



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
- Oil and sunlight resistant construction

ELECTRICAL RATINGS

Conductor Configuration	Voltage Rating	Conductor Size	Quantity
Power Conductors	2000V (2KV)	4/0 AWG	2
Control/Auxiliary Conductors	600V	14 AWG	12
Plus Ground and Ground Check Conductors			

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

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

TECHNICAL CONSTRUCTION

CONDUCTORS

- Material: Soft drawn flexible stranded bare or tinned copper
- Class: Class I per ASTM B-33
- Construction: High strand count for maximum flexibility and flex life

SEPARATOR

- Tape separator between conductor and insulation for enhanced electrical performance

INSULATION

- Material: Ethylene-Propylene Rubber (EPR)
- Standard: Per ICEA S-75-381/NEMA WC 58
- Properties: Excellent electrical properties, flexibility, and resistance to environmental conditions

COLOR CODE

 Black	Power Conductor / Phase
 White	Power Conductor / Neutral
 Red	Power Conductor / Phase
 Green	Ground Conductors
 Yellow	Ground Check Conductor

GROUND CONDUCTORS

- Construction: Soft drawn flexible stranded bare or tinned copper
- Insulation: Green ethylene-propylene rubber (EPR)
- Purpose: Primary equipment grounding for safety

GROUND CHECK CONDUCTOR

- Construction: Soft drawn flexible stranded bare or tinned copper
- Insulation: Yellow polypropylene-insulated (EPR) insulation over conductor
- Purpose: Continuous monitoring of ground circuit integrity for enhanced safety systems
- Application: Critical for systems requiring real-time ground fault detection

ASSEMBLY

- Power, ground check, and ground cores cabled together to form a round core configuration
- Single-faced rubber filled binder tape applied over cable assembly
- Optimized lay length for maximum flexibility and minimal stress during reeling operations

JACKET

- Material: Black heavy duty, integral-filled CPE (Chlorinated Polyethylene) thermosetting compound
- Properties: Exceptional abrasion resistance, oil resistance, sunlight resistance, and flame retardance
- Design: Engineered for severe mechanical stress and environmental exposure
- Temperature Rating: 90°C Wet or Dry

APPLICATIONS

This cable is specifically designed for demanding industrial environments requiring:

- Mobile and portable mining equipment power supply
- Drilling rigs and rotary motor installations
- Front-end loaders and material handling equipment

- Conveyor systems in mining and industrial facilities
- High-pressure pumping equipment
- Rock drills and cutting machinery
- Cable reel and festoon systems
- Applications requiring continuous flexing and reeling service
- Systems requiring ground fault monitoring for enhanced safety

COMPLIANCE STANDARDS

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

UL 44	UL 1650	C(UL) FT1	C(UL) FT5
CSA C22.2 96-13	ICEA S-75-381	NEMA WC 58	ICEA S-95-658
NEMA WC 70	ASTM B33	ASTM B172	

PERFORMANCE CHARACTERISTICS

Property	Performance
Oil Resistance	Excellent - suitable for oil-contaminated environments
Sunlight Resistance	UV stabilized for outdoor applications
Flexibility	Class I stranding provides superior flex life
Abrasion Resistance	Heavy duty CPE jacket for severe service
Temperature Rating	90°C continuous operation (Wet or Dry)
Cold Flexibility	Remains flexible at -40°C
Flame Resistance	Meets FT1 and FT5 flame test requirements

SAFETY FEATURES

- **Ground Check Conductor:** Provides continuous monitoring of ground circuit integrity, critical for personnel safety in hazardous environments
- **Multiple Ground Paths:** Separate ground and ground check conductors ensure redundant safety systems
- **High Visibility Color Coding:** Clear identification reduces installation errors and maintenance issues
- **Enhanced Mechanical Protection:** Heavy duty jacket protects against physical damage and extends service life
- **Extreme Temperature Performance:** Maintains electrical and mechanical integrity across wide temperature range

ANHUI FEICHUN SPECIAL CABLE CO., LTD.

安徽飞纯特种电缆有限公司

This specification is subject to change without notice. Please contact us for the most current information.

© 2025 Anhui Feichun Special Cable Co., Ltd. All Rights Reserved.