

Anhui Feichun Special Cable Co., Ltd.

安徽飞纯特种电缆有限公司



(N)TSCGEWÖU+LWL Reeling Cable MV

Medium Voltage Power Cable with Integrated Optical Fiber

High Speed, High Pull & Torsion Resistance for Reeling Applications

⚡ Equivalent Replacement for TRATOSFLEX-ESDB-FO Cable
Standards: VDE 0250 Part 813 (as applicable) & HD 620 S1 Part 9
Featured Configuration: ES-DB 3X50+2X25/2+24FO (62.5/125) 6/10kV

Featured Model: FDD350F - 6/10kV

CONFIGURATION

3x50+2x25/2+24FO

RATED VOLTAGE

6/10 kV

OPTICAL FIBERS

24 Fibers

FIBER TYPE

62.5/125 μm

OVERALL DIAMETER

47.2-50.2 mm

CABLE WEIGHT

3,520 kg/km

MAX OPERATING SPEED

300 m/min

TENSILE LOAD

3,600 N

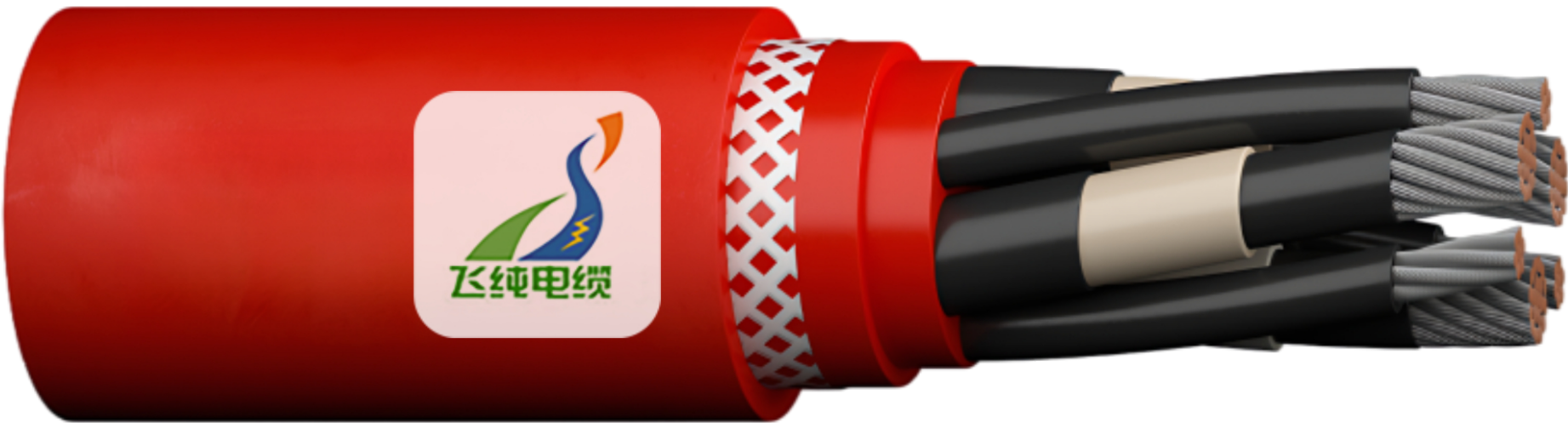
🚀 High Speed Operation

💪 High Pull Resistance

🌀 Torsion Resistant

📡 Integrated Fiber Optics

🎯 Reel End & Centre Feed



Product Description

The **(N)TSCGEWÖU+LWL** reeling cable is a technologically advanced medium voltage power cable specifically engineered for high-performance reeling applications. This cable combines electrical power transmission with integrated optical fiber communication capabilities, making it ideal for modern industrial automation, crane systems, mobile machinery, and data-intensive applications requiring simultaneous power and high-speed data transmission.

Designed as a direct equivalent replacement for the renowned TRATOSFLEX-ESDB-FO cable, our cable incorporates premium elastomeric compounds and advanced materials to deliver superior flexibility, exceptional mechanical strength, and outstanding resistance to torsional stress. The cable features ultra-flexible conductors (more flexible than Class 5 VDE 0295), specialized HEPR-equivalent insulation, and robust anti-torsional protection layers.

With integrated optical fiber technology supporting up to 24 fibers (standard 62.5/125 µm multimode), this cable enables real-time data communication, sensor monitoring, video transmission, and control signal transmission alongside power delivery - essential for Industry 4.0 applications, automated guided vehicles (AGVs), container cranes, mining equipment, and smart manufacturing systems.

Key Features & Performance Advantages

1

Ultra-Flexible Conductor

Conductor flexibility exceeding Class 5 requirements per VDE 0295, enabling extremely tight bending radii and exceptional fatigue resistance during continuous reeling operations.

2

Advanced HEPR Insulation

Proprietary TRATOSFLEX-ESDB-I® insulation compound equivalent to or better than standard HEPR, providing superior electrical properties, thermal stability, and mechanical durability.

3

Semiconducting Ground System

Ground conductor with specialized semiconducting layer acting as screen. Resistance between ground conductor and external semiconductive layer: maximum 500 Ω (VDE 0472 Part 512).

4

Integrated Optical Fiber

Up to 24 optical fibers (standard 62.5/125 µm multimode, also available 50/125 and E9/125 singlemode) integrated within cable core for high-speed data transmission and communication.

5

Premium Inner Sheath

Red elastomeric compound TRATOS-JBA-IS® inner sheath providing mechanical protection, electrical isolation, and enhanced cable integrity during dynamic operations.

6

Anti-Torsional Protection

Specialized anti-torsional protection layer prevents cable twisting and rotation during reeling operations, ensuring long service life and reliable performance in demanding applications.

7

Superior Outer Sheath

Red elastomeric compound TRATOS-JBA-OS® outer sheath, superior to standard 5GM5 quality, offering exceptional abrasion resistance, oil resistance, and environmental protection.

8

High-Speed Capability

Engineered for high-speed reeling operations up to 300 m/min with outstanding pull and torsion resistance, suitable for monospiral reel end feed and centre feed applications.

Detailed Cable Construction

1

Phase Conductors (3 cores)

Material: Tinned or bare copper, ultra-flexible stranding

Flexibility: More flexible than Class 5 per VDE 0295

Cross-section: 50 mm² (for featured model FDD350F)

Nominal diameter: 9.5 mm

DC Resistance at 20°C: ≤0.393 Ω/km

Construction: Multi-wire compacted stranded for maximum flexibility

2

Inner Semiconducting Layer

Material: Extruded semiconducting compound

Function: Electrical field stress control, prevents corona discharge

Application: Applied directly over each phase conductor

Bonding: Bonded to insulation to eliminate voids

3

Phase Insulation

Material: TRATOSFLEX-ESDB-I® compound (equivalent to or better than HEPR)

Type: High-performance ethylene-propylene rubber

Properties: Excellent electrical properties, thermal stability, flexibility

Temperature rating: Continuous operation at elevated temperatures

Dielectric strength: Superior voltage withstand capability

4

Outer Semiconducting Layer

Material: Specialized semiconducting compound

Function: Acts as screen, controls electrical field at insulation surface

Special property: Resistance between ground conductor and this layer ≤500 Ω (VDE 0472 Part 512)

Application: Extruded over insulation on each phase conductor

5

Ground/Protective Conductors (2 cores)

Configuration: 2 x 25/2 mm² (for featured model)

Material: Tinned or bare copper, flexible stranding

Nominal diameter: 4.8 mm

DC Resistance at 20°C: ≤0.795 Ω/km (parallel connection: ≤0.3975 Ω/km)

Special feature: Includes semiconducting layer for enhanced screening

Function: Equipment grounding, fault current path, electromagnetic shielding

6

Optical Fiber Cable

Standard configuration: 24 optical fibers (62.5/125 µm multimode)

Alternative options: 6, 12, 18, or 24 fibers available

Fiber types available:

- 62.5/125 µm multimode (OM1) - Standard
- 50/125 µm multimode (OM2/OM3/OM4) - Upon request
- E9/125 µm singlemode (OS1/OS2) - Upon request

Protection: Individual fiber coating, buffer tubes, central strength member

Application: Real-time data transmission, sensor networks, video surveillance, control systems

7

Cable Core Assembly

Configuration: 3 insulated phase conductors + 2 ground conductors + optical fiber cable

Lay: Stranded in optimized geometry for flexibility and mechanical strength

Filler: Non-hygroscopic filler material maintaining cable roundness

Binding: Textile or synthetic binding tape

8

Inner Sheath

Material: TRATOS-JBA-IS® elastomeric compound

Colour: Red

Function: Mechanical protection of core, moisture barrier

Properties: High elasticity, excellent flexibility, oil resistant

Application: Extruded over assembled cable core

9

Anti-Torsional Protection Layer

Design: Specialized reinforcement layer
Function: Prevents cable rotation and twisting during reeling
Construction: High-strength textile or aramid reinforcement in optimized lay
Benefit: Extended cable life in continuous reeling applications
Critical for: Monospiral reels, centre feed systems, high-cycle operations

10

Outer Sheath

Material: TRATOS-JBA-OS® elastomeric compound
Quality level: Superior to standard 5GM5 grade
Colour: Red
Properties:

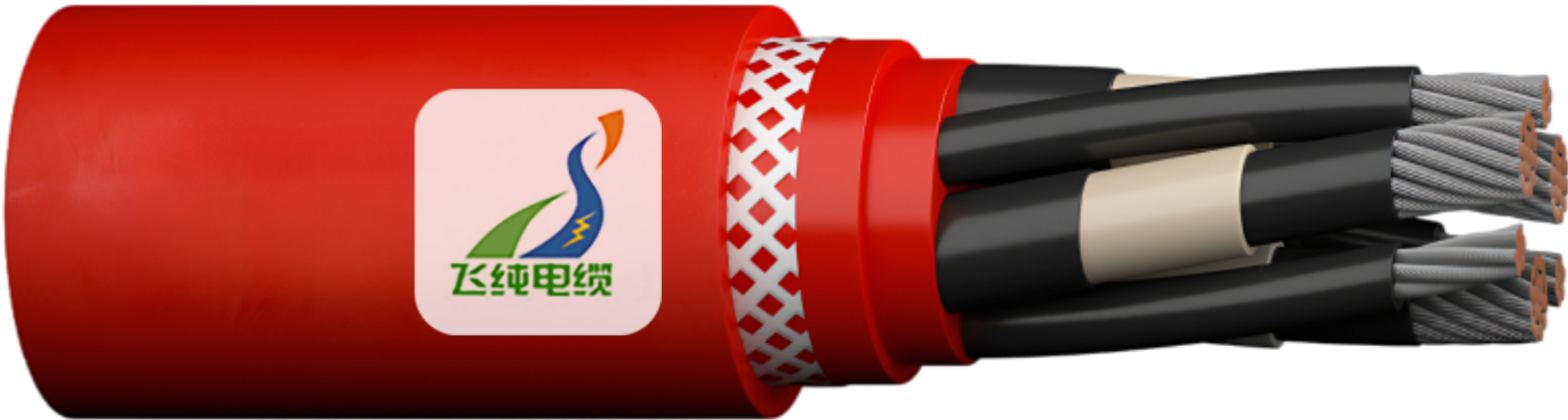
- Exceptional abrasion resistance
- Excellent oil and chemical resistance
- Superior mechanical properties
- UV and ozone resistant
- Flame retardant characteristics

Temperature range: Suitable for wide operating temperature range

Voltage Ratings & Electrical Specifications

Rated Voltage U ₀ /U	Maximum System Voltage AC	AC Test Voltage (Type Test)	Standard Reference
3.6/6 kV	4.2/7.2 kV	11 kV	VDE 0250-813 / HD 620
6/10 kV ★	6.9/12 kV	17 kV	VDE 0250-813 / HD 620
8.7/15 kV	10.4/18 kV	24 kV	VDE 0250-813 / HD 620
12/20 kV	13.9/24 kV	29 kV	VDE 0250-813 / HD 620

Note: The featured model FDD350F operates at **6/10 kV** rated voltage (highlighted above). This is the most common voltage level for industrial reeling applications. All voltage levels utilize the same advanced construction principles with insulation thickness adjusted according to voltage requirements.



Operating Conditions & Temperature Ranges

Temperature Specifications

Condition	Temperature Range	Remarks
Fixed Installation	-40°C to +80°C	Stationary applications
In Operation (Reeling)	-30°C to +80°C	During dynamic reeling cycles
Maximum Conductor Temperature	+90°C	Continuous operation
Short-Circuit Temperature	+250°C	Maximum 5 seconds
Minimum Installation Temperature	-5°C	Without pre-heating
Storage Temperature	-25°C to +55°C	In original packaging

Reeling Application Performance

High-Speed Travel Conditions:

Application Type	Configuration	Operating Speed (m/min)	Suitability
Tender System	Random / Loose cable	60 m/min	Suitable
Monospiral Reel - Centre Feed	Controlled winding	60 m/min	Suitable
Monospiral Reel - End Feed	Standard reel drum	200 m/min	Suitable
High-Speed End Feed	Optimized system	300 m/min	Maximum Performance

Complete Technical Data - All Voltage Levels

6/10 kV Models (FDD Series) - Most Common Configuration

Model	Configuration	Conductor Ø (mm)	DC Resistance (Ω/km)	Permanent Tensile (N)	Dynamic Tensile (N)	Diameter (mm)	Weight (kg/km)
FDD325F	3x25+2x25/2+FO	6.5 / 4.8	0.795 / 0.795*	3,000	4,125	42.5-45.5	2,560
FDD335F	3x35+2x25/2+FO	7.8 / 4.8	0.565 / 0.795*	3,000	4,125	44.2-47.2	3,050
FDD350F ★	3x50+2x25/2+24FO	9.5 / 4.8	0.393 / 0.795*	3,600	5,250	47.2-50.2	3,520
FDD370F	3x70+2x35/2+FO	11.4 / 5.4	0.277 / 0.565*	5,000	7,500	50.0-54.2	4,700
FDD395F	3x95+2x50/2+FO	13.0 / 6.4	0.210 / 0.393*	6,500	8,900	54.5-58.5	5,880
FDD30AF	3x120+2x70/2+FO	14.7 / 7.8	0.164 / 0.277*	7,500	10,800	59.0-63.0	6,950
FDD30BF	3x150+2x70/2+FO	16.5 / 7.8	0.132 / 0.277*	9,000	12,000	64.0-68.0	8,600
FDD30CF	3x185+2x95/2+FO	18.3 / 9.3	0.108 / 0.210*	11,100	14,000	69.3-73.3	10,300

Legend: * DC Resistance value for two protective conductors in parallel connection. FO = Optical fiber configuration (standard 6-24 fibers, type 62.5/125 µm).

3.6/6 kV Models (FDC Series)

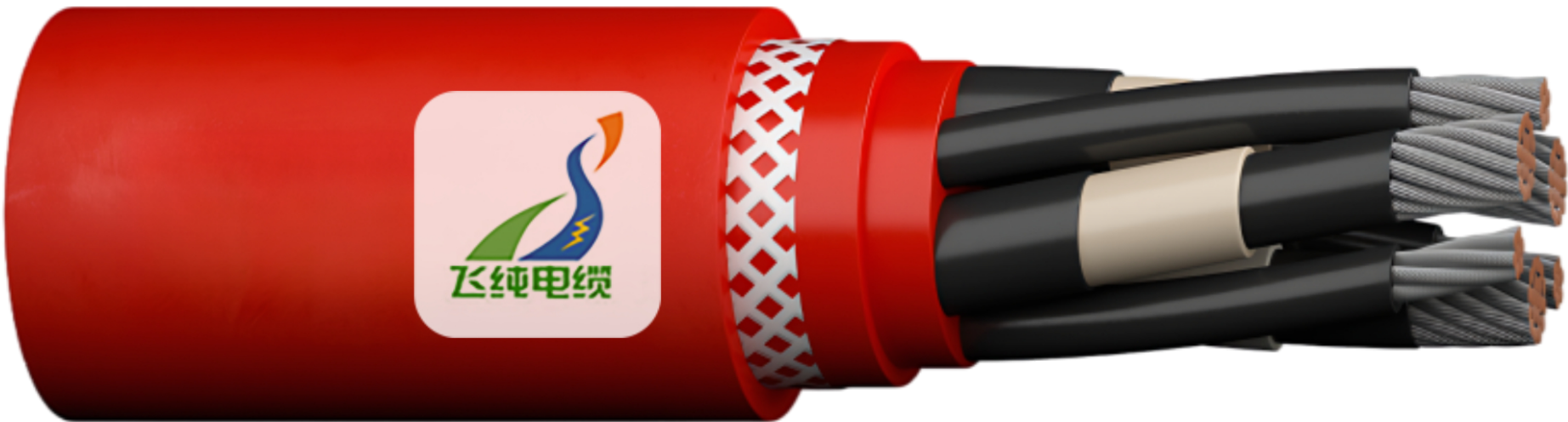
Model	Configuration	Diameter (mm)	Weight (kg/km)	Permanent Tensile (N)	Dynamic Tensile (N)
FDC325F	3x25+2x25/2+FO	42.5-45.5	2,560	3,000	4,125
FDC335F	3x35+2x25/2+FO	44.2-47.2	3,050	3,000	4,125
FDC350F	3x50+2x25/2+FO	47.3-50.2	3,520	3,600	5,250
FDC370F	3x70+2x35/2+FO	52.2-54.2	4,950	5,000	7,500
FDC395F	3x95+2x50/2+FO	54.0-58.0	5,780	6,500	8,900
FDC30AF	3x120+2x70/2+FO	59.0-63.0	6,800	7,500	10,800
FDC30BF	3x150+2x70/2+FO	64.0-68.0	8,600	9,000	12,000
FDC30CF	3x185+2x95/2+FO	69.0-73.0	10,100	11,100	14,000

8.7/15 kV Models (FDE Series)

Model	Configuration	Diameter (mm)	Weight (kg/km)	Permanent Tensile (N)	Dynamic Tensile (N)
FDE325F	3x25+2x25/2+FO	44.5-47.5	2,840	3,000	4,125
FDE335F	3x35+2x25/2+FO	47.1-50.1	3,250	3,000	4,125
FDE350F	3x50+2x25/2+FO	50.0-54.0	3,890	3,600	5,250
FDE370F	3x70+2x35/2+FO	54.0-58.0	5,100	5,000	7,500
FDE395F	3x95+2x50/2+FO	59.1-63.1	6,270	6,500	8,900
FDE30AF	3x120+2x70/2+FO	64.5-68.5	7,700	7,500	10,800
FDE30BF	3x150+2x70/2+FO	69.0-73.0	9,200	9,000	12,000
FDE30CF	3x185+2x95/2+FO	75.0-79.0	11,000	11,100	14,000

12/20 kV Models (FDF Series)

Model	Configuration	Diameter (mm)	Weight (kg/km)	Permanent Tensile (N)	Dynamic Tensile (N)
FDF325F	3x25+2x25/2+FO	48.6-51.0	3,180	3,000	4,125
FDF335F	3x35+2x25/2+FO	51.5-54.5	3,800	3,000	4,125
FDF350F	3x50+2x25/2+FO	55.0-59.0	4,470	3,600	5,250
FDF370F	3x70+2x35/2+FO	59.0-63.0	5,800	5,000	7,500
FDF395F	3x95+2x50/2+FO	63.6-67.6	6,900	6,500	8,900
FDF30AF	3x120+2x70/2+24FO	69.0-73.0	8,150	7,500	10,800



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

Optical Fiber Specifications

Standard Fiber Configuration

STANDARD FIBER COUNT	STANDARD FIBER TYPE	FIBER CATEGORY	AVAILABLE OPTIONS
24 Fibers	62.5/125 μm	OM1 Multimode	6, 12, 18, 24

Available Fiber Types

Fiber Type	Core/Cladding (μm)	Category	Bandwidth	Typical Applications
Multimode Standard ★	62.5/125	OM1	200 MHz·km @ 850nm	General industrial, sensor networks, short-distance data
Multimode Enhanced	50/125	OM2/OM3/OM4	500-4700 MHz·km @ 850nm	High-speed data, long-distance multimode, 10G/40G/100G networks
Singlemode	E9/125	OS1/OS2	Unlimited	Long-distance telecommunication, high-bandwidth applications

Optical Fiber Performance Parameters (62.5/125 μm OM1)

Core Diameter	62.5 μm ± 3 μm
Cladding Diameter	125 μm ± 2 μm
Coating Diameter	245 μm ± 10 μm
Numerical Aperture (NA)	0.275 ± 0.015
Attenuation @ 850 nm	≤3.5 dB/km
Attenuation @ 1300 nm	≤1.5 dB/km
Bandwidth @ 850 nm	≥200 MHz·km
Bandwidth @ 1300 nm	≥500 MHz·km
Minimum Bend Radius	30 mm (long term), 15 mm (short term)
Proof Test	100 kpsi (0.69 GPa)
Operating Temperature	-40°C to +85°C

Fiber Optic Cable Construction:

- Individual Fiber Protection:** Each fiber features 245 μm tight-buffered coating for mechanical protection
- Color Coding:** Fibers are color-coded according to international standards for easy identification
- Sub-Units:** Fibers organized in groups for easy splicing and termination
- Central Strength Member:** High-strength aramid or fiberglass rod providing tensile strength

- **Water Blocking:** Water-blocking tape or gel preventing moisture ingress
- **Buffer Tube:** Protective tube housing fiber bundle with controlled excess fiber length
- **Protection:** Integrated within main cable structure for maximum protection during reeling

Typical Fiber Optic Applications



Real-Time Data Transmission

High-speed communication between mobile equipment and control systems, SCADA networks, industrial Ethernet protocols (PROFINET, EtherNet/IP).



Video Surveillance

HD/4K video transmission from cameras on mobile cranes, container handlers, or automated vehicles to control rooms.



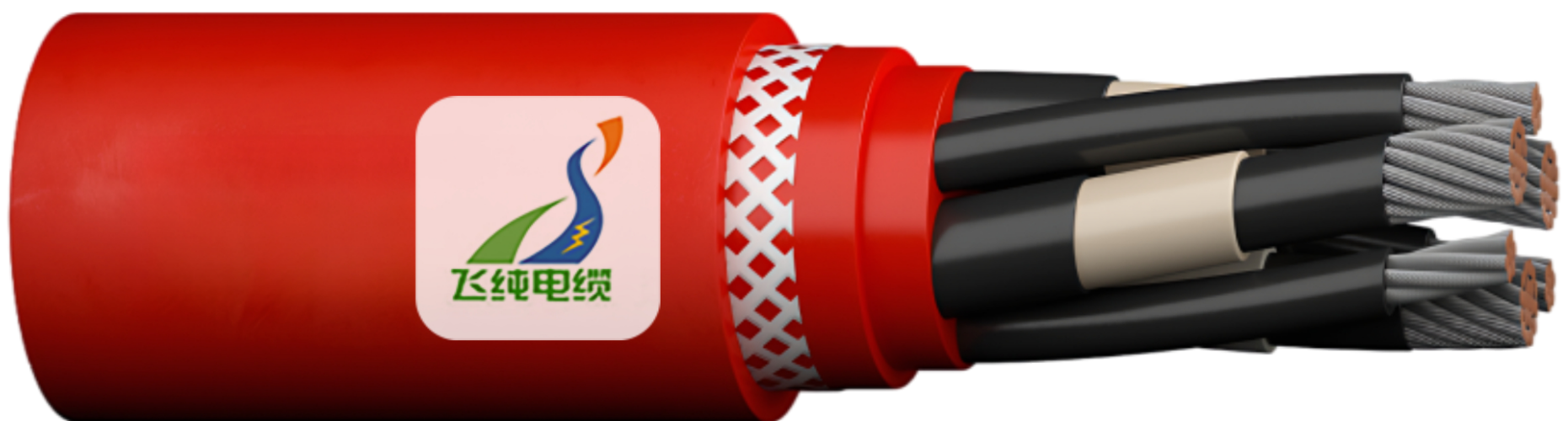
Sensor Networks

Connection of multiple sensors for position detection, load monitoring, environmental sensing, safety systems.



Diagnostic Systems

Condition monitoring, predictive maintenance data collection, equipment health monitoring, performance analysis.



Primary Applicable Standards

Standard	Title	Application
VDE 0250 Part 813	Power cables with rated voltages up to 30 kV	Cable design, construction, testing
HD 620 S1 Part 9	Distribution cables of rated voltage 0.6/1 kV up to 18/30 kV	European harmonization standard
VDE 0295	Conductors of cables and insulated cords	Ultra-flexible conductor requirements
VDE 0472 Part 512	Testing of cables - Measurement of insulation resistance	Semiconducting layer resistance verification
IEC 60228	Conductors of insulated cables	Conductor construction reference
IEC 60502	Power cables with extruded insulation 1-30 kV	Electrical performance requirements
IEC 60794	Optical fiber cables	Optical fiber specifications and testing
IEC 60332	Tests on electric cables under fire conditions	Flame retardancy verification

⚡ Equivalent to TRATOSFLEX-ESDB-FO Cable

This cable is designed and manufactured as a direct equivalent replacement for the TRATOSFLEX-ESDB-FO cable series. It meets or exceeds all performance characteristics of the original design while maintaining compatibility with existing installation methods, termination procedures, and application requirements. The cable utilizes advanced proprietary compounds (TRATOSFLEX-ESDB-I®, TRATOS-JBA-IS®, TRATOS-JBA-OS®) that are equivalent to or superior to the referenced materials in the original specification.



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

Applications & Industries

Primary Application Areas

Container Handling & Port Equipment

Ship-to-shore cranes, rubber-tired gantry cranes (RTG), rail-mounted gantry cranes (RMG), automated stacking cranes (ASC) requiring high-speed cable reeling with integrated data transmission for position sensing, load monitoring, and video surveillance.

Industrial Cranes & Hoists

Overhead traveling cranes, gantry cranes, jib cranes, and specialized lifting equipment in manufacturing facilities, steel mills, shipyards, and heavy industry requiring reliable power and data communication during continuous operation.

Mining Equipment

Mobile mining machinery, continuous miners, longwall systems, shuttle cars, conveyor systems, and material handling equipment requiring durable cables for harsh underground and surface mining environments with integrated communication capabilities.

Rail Transportation Systems

Automated people movers (APM), metro systems, light rail vehicles, monorails, and rail maintenance equipment requiring flexible reeling cables with data transmission for train control, monitoring, and communication systems.

Amusement & Entertainment

Theme park rides, roller coasters, cable cars, ski lifts, observation wheels, and entertainment equipment requiring reliable power distribution and safety monitoring through integrated optical fiber networks.

Automated Guided Vehicles (AGVs)

Warehouse automation, factory logistics, automated storage and retrieval systems (AS/RS) utilizing reeling cable systems for power supply and real-time data exchange for navigation, control, and monitoring.

Stage & Theater Equipment

Stage rigging systems, motorized hoists, automated lighting systems, moving platforms, and theatrical machinery requiring flexible cable solutions with integrated DMX, network, or video signals.

Research & Testing Facilities

Testing equipment, material handling systems in laboratories, particle accelerators, wind tunnels, and specialized research installations requiring precise power delivery and high-bandwidth data acquisition.

Key Application Advantages

Why Choose (N)TSCGEWÖU+LWL for Reeling Applications:

- **Integrated Power & Data:** Single cable solution eliminates need for separate fiber optic cables, reducing installation complexity and drum space requirements
- **High-Speed Capability:** Proven performance up to 300 m/min linear speed for demanding high-speed applications
- **Extended Service Life:** Ultra-flexible conductors and anti-torsional protection ensure >1 million bending cycles in typical applications
- **Reduced Downtime:** Superior mechanical properties minimize cable failures and maintenance requirements
- **Wide Temperature Range:** Operates reliably from -30°C to +80°C covering most industrial environments
- **High Pull Forces:** Withstands permanent tensile loads up to 11,100 N and dynamic loads up to 14,000 N depending on configuration
- **Compact Design:** Optimized construction provides maximum performance in minimum space
- **Future-Proof:** Integrated fiber optics enable Industry 4.0 connectivity and advanced diagnostics

Installation & Handling Guidelines

General Installation Requirements

Minimum Installation Temperature	-5°C (without pre-heating); pre-heating recommended below 0°C
Minimum Bending Radius (Fixed)	15 × overall diameter (e.g., 15 × 50 mm = 750 mm for FDD350F)
Minimum Bending Radius (Reeling)	20 × overall diameter (e.g., 20 × 50 mm = 1000 mm for FDD350F)
Drum Diameter Recommendation	Minimum 25-30 × cable diameter for optimal service life
Maximum Pulling Force	As specified in technical data tables (permanent tensile load values)
Cable Support During Installation	Support at maximum 1.5 m intervals; avoid dragging over rough surfaces

Reeling System Design Considerations

Critical Design Parameters:

- Drum Selection:** Choose drum diameter $\geq 25 \times$ cable overall diameter to minimize bending stress
- Groove Design:** Ensure groove width is $1.1\text{-}1.15 \times$ cable diameter with smooth, rounded edges
- Fleet Angle:** Maintain fleet angle $\leq 4^\circ$ for optimal spooling and cable life
- Layer Configuration:** For multi-layer winding, use proper dividers or increased flange height
- Drum Rotation Speed:** Calculate to ensure linear speed does not exceed cable rating
- Acceleration/Deceleration:** Design system for smooth acceleration; avoid shock loads
- Cable Anchor:** Properly secure cable to drum using approved anchor method
- Slip Ring Selection:** Match slip ring channels to cable configuration including fiber optic rotary joints

Optical Fiber Handling

Special Precautions for Integrated Optical Fiber:

- Minimum Bend Radius:** Never bend cable tighter than specified radius to prevent fiber damage
- Tension Control:** Avoid excessive pulling forces; use proper cable grips, not fiber
- Termination Environment:** Perform fiber splicing in clean, controlled environment
- Testing After Installation:** Test all fibers with OTDR (Optical Time Domain Reflectometer)
- Protection During Installation:** Protect cable ends from moisture and contamination
- Fiber Excess Length:** Maintain proper fiber excess length within cable for strain relief
- Rotary Joint Alignment:** Carefully align fiber optic rotary joints per manufacturer instructions

Termination & Connection

Power Conductor Termination	Use compression lugs rated for cable voltage; apply anti-oxidant compound
Ground Conductor Connection	Terminate both ground conductors properly; ensure low-impedance path
Fiber Optic Termination	Use fusion splicing or mechanical splicing; avoid field-installable connectors for mobile applications
Slip Ring Connection	Use appropriate slip rings for voltage rating; fiber optic slip rings for data channels

Cable Entry Sealing

Properly seal all cable entries to equipment to prevent moisture ingress

Stress Relief

Provide adequate strain relief at all termination points

Testing & Quality Assurance

Factory Tests Performed

Test Type	Standard	Specification
Conductor DC Resistance	VDE 0295 / IEC 60228	As specified in technical data tables
AC Voltage Test	VDE 0250-813	Per voltage rating (e.g., 17 kV for 6/10 kV cable)
Partial Discharge Test	IEC 60502	≤10 pC at specified test voltage
Semiconducting Layer Resistance	VDE 0472-512	≤500 Ω between ground conductor and outer semiconducting layer
Conductor Flexibility Verification	VDE 0295	More flexible than Class 5 requirements
Optical Fiber Attenuation	IEC 60794	As specified for fiber type (e.g., ≤3.5 dB/km @ 850 nm for 62.5/125)
Fiber Bandwidth	IEC 60794	≥200 MHz·km @ 850 nm for OM1
Dimensional Check	Internal standard	Overall diameter, conductor diameter within tolerances
Tensile Strength Test	Internal standard	Verification of permanent and dynamic tensile load ratings
Flame Retardancy	IEC 60332-1-2	Single vertical flame test - cable self-extinguishing

On-Site Acceptance Testing Recommendations

Recommended Tests After Installation:

- Insulation Resistance:** Megger test between conductors and between conductor and ground (minimum 100 MΩ at 500 VDC)
- Continuity Test:** Verify all power and ground conductors for proper connections
- Optical Fiber Testing:**
 - OTDR (Optical Time Domain Reflectometer) test on all fibers
 - Verify no breaks, excessive losses, or damaged sections
 - Check splice losses (typically <0.1 dB for fusion splices)
 - Verify end-to-end attenuation within specifications
- Ground Continuity:** Low-resistance test of ground path (typically <1 Ω)
- Hi-Pot Test (Optional):** If required, perform at 80% of factory test voltage with DC
- Functional Test:** Operate system through full range of motion verifying proper reeling operation
- Data Communication Test:** Verify proper operation of all fiber optic data channels

Quality Documentation: Each cable drum is supplied with comprehensive documentation including conductor resistance test results, voltage test certificates, partial discharge test data, optical fiber test reports (OTDR traces), cable length certification, manufacturing batch identification, and traceability information. Type test reports are available upon request.

Ordering Information

EXAMPLE ORDER CODE: (N)TSCGEWÖU FDD350F 6/10kV 3X50+2X25/2+24FO (62.5/125)

Order Designation Breakdown

(N)TSCGEWÖU	Cable type designation - Reeling cable with optical fiber
FDD	Series designation (FDC=3.6/6kV, FDD=6/10kV, FDE=8.7/15kV, FDF=12/20kV)
350F	Model number indicating conductor size (350 = 3x50mm² phase + 2x25/2mm² ground)
6/10kV	Rated voltage U ₀ /U
3X50+2X25/2	Conductor configuration: 3 phase conductors @ 50mm² + 2 ground conductors @ 25/2mm²
+24FO	Integrated optical fiber: 24 fibers (options: 6FO, 12FO, 18FO, 24FO)
(62.5/125)	Fiber type: 62.5/125 µm OM1 (alternatives: 50/125 or E9/125 upon request)

Required Information for Quotation

1. Cable Configuration	Model number (e.g., FDD350F) or specify custom conductor sizes
2. Voltage Rating	3.6/6 kV, 6/10 kV, 8.7/15 kV, or 12/20 kV
3. Optical Fiber Configuration	Fiber count (6, 12, 18, or 24) and type (62.5/125, 50/125, or E9/125)
4. Total Cable Length Required	Total meters needed for project
5. Delivery Length per Drum	Preferred continuous length (typically 250m, 500m, 750m, or 1000m)
6. Application Details	Type of reeling system, operating speed, environment conditions
7. Drum Type	Wooden or steel, returnable or non-returnable
8. Special Requirements	Any specific certifications, testing, or documentation needs
9. Delivery Schedule	Required delivery date and location
10. Delivery Terms	Ex-works, FOB, CIF, or other Incoterms

Custom Configurations Available:

While standard configurations are listed in the technical data tables, custom designs are available for special applications including:

- Non-standard conductor cross-sections
- Alternative voltage ratings
- Different ground conductor configurations
- Custom optical fiber counts and types
- Special color coding or marking
- Extended temperature ratings

- Additional protective features

Please contact our engineering department to discuss custom requirements.

⚠ Important Installation & Safety Notes:

- **Professional Installation Required:** This cable must only be installed by qualified personnel with experience in MV cable systems and fiber optic installation
- **System Design:** Reeling system must be properly engineered considering cable specifications, operating speeds, and environmental conditions
- **Bending Radius:** NEVER exceed minimum bending radius specifications - this is critical for both electrical and optical fiber performance
- **Tensile Loads:** Do not exceed specified permanent or dynamic tensile load ratings
- **Operating Speed:** Ensure system design does not exceed maximum speed ratings for the application type
- **Fiber Optic Handling:** Special care must be taken during termination and testing of optical fibers
- **Electrical Safety:** Follow all local electrical codes and safety regulations for MV installations
- **Regular Inspection:** Implement regular inspection and maintenance program for reeling cable systems
- **Environmental Protection:** Ensure proper sealing of all connections and cable entries
- **Documentation:** Maintain complete installation records and test results for future reference

Anhui Feichun Special Cable Co., Ltd.

安徽飞纯特种电缆有限公司

Professional Manufacturer of Medium Voltage Reeling Cables with Integrated Fiber Optics

ISO 9001:2015 Certified | Advanced Testing Facilities | Technical Excellence

Technical Support: tech@feichuncables.com

Sales Inquiries: zihao.yang@feichuncables.com



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