



FX-RU INDUSTRIAL REELING CABLE

0.6/1kV 4-Core Highly Flexible PUR Sheathed Low Voltage Reeling Cable

Featured Specifications: 4×8mm² & 4×35mm²



FEATURED PRODUCT CONFIGURATIONS

4 × 8 mm²

SAP Code:	20298845
Conductor Ø:	3.6 mm
Cable Ø:	15.8 - 16.9 mm
Weight:	485 kg/km
Min. Bend Radius:	94.8 - 101.4 mm

4 × 35 mm²

SAP Code:	20156715
Conductor Ø:	7.8 mm
Cable Ø:	28.5 - 30.2 mm
Weight:	1,760 kg/km
Min. Bend Radius:	171.0 - 181.2 mm

PRODUCT OVERVIEW

The FX-RU series comprises high-performance flexible low voltage reeling cables specifically engineered to withstand severe mechanical stresses in industrial environments. These cables feature polyurethane (PUR) outer sheath construction and are certified for permanent submersion in non-potable water up to 50 meters depth. The design incorporates halogen-free materials, polyester reinforcement braiding, and Class 5 finely stranded copper conductors to deliver exceptional flexibility, durability, and electrical performance. Applications include reeling drums, festoon systems, mobile industrial machinery, and underwater installations where resistance to abrasion, chemicals, UV radiation, and extreme temperatures is critical.

STANDARDS & APPROVALS

DIN EN 60228 / IEC 60228 Conductor standards	DIN VDE 0293-308 Core identification	DIN EN 60332-1-2 / IEC 60332-1-2 Fire performance
DIN VDE 0298-3 Application standards	DIN VDE 0298-4 Electrical parameters	

CABLE DESIGN & CONSTRUCTION

CONDUCTOR Type: Finely stranded copper, bare Class:5 (IEC 60228)	CORE INSULATION Material:Halogen-free polymer Arrangement:Central textile carrier	INNER SHEATH Material:Halogen-free polymer
REINFORCEMENT Type:Braiding Material:Polyester	OUTER SHEATH Material:Polyurethane (PUR) Color:Black (standard)	

ELECTRICAL PARAMETERS

VOLTAGE RATINGS	
Rated Voltage U ₀ /U (U _m):	0.6/1 (1.2) kV
Nominal Voltage U:	1,000 V
Test Voltage:	2.5 kV

THERMAL PARAMETERS

OPERATING TEMPERATURES Max. Conductor Temp:+90 °C Short Circuit Temp:+250 °C	FIXED INSTALLATION Min. Ambient Temp:−50 °C Max. Ambient Temp:+80 °C	FLEXIBLE INSTALLATION Min. Ambient Temp:−40 °C Max. Ambient Temp:+80 °C
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CHEMICAL & ENVIRONMENTAL RESISTANCE

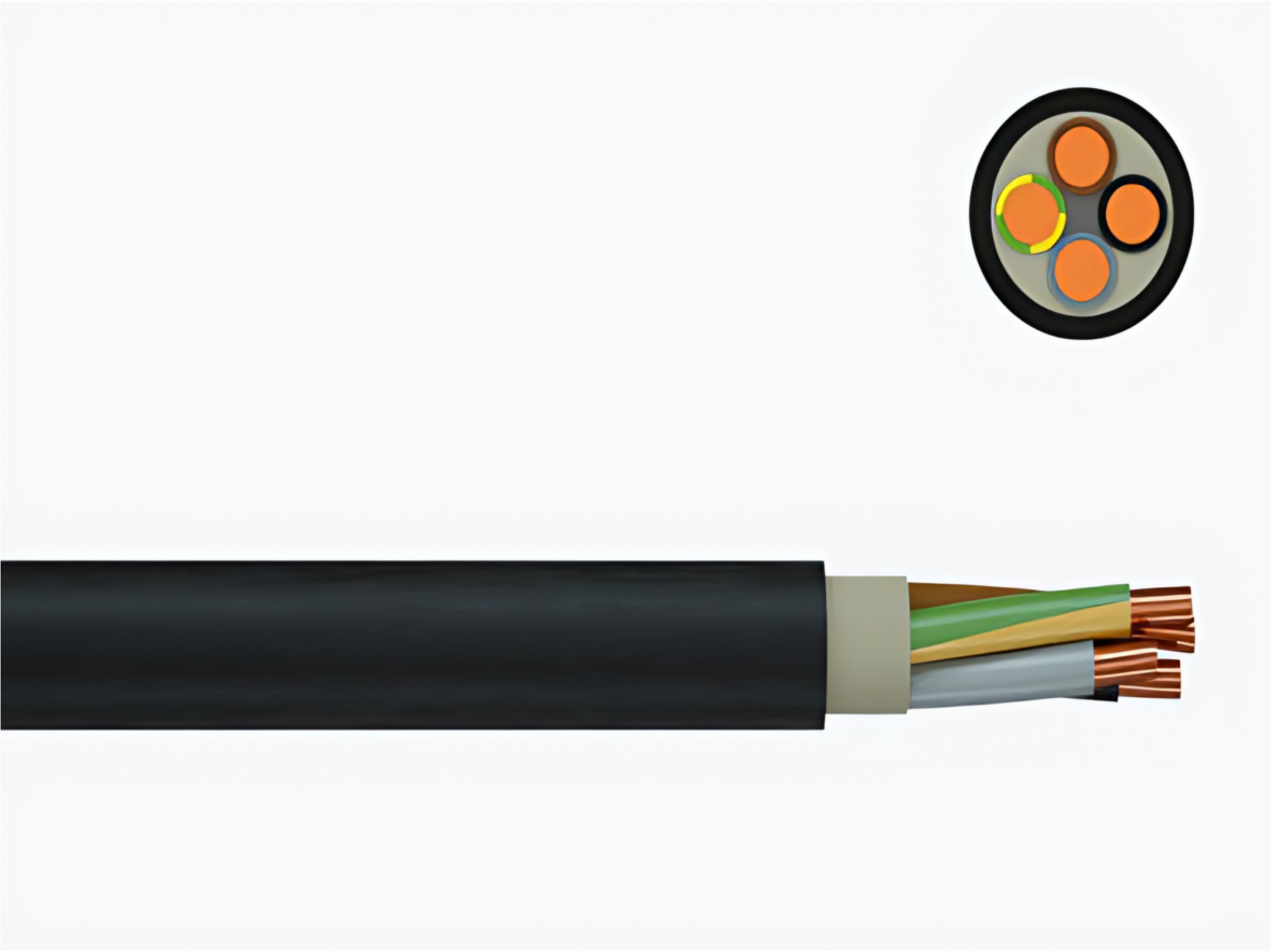
CHEMICAL PROPERTIES	
Flame Retardant:	✓ EN/IEC 60332-1-2
Halogen Free:	✓ Yes
Ozone Resistance:	✓ Yes
UV Resistance:	✓ Yes
Seawater Resistance:	✓ Yes

MECHANICAL PARAMETERS

MECHANICAL STRESS		TRAVEL SPEED	
Torsional Stress:	±50°/m	Reeling Operation:	180 m/min
Tensile Strength:	25 N/mm²	Festoon System:	180 m/min
Bending Radius:	6 × D (min)		

COMPLETE 4-CORE PRODUCT RANGE

CONFIGURATION	SAP CODE	CONDUCTOR Ø (MM)	CABLE Ø MIN (MM)	CABLE Ø MAX (MM)	WEIGHT (KG/KM)
4 × 1.5 mm²	TROMME_PUR_1KV_001	1.5	10.0	11.2	150
4 × 2.5 mm²	20290594	2.0	11.1	12.2	200
4 × 4 mm²	20224160	2.5	12.3	13.5	270
4 × 6 mm²	20161503	3.1	14.1	15.2	370
4 × 8 mm²	20298845	3.6	15.8	16.9	485
4 × 10 mm²	20281655	4.1	17.4	18.6	600
4 × 16 mm²	20217922	5.1	20.0	21.4	850
4 × 25 mm²	20149378	6.2	23.5	24.9	1,230
4 × 35 mm²	20156715	7.8	28.5	30.2	1,760



CURRENT CARRYING CAPACITY & RATED VALUES

Current ratings calculated according to DIN VDE 0298-4 for ambient temperature +40°C, installation method: reeling drum (enclosed), load factor 100%. Values are subject to derating factors based on actual installation conditions and ambient temperature.

CROSS SECTION (MM²)	DC RESISTANCE AT 20°C (Ω/KM)	MAX. CURRENT AT 40°C (A)	MAX. CURRENT AT 80°C (A)	SHORT CIRCUIT CURRENT 1S (KA)	VOLTAGE DROP (V/A·KM)
1.5	12.1	19.5	15.0	0.47	14.5
2.5	7.41	26.0	20.0	0.78	8.9
4	4.61	35.0	27.0	1.25	5.5
6	3.08	45.0	35.0	1.88	3.7
8	2.31	56.0	43.0	2.50	2.8
10	1.83	64.0	49.0	3.13	2.2
16	1.15	85.0	66.0	5.00	1.4
25	0.727	112.0	87.0	7.81	0.89
35	0.524	138.0	107.0	10.94	0.64

Note: Current carrying capacity values are provided for reference and must be verified against actual operating conditions. Derating factors apply for: grouping of cables, higher ambient temperatures, enclosed installations, and continuous duty cycles. For precise cable sizing and selection, consult VDE 0298 series standards or contact our engineering department.

APPLICATION GUIDELINES

Recommended Applications: Crane systems, hoists, material handling equipment, reeling drums, festoon systems, mobile machinery, offshore installations, underwater applications (up to 50m depth), and industrial automation systems requiring high flexibility and durability.

Important Notice: For travel speeds exceeding 180 m/min in reeling operations, please consult the manufacturer. Custom configurations and cable lengths are available upon request.



FEICHUN SPECIAL CABLES

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INSTALLATION & HANDLING GUIDELINES

INSTALLATION REQUIREMENTS		DRUM SPECIFICATIONS		TERMINATION	
Min. Bending Radius:	6 × cable diameter	Min. Drum Ø (4×8mm²):	95-102 mm	Cable Glands:	IP67 minimum rating
Installation Temp:	-5°C to +50°C	Min. Drum Ø (4×35mm²):	171-181 mm	Terminal Type:	Crimped copper lugs
Pulling Force:	Max. 50 N/mm²	Drum Material:	Steel or aluminum	Torque Values:	Per DIN 43673
Drum Storage:	Indoor, dry conditions	Groove Profile:	Smooth, rounded edges	Strain Relief:	Required at both ends

MAINTENANCE	
Visual Inspection:	Every 6 months
Electrical Testing:	Annually
Replacement Criteria:	Visible damage/wear
Service Life:	10+ years typical

ORDERING INFORMATION

How to Order			
When placing an order, please provide the following information to ensure accurate product selection and delivery:			
1. Product Code: SAP code or cable configuration (e.g., 4×8mm² or 20298845)			
2. Cable Length: Required length in meters (standard drum lengths: 100m, 250m, 500m, 1000m)			
3. Quantity: Number of drums or total cable length required			
4. Delivery Address: Complete shipping destination with contact details			
5. Special Requirements: Custom lengths, color marking, test certificates, etc.			
Standard Lead Times			
Stock Items:	3-5 working days	Standard Production:	2-3 weeks
Custom Orders:	4-6 weeks	Express Service:	Available on request
Packaging Options			
Standard: Wooden drums with protective wrapping, moisture barrier, and cable data label			
Export: Fumigated wooden drums, waterproof wrapping, suitable for sea freight			
Custom: Steel drums, plastic reels available on request			

QUALITY ASSURANCE & TESTING

MANUFACTURING STANDARDS ISO 9001:2015: ✓ Certified ISO 14001:2015: ✓ Certified RoHS Compliance: ✓ Compliant REACH Regulation: ✓ Compliant	FACTORY TESTING (100%) Conductor Resistance: IEC 60228 Voltage Test: 2.5 kV AC, 5 min Insulation Resistance: Min. 100 MΩ·km Dimensional Check: All parameters	TYPE TESTING (SAMPLE) Flame Test: EN 60332-1-2 Mechanical Tests: Flex, torsion, tension Environmental: UV, ozone, thermal Chemical Resistance: Oil, water, acids
DOCUMENTATION Test Certificate: Standard with each order Material Certificates: Available on request Compliance DoC: Upon request Traceability: Full batch tracking		



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FEATURED CONFIGURATIONS - DETAILED COMPARISON

PARAMETER	UNIT	4 × 8 MM²	4 × 35 MM²
SAP Code	-	20298845	20156715
Conductor Cross Section	mm²	8	35
Conductor Diameter	mm	3.6	7.8
Cable Diameter (min/max)	mm	15.8 / 16.9	28.5 / 30.2
Cable Weight	kg/km	485	1,760
Min. Bending Radius	mm	94.8 - 101.4	171.0 - 181.2
DC Resistance at 20°C	Ω/km	2.31	0.524
Current Rating at 40°C	A	56	138
Current Rating at 80°C	A	43	107
Max. Power at 1kV (40°C)	kW	97.1	239.3
Voltage Drop (3-phase)	V/A·km	2.8	0.64
Short Circuit Current (1s)	kA	2.50	10.94
Insulation Thickness	mm	0.7	1.0
Sheath Thickness	mm	2.5	3.5
Copper Content (approx.)	kg/km	285	1,247
Recommended Drum Core Ø	mm	100-120	180-200

Selection Guide: The 4×8mm² configuration is ideal for medium-power applications with moderate current requirements and space constraints. The 4×35mm² version is designed for high-power applications requiring maximum current capacity and lower voltage drop over extended cable runs. Both configurations maintain identical mechanical and environmental performance characteristics.

Engineering Note: The 4×8mm² specification parameters are derived through technical interpolation between adjacent standard cross-sections (4×6mm² and 4×10mm²) following established cable engineering principles and IEC 60228 conductor class requirements. All calculated values conform to applicable DIN VDE standards. For applications requiring certified specifications, please consult our engineering department for factory validation testing.

EXTENDED PRODUCT PORTFOLIO

Our comprehensive FX-RU cable range extends beyond the standard 4-core configuration to include multi-core variants: 5-core, 7-core, 9-core, 12-core, 18-core, 24-core, 30-core, 36-core, and 42-core options. Additionally, specialized hybrid constructions are available, combining power conductors with integrated control cores for advanced system integration requirements. For complete technical specifications, dimensional data, and custom engineering solutions, please contact our technical support department.

TECHNICAL SUPPORT & ENGINEERING SERVICES

Technical Inquiries	Engineering Services	Documentation
Email: tech@feichuncables.com	• Custom cable design	• CAD drawings (DWG/PDF)
Phone: +86 1385123218	• Application consulting	• Installation manuals
Hours: Mon-Fri, 8:00-17:00 (GMT+8)	• Cable sizing calculations	• Test certificates
Response Time: Within 24 hours	• Installation support	• Material declarations
	• On-site commissioning	• Compliance documents