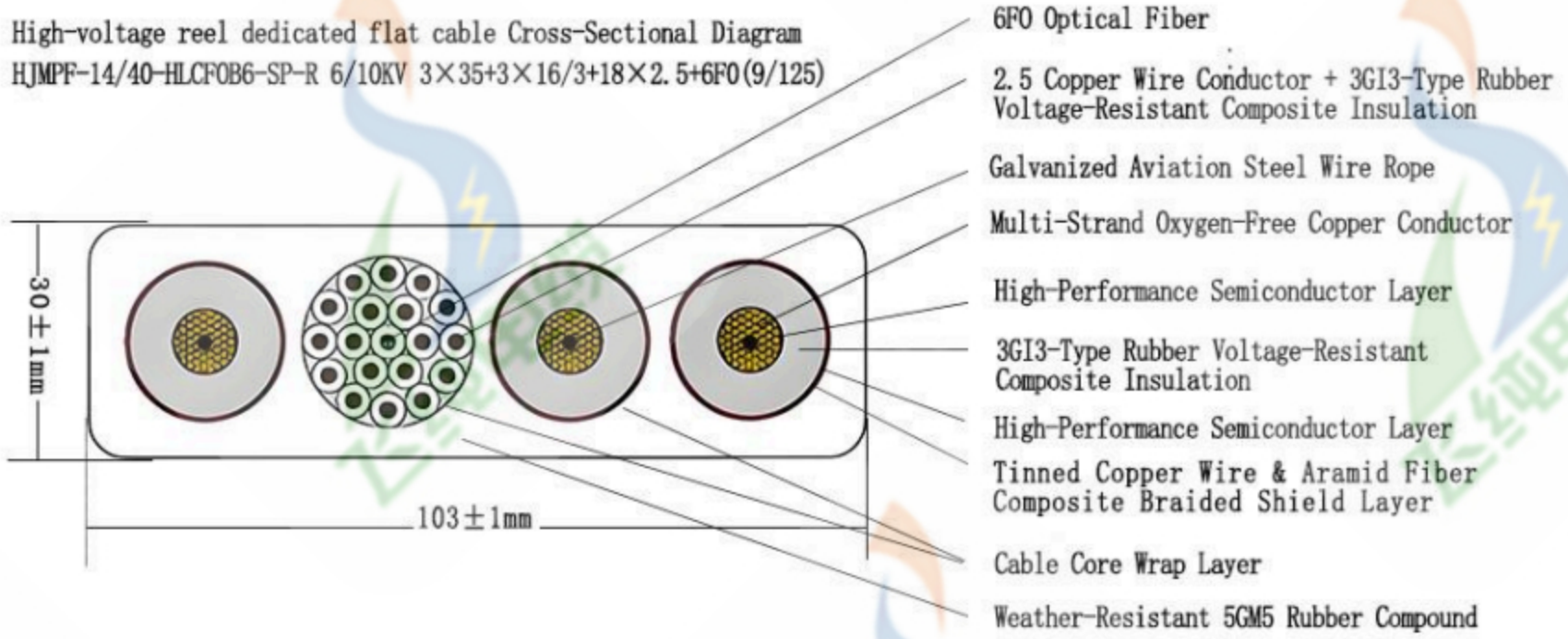
FEICHUN CABLE PRODUCT TECHNICAL SPECIFICATION SHEET

Product Name: High-Voltage Reel Dedicated Flat Cable
Model: HJMPF-14/40-HLCFOB6-SP-R 6/10KV 3×35+3×16/3+18×2.5+6FO(9/125)



1. Application

This high-voltage flat reeling cable is specifically engineered for mobile power and data transmission in demanding industrial environments. It integrates power, control, and fiber optic communication capabilities into a single compact structure.

Ideal for use in:

- Bucket Wheel Reclaimers
- Port Machinery
- Stackers and Conveyors
- Winders and Drag Chain Systems
- Cranes and Mining Equipment

Suitable for installation in:

- Indoor and Outdoor environments
- Wet or Dry conditions

Common Installation Locations:

- Steel Plants

- Coal Yards
- Ore Yards
- Power Stations
- Ports and Docks

2. Standards and Certifications

- **CE 0812 Certified:** Conforms to European safety, health, and environmental protection requirements.
- **IEC 60228 Class 5 (Conductor Standard):** Specifies the requirements for conductors of insulated cables.
- Designed in line with international heavy machinery cabling standards.

3. Cable Structure Overview

3.1 Cross-Section Dimensions:

- **Width:** 103±1.0 mm
- **Thickness:** 30±1.0 mm

3.2 Cable Composition:

- **Power Cores:** 3×35 mm^2
- **Control Cores:** 3×(16/3) mm^2
- **Auxiliary Cores:** 18×2.5 mm^2
- **Fiber Optic:** 6FO (9/125 µm)

3.3 Conductor Material:

- Multi-stranded, oxygen-free fine copper wire, flexible and bend-resistant.
- In compliance with IEC 60228 Class 5.

3.4 Conductor Details:

Core Type	Structure
Power Cores	1235 strands of 0.19 mm
Control Cores	163 strands of 0.14 mm
Optical Fiber	6 cores, 62.5/125 µm

3.5 Conductor Shielding:

- High-performance semiconductive layer.

3.6 Insulation:

- Special 3GI3-type rubber insulation for superior voltage resistance and mechanical durability.
- **Insulation Thickness:** 5.4±0.5 mm

3.7 Shielding Layer:

- Composite braided layer consisting of tin-plated copper mesh, Aramid fiber, and polyester.
- **Shielding Coverage:** ≥90%

3.8 Cable Jacket:

- Weather-resistant 50M5 rubber compound.
- **Properties:** Resistant to abrasion, tension, water, oil, harsh weather, and chemicals.
- **Jacket Thickness:** 5.6±0.5 mm
- **Colour:** Black

3.9 Reinforcement:

- Integrated galvanized steel wire ropes to handle significant mechanical stress.

3.10 Additional Layers:

- Cable core wrapping layer for compactness and enhanced flexibility.
- Optical fiber protection tube embedded within the flat structure.

4. Electrical & Mechanical Properties

Property	Value
Rated Voltage (Uo/U)	6/10 kV
DC Resistance at 20◦C	0.565 Ω/km
Test Voltage (5 min)	35,000 V
Maximum Tension	3160 N
Short-Circuit Temperature Limit	Up to 250◦C (1 sec duration)
Continuous Operating Temperature	−50◦C to +100◦C
Minimum Bending Radius (Static)	8.5×cable width (D)
Minimum Bending Radius (Dynamic)	12×cable width (D)

Approximate Cable Weight	6150 kg/km

5. Optical Fibre Characteristics

- **Fibre Count:** 6 cores
- **Type:** 62.5/125 µm multi-mode fibre
- **Functionality:** Provides stable, high-speed data transmission in challenging environments.

6. Key Advantages

- **Integrated Design:** Combines power, control, and communication cores in one unified flat cable for compact installation and reduced system complexity.
- **Superior Flexibility:** Engineered for repeated winding/unwinding cycles and dynamic reeling systems.
- **Enhanced Durability:** Built to resist oil, water, abrasion, UV, and chemical corrosion.
- **Temperature & Weather Resistance:** Reliable operation from –50◦C to +100◦C, with short-term endurance up to +250◦C.

7. Ordering Code Explanation

HJMPF-14/40-HLCFOB6-SP-R 6/10KV 3×35+3×16/3+18×2.5+6FO(9/125)

Code Segment	Description
HJMPF	High-voltage Joint Mobile Power Flat cable
14/40	Structural specification code
HLCFOB6	6-core Fibre Optic with high mechanical strength
SP-R	Special performance + Reeling
6/10KV	Rated Voltage (Uo/U)
3×35	3 Power Cores of 35 mm²
3×16/3	3 Control cores, each 16 mm² divided into 3 wires
18×2.5	18 Auxiliary cores of 2.5 mm²
6FO(9/125)	6 Optical fibers, 9/125 µm