains flexible at low temperatures while retaining dielectric strength at elevated temperatures.
- **Class I Stranding:** Maximum flexibility with 1330 strands in 4/0 AWG conductors ensures superior flex life for continuous reeling applications. Reduces fatigue failure common with larger strand conductors.
- **Optimized Construction:** Precisely calculated lay lengths and cabling geometry minimize mechanical stress during flexing, dramatically extending service life in mobile applications.
- **Oil & Chemical Resistance:** CPE jacket withstands exposure to petroleum products, hydraulic fluids, cutting oils, and industrial chemicals common in drilling and mining operations.



INSTALLATION GUIDELINES & REQUIREMENTS

Installation Parameter	Requirement/Recommendation
Minimum Bending Radius (Installation)	12 × OD = 600mm (23.6 inches) For one-time bends during installation
Minimum Bending Radius (Operation/Reeling)	18 × OD = 900mm (35.4 inches) For repeated flexing in service
Maximum Pulling Tension	2,700 kg (6,000 lbs) maximum Calculation: 0.008 × circular mil area × number of conductors Use pulling eye or kellums grip - never pull by jacket
Maximum Sidewall Pressure	300 kg/m (200 lbs/ft) during installation Use proper radius sheaves and rollers
Cable Reel Diameter (Minimum)	20 × OD = 1000mm (39.4 inches) drum flange diameter Larger diameter reduces stress and extends flex life
Storage Temperature	-20°C to +60°C in dry, ventilated conditions Avoid direct sunlight during storage Store reels upright when possible
Installation Temperature	Minimum: -15°C without preheating Below -15°C: Preheat cable to -10°C before handling Recommended: +10°C to +30°C for optimal installation
Ground Connection Requirements	• All three ground conductors must be properly terminated and connected • Ground check conductor connects to monitoring relay at both ends • Use compression lugs or bolted mechanical connectors • Verify continuity of all ground paths before energizing • Bond to equipment frame per NEC Article 250
Cable Support Spacing	Horizontal runs: Maximum 3m (10 ft) intervals Vertical runs: Maximum 2m (6.5 ft) intervals Use appropriate cable cleats, J-hooks, or tray systems
Termination Methods	• Power conductors: Compression lugs (recommended) or mechanical set-screw lugs • Control conductors: Ferrules, ring terminals, or barrier strips • Heat-shrink or cold-applied tape splicing kits for field repairs • Follow manufacturer's torque specifications • Use terminal compounds to prevent oxidation

Reel Winding Direction	Wind cable onto reel in direction that maintains natural lay Avoid reverse bending which induces twist Maintain proper tension during winding (5-10% of rated pulling tension)
Conduit/Raceway Installation	Maximum fill: 40% for single cable, 31% for multiple cables Use proper cable lubricants rated for EPR insulation Support at conduit entries/exits to prevent abrasion

⚠ CRITICAL INSTALLATION NOTES:

- **Pre-Installation Inspection:** Always inspect cable for damage during shipment before installation. Check for cuts, abrasions, kinks, or flat spots. Do not install damaged cable.
- **Cable Lubricants:** Use only cable pulling lubricants specifically rated for EPR/EPDM insulation. Petroleum-based lubricants may damage insulation. Water-based or synthetic lubricants recommended.
- **Prevent Twisting:** Never twist cable during installation. Use swivel pulling eyes or kellys grips with swivels. Twisting induces internal stress and reduces flex life.
- **Ground Check Conductor:** MUST be connected to ground monitoring system for proper operation. This is a safety-critical connection - verify proper function before energizing equipment.
- **Temperature Derating:** Apply appropriate ampacity correction factors for ambient temperatures exceeding 30°C per NEC Table 310.15(B)(2)(a) or ICEA standards.
- **Voltage Drop Calculations:** For long cable runs, calculate voltage drop and verify it is within acceptable limits for connected equipment (typically 3-5% maximum).
- **Electrical Codes:** Installation must comply with all applicable local electrical codes, NFPA 70 (NEC), and MSHA regulations where applicable.
- **Documentation:** Maintain installation records including test results, termination torques, and as-built drawings for future reference and troubleshooting.
- **Regular Inspection:** Establish periodic inspection schedule for reeling cables (recommended: monthly). Look for jacket wear, conductor exposure, or mechanical damage.



FEICHUN SPECIAL CABLES

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ORDERING INFORMATION & SPECIFICATIONS

Item	Details
Product Code	AFSC-DR-2K4/0×2+600V14×12-GC-EPR/CPE
Standard Cable Description	2×4/0 AWG @ 2000V EPR Insulation + 12×14 AWG @ 600V EPR Insulation + 3×4 AWG Green Ground Conductors + 1×14 AWG Yellow Ground Check Conductor CPE Jacket, Black, 90°C Rating
Standard Lengths Available	• 100 meters (328 feet) • 200 meters (656 feet) • 305 meters (1000 feet) • 500 meters (1640 feet) • Custom lengths available (minimum order quantity may apply)
Standard Reel Sizes	• Type A: 800mm width × 1200mm flange dia. (up to 200m) • Type B: 1000mm width × 1400mm flange dia. (up to 500m) • Type C: Custom drum dimensions for special requirements • Steel or wooden reels per DIN 46395 / BS 8436
Cable Marking/Print Line	<i>ANHUI FEICHUN SPECIAL CABLE - 2×4/0AWG 2KV + 12×14AWG 600V EPR/CPE - 90°C WET/DRY - UL44 CSA C22.2 96-13 - OIL RES SUN RES - [METER MARKING] - [PRODUCTION YEAR]</i> Sequential meter marking every 1 meter with UV-resistant white ink
Lead Time	• Standard configurations: 3-4 weeks from order confirmation • Custom configurations: 5-6 weeks from approved drawings • Express service available for premium (contact sales)
Minimum Order Quantity	• Standard spec: 100 meters • Custom configurations: 500 meters (may vary) • Sample lengths (10-20m) available for testing
Pricing Structure	Volume discounts available: • 500-1000m: 5% discount • 1000-5000m: 10% discount • >5000m: Contact for project pricing FOB pricing available

 Custom Configuration Options Available:

- **Conductor Variations:** Alternative AWG sizes, different conductor quantities, additional control pairs
- **Voltage Ratings:** 5KV, 8KV, 15KV versions available with appropriate insulation thickness

- **Armor Options:** Galvanized steel wire armor (SWA), interlocked armor (MC), or steel tape armor for enhanced mechanical protection
- **Jacket Options:** Alternative colors for circuit identification, UV-resistant compounds for extended outdoor exposure, flame-retardant grades
- **Special Features:** Fiber optic integration for communications, shielding/screening for EMI protection, water-blocking compounds
- **Length & Packaging:** Non-standard lengths, custom reel types, factory spliced sections for extended runs
- **Testing & Certification:** Witness testing, third-party certification, special test reports, customer-specific quality plans

Contact our engineering team with your specific requirements for a detailed quotation and technical proposal.



PACKAGING & SHIPPING SPECIFICATIONS

Parameter	Specification
Packaging Method	- Steel or wooden reels per DIN 46395 / BS 8436 - Steel reels: Recyclable, returnable for credit - Wooden reels: Heat-treated, fumigated for export (ISPM-15)
Reel Protection	- Heavy-duty polyethylene shrink wrap - Moisture barrier layer (VCI paper for export) - Desiccant packets enclosed - Corner protectors on steel reels
Cable End Protection	- Heat-shrink caps or heavy-duty PVC end caps - Sealed with identification tags showing conductor configuration - Both ends labeled "A" and "B" for phasing identification
Documentation Included	Electrical Test Reports: Hi-pot test, insulation resistance, conductor resistance Mechanical Test Reports: Tensile, elongation, cold bend (from production lot) Certificate of Compliance: UL/CSA/ICEA standards conformance Material Certifications: Copper, insulation, jacket compound test reports Installation Guide: Torque specs, termination procedures, handling instructions MSDS/SDS: Material Safety Data Sheets for all components
Reel Labeling	Weatherproof label includes: - Cable specification and part number - Length in meters and feet - Gross and net weight - Production date and batch/lot number - Test voltage and date - QR code for traceability - Handling instructions and symbols
Export Packaging	- Fumigated wooden reels with ISPM-15 stamp - Complete export documentation (commercial invoice, packing list, certificate of origin) - Compliance certificates for destination country - Seaworthy packaging for container or break-bulk shipping
Shipping Options	- Domestic: Truck freight (LTL or FTL) - International: Sea freight (FCL or LCL), air freight for urgent orders - Local delivery available within 100km of factory - Customer pickup arrangements accepted

Warranty Coverage

Anhui Feichun Special Cable Co., Ltd. warrants this cable product to be free from defects in materials and workmanship for a period of **24 months from date of shipment**, when the cable is installed, operated, and maintained in accordance with this specification and applicable industry standards.

Warranty Terms:

- Replacement or repair of defective cable at manufacturer's discretion
- Shipping costs for replacement cable covered by manufacturer
- Extended warranty options available for critical applications
- Warranty void if cable is modified, misused, or improperly installed
- Normal wear and tear, mechanical damage, and environmental degradation not covered

Quality Management System

ISO 9001:2015 Quality Management Systems - Certified	ISO 14001:2015 Environmental Management Systems - Certified	ISO 45001:2018 Occupational Health & Safety - Certified	UL Certified Facility Regular audits and surveillance
CSA Listed Manufacturer Canadian Standards Association	RoHS Compliant Restriction of Hazardous Substances		

Product Traceability

Complete traceability system for quality assurance and product recall capability:

- Unique batch/lot number assigned to each production run
- Raw material certifications (copper, insulation, jacket) traceable to suppliers
- In-process quality control test results linked to batch number
- Final test reports with date, operator ID, and test equipment calibration
- Complete production records maintained for minimum 10 years
- QR code on reel label provides instant access to production data
- Customer complaint tracking system with root cause analysis

Continuous Improvement

Our commitment to quality extends beyond manufacturing:

- Regular design reviews incorporating customer feedback and field performance data
- Investment in advanced testing equipment and quality control technologies
- Employee training programs on latest standards and best practices
- Participation in industry standards committees and technical working groups
- Research and development of improved materials and constructions