ANHUI FEICHUN SPECIAL CABLE CO., LTD.

安徽飞纯特种电缆有限公司

TECHNICAL SPECIFICATION

Cable Product Overview

Product Name	Submersible Cable SHD-GC 250-3
Rated Voltage	2 kV
Insulation Material	XFEL (Cross-linked EPR)
Jacket Material	TPU (Thermoplastic Polyurethane)
Jacket Color	Blue
Standards	ICEA S-75-381 / NEMA WC-58 / Manufacturer Standard

HIGHLIGHTED SPECIFICATION

Cable Configuration: 3×250 MCM + 2×1/0 AWG + 1×6 AWG

Description:

- **3 Phase Conductors:** 250 MCM (127 mm^2)
- **2 Grounding Conductors:** 1/0 AWG (33.6 mm^2)
- **1 Ground Check Conductor:** 6 AWG (13.3 mm^2)

Cable Structure (From Inner to Outer)

Layer Construction

1. **Conductor:** Tinned copper wire
2. **Insulation:** EPR (Ethylene Propylene Rubber)
3. **Grounding Conductor:** Tinned copper wire
4. **Metallic Shield:** Tinned copper wire + Textile fiber
5. **Inner Jacket:** TPU (Thermoplastic Polyurethane)
6. **Ground Check Conductor Insulation:** EPR (Yellow)
7. **Reinforcement:** Aramid fiber
8. **Outer Jacket:** TPU Blue

Detailed Technical Specifications

Conductor Specifications

Parameter	Phase Conductors	Grounding Conductors	Ground Check Conductor
Number of Cores	3	2	1
Cross-Sectional Area	127 mm^2 (250 MCM)	33.6 mm^2 (1/0 AWG)	13.3 mm^2 (6 AWG)
Material	Tinned copper wire		
Type of Conductor	Class 5 (Flexible stranded)		
Number & Diameter of Wires	627 × 0.50 mm	266 × 0.40 mm	105 × 0.40 mm
Max. DC Resistance at 20°C	≤0.142 Ω/km	≤0.532 Ω/km	≤1.34 Ω/km

Insulation Specifications

Insulation Material	EPR (Ethylene Propylene Rubber)
Phase Conductor Insulation Thickness	2.41 mm (nominal)
Ground Check Conductor Insulation Thickness	1.52 mm (nominal)
Ground Check Conductor Insulation Color	Yellow

Insulation Screen

Screen Material	Semi-conductive screen
Nominal Thickness	0.60 mm

Metallic Shield

Shield Material	Tinned copper wire + Textile fiber
Shield Density	≥60%

Outer Sheath (Jacket)

Sheath Material	TPU (Thermoplastic Polyurethane)
Nominal Thickness	5.59 mm
Color	Blue

Physical & Electrical Parameters

Cable Dimensions & Weight

Outer Diameter (Approximate)	60.0 mm
Weight (Approximate)	6,366 kg/km (6.366 kg/m)
Minimum Bending Radius (Laying)	15 × D (900 mm for 60 mm diameter)

Electrical Performance

Rated Voltage	2 kV
Allowable Ampacity	355 A

Short Circuit Current (1 second)	18.16 kA

Thermal Parameters

Max. Conductor Working Temperature	90°C
Max. Conductor Short Circuit Temperature	250°C

Application & Features

Primary Applications

- Submersible pump installations
- Deep well pump applications
- Underwater power transmission
- Industrial water systems
- Mining and dewatering operations

Key Features

- **High Voltage Rating:** 2 kV rated voltage for demanding applications
- **Water Resistance:** TPU jacket provides excellent water resistance and durability
- **Flexibility:** Aramid fiber reinforcement with flexible stranded conductors
- **Corrosion Protection:** Tinned copper conductors prevent corrosion in wet environments
- **Ground Check System:** Dedicated ground check conductor for safety monitoring
- **High Current Capacity:** 355 A ampacity for powerful motor applications
- **Metallic Shield:** Enhanced electromagnetic interference protection

Standards Compliance

ICEA Standard	ICEA S-75-381
NEMA Standard	NEMA WC-58
Manufacturer Standard	Per manufacturer specifications and quality control procedures

---

This technical specification is prepared in accordance with ICEA S-75-381 and NEMA WC-58 standards and is subject to change without notice. All specifications are nominal values and subject to normal manufacturing tolerances. For any modifications, additional information, or clarifications, please contact the supplier directly. Custom configurations are available upon request.