TYPE · LV REELING CABLE · PORT CRANES | 0.6/1 kV | 18 TYPES | EQUIVALENT TO CORDAFLEX XPRT E-RTG

FC-CFX-ER (N)SHÖU-J + FO

Large-Section LV Reeling Cable for E-RTG, optional Fibre Optics

Large-section low-voltage reeling cable for the main supply of electrified RTGs — 3×35 to 3×300 mm² with an optional central 12-fibre single-mode element carrying power and remote-control data in one cable.

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01 Application and product overview

Large-section LV reeling cables developed for the main supply of diesel-to-electric converted RTGs (E-RTG). Based on the heavy-duty design, a 12-fibre single-mode element can be integrated in the centre, carrying power and remote-control / video data in one cable — ideal for automation and remote-operation retrofits.

3×35 to 3×300 mm² with earth split in three; central 12 × E9 single-mode fibre element (FO versions), OTDR-tested at the factory; yellow PCP double sheath and polyester anti-torsion braid for high-speed reeling. Non-FO versions have a rubber centre filler for symmetry.

Typical applications

- E-RTG main supply reels (400 V / 690 V)
- Power + fibre links for remotely operated RTGs
- High-power LV mobile equipment reels
- Quick plug-in supply when changing yard blocks
- Large-section LV shore and temporary supply

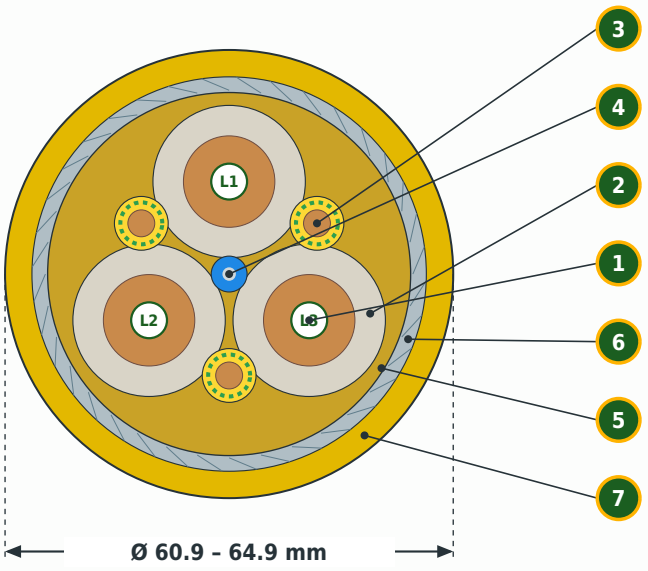
18 types	0.6/1 kV	30 N/mm²	240 m/min
Type variants in the series	Rated voltage U_0/U	Max. tensile stress on conductors	Max. travel speed

Equivalent reference type

REFERENCE TYPE	FEICHUN EQUIVALENT
CORDAFLEX XPRT E-RTG 0.6/1 kV	FC-CFX-ER (N)SHÖU-J + FO

Functional equivalent of the reference type with similar diameter and weight, suitable for existing reels and guides. Port application tip: E-RTG reel cables are repeatedly plugged, unplugged and dragged when changing blocks: choose fibre versions to reserve a remote-control channel and fit bend protection near the plug. Fibre termination needs trained technicians and special tools; factory-fitted connectors or pigtails are recommended — state connector type and tail length when ordering.

02 Construction



Section A–A · FC-CFX-ER 0.6/1 kV · reference size 3×185+3×95/3+1×(12E9)
Schematic, 1st-angle, not to scale; other sizes scale proportionally.

No.	Element	Material
1	**Phase conductor**	Tinned electrolytic Cu, very finely stranded, class FS / class 5
2	**Insulation**	Special EPR-based compound, light-coloured cores with black numbers
3	**Earth conductor**	Split into 3 parts in the interstices, green-yellow insulation
4	**Centre element**	Rubber filler, or FO element 12 × E9 (FO versions)
5	**Inner sheath**	PCP-based rubber compound, yellow
6	**Anti-torsion braid**	Polyester braid vulcanised between the sheaths
7	**Outer sheath**	PCP-based compound, min. 5GM5, abrasion- and tear-resistant, yellow

03 Technical data

Rated voltage U_0/U	0.6/1 kV
Max. operating voltage AC / DC	0.7/1.2 kV · 0.9/1.8 kV
AC test voltage (5 min)	3.5 kV
Conductor	Tinned copper, class FS / 5
Max. conductor temperature	+90 °C
Short-circuit temperature	+250 °C
Ambient, mobile use	−35 °C to +80 °C
Ambient, fixed installation	−50 °C to +80 °C
Max. tensile stress on conductors	30 N/mm²
Torsion	±50 °/m
Min. bending radius	To DIN VDE 0298-3 (see tables)
S-type direction changes	min. 20 × D
Travel speed	up to 240 m/min
Resistance	Oil, ozone, UV and moisture

04 Type and data tables — 0.6/1 kV (18 types)

Size cores × mm²	FeiChun part no.	Cond. Ø max. mm	Outer Ø min. mm	Outer Ø max. mm	Min. bend radius mm	Weight kg/km	Max. tensile force N	R_{20} max. Ω/km	Current A	Short-circ. kA (1 s)
Power cables, 3-core with earth split in three										
3×35+3×16/3	FC-CFX-ER-001	8.4	28.7	31.7	159	1,990	3,150	0.565	162	5.01
3×50+3×25/3	FC-CFX-ER-002	10.3	34.4	37.4	187	2,810	4,500	0.393	202	7.15
3×70+3×35/3	FC-CFX-ER-003	12.0	39.7	42.7	214	3,860	6,300	0.277	250	10.01
3×95+3×50/3	FC-CFX-ER-004	14.0	44.3	47.3	237	4,950	8,550	0.210	301	13.59
3×120+3×70/3	FC-CFX-ER-005	15.8	51.0	55.0	275	6,440	10,800	0.164	352	17.16
3×150+3×70/3	FC-CFX-ER-006	17.5	53.9	57.9	290	7,500	13,500	0.132	404	21.45
3×185+3×95/3	FC-CFX-ER-007	19.4	58.9	62.9	315	8,990	16,650	0.108	461	26.46
3×240+3×120/3	FC-CFX-ER-008	22.5	67.4	71.4	357	11,940	21,600	0.0817	540	34.32
3×300+3×150/3	FC-CFX-ER-009	25.2	75.6	79.6	398	14,740	27,000	0.0654	620	42.90
Power cables with integrated fibre optics (12 × E9)										
3×35+3×16/3+1×(12E9)	FC-CFX-ER-010	8.4	30.7	33.7	168	2,080	3,150	0.565	162	5.01
3×50+3×25/3+1×(12E9)	FC-CFX-ER-011	10.3	36.4	39.4	197	2,900	4,500	0.393	202	7.15
3×70+3×35/3+1×(12E9)	FC-CFX-ER-012	12.0	41.7	44.7	224	3,950	6,300	0.277	250	10.01
3×95+3×50/3+1×(12E9)	FC-CFX-ER-013	14.0	46.3	49.3	246	5,040	8,550	0.210	301	13.59
3×120+3×70/3+1×(12E9)	FC-CFX-ER-014	15.8	53.0	57.0	285	6,530	10,800	0.164	352	17.16
3×150+3×70/3+1×(12E9)	FC-CFX-ER-015	17.5	55.9	59.9	300	7,590	13,500	0.132	404	21.45
3×185+3×95/3+1×(12E9)	FC-CFX-ER-016	19.4	60.9	64.9	324	9,080	16,650	0.108	461	26.46
3×240+3×120/3+1×(12E9)	FC-CFX-ER-017	22.5	69.4	73.4	367	12,030	21,600	0.0817	540	34.32
3×300+3×150/3+1×(12E9)	FC-CFX-ER-018	25.2	77.6	81.6	408	14,830	27,000	0.0654	620	42.90

Current ratings are base values at 30 °C in air with the cable fully unreeled (DIN VDE 0298-4); for reel operation multiply by the layer and ambient temperature factors below. Short-circuit current values are 1 s values.

Ambient temperature factors (90 °C conductor)

°C	20	25	30	35	40	45	50
Factor	1.08	1.04	1.00	0.96	0.91	0.87	0.82

Cylindrical multi-layer reels — layer factors

Layers	1	2	3	4	5
Factor	0.80	0.61	0.49	0.42	0.38

Monospiral reels (guide values)

Reel	Well ventilated	Unventilated / enclosed
Factor	0.85	0.75

Loaded-core factors (control cables)

Loaded cores	5	7	10	14	19	24
Factor	0.75	0.65	0.55	0.50	0.45	0.40

05 Standards and testing

Standard	Scope
DIN VDE 0250-814	(N)SHÖU reeling cables
DIN VDE 0298-3 / -4	Bending radii, tension, current ratings
IEC 60228	Conductors (class 5, class FS)
IEC 60245	Rubber-insulated flexible cables
IEC 60332-1-2	Vertical flame test, single cable
IEC 60811-404	Oil resistance test

Routine and type tests

- AC voltage test on every drum (LV 2.5–3.5 kV)
- Conductor resistance, insulation resistance and dimensional checks
- Type tests: reeling, reversed bending, roller bending and torsion
- OTDR attenuation test of every fibre; report supplied with the drum

Test documents: every shipment comes with factory inspection reports from FeiChun's in-house laboratory. Third-party witnessed testing can be arranged at the buyer's cost.

06 Installation, marking and supply

Installation notes

- Use a drum stand and pay out tangentially — never pull off over the flange; avoid kinks and twists.
- Lay the cable out fully and let it relax for at least 24 hours to remove the winding twist before reeling.
- Reel core diameter at least 2 × the minimum bending radius; guide funnel and sheave radius not smaller than the minimum bending radius.
- Set tension to the reel manufacturer's values and keep 2–3 dead turns on the reel.
- Combine all earth conductor parts at both ends; avoid earth loops on screened elements.
- Inspect daily in the first week for corkscrewing, local wear and abnormal tension.

Sheath marking

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FEICHUN FC-CFX-ER (N)SHÖU [size] [voltage] [year] [batch] [metre mark]
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Packaging and supply

Packing	Steel-timber or all-steel drums; outer protection; both ends sealed with heat-shrink caps
Drum lengths	Supplied in full ordered lengths; no joints in reeling cables
Drum marking	Type, size, length, gross / net weight, drum no., production date
Documents	Factory inspection report; OTDR report for fibre versions
Lead time	Typically 2–3 weeks (depending on type and quantity)
Warranty	1 year, covering failures not caused by human factors

07 Certification and quality

CE — LVD 2014/35/EU

Certificate of conformity M.2025.206.C116598 · EN 50525-1:2011+A1:2022 · UDEM International Certification · valid until 01.04.2030

EAC — TR CU 004/2011

Certificate ЕАЭС KG417/052.CN.02.15390 · GOST 31996-2012, GOST 31565-2012 · valid 24.10.2025–23.10.2030

UKCA — voluntary verification

No. ICR/VC/HS2508110 · BS EN 50525-1:2011+A1:2022 · ICR Polska · valid until 17.08.2030

ATEX — file verification

No. 3A260609.AFST025 · Directive 2014/34/EU · Ex ia IIC T6 Ga; Ex da IIIC T185 °C Da · Ente Certificazione Macchine · until 08.06.2031 (voluntary)

Certificates apply to the types listed in their annexes; whether a specific type is covered can be confirmed on request. Copies of certificates, datasheets and test reports are available on request for vendor approval and project submissions.

08 Trademark notice and intellectual property

CORDAFLEX® is a trademark of its owner (Prysmian Group) and is cited solely to identify the reference type for technical comparison; FeiChun Cables has no affiliation with, and is not endorsed by, the trademark owner. FC-CFX-ER products are designed to equivalent functional performance. (N)SHÖU is a standard type code.

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