TYPE · LV REELING CABLE · PORT CRANES | 0.6/1 kV | 33 TYPES | EQUIVALENT TO CORDAFLEX XPRT

FC-CFX-HD (N)SHÖU-J

Heavy-Duty LV Reeling Cable for Port Cranes

Heavy-duty low-voltage reeling cable for high travel speeds, dynamic tension, direction changes in several planes and frequent torsion — EPR insulation, yellow PCP double sheath and a vulcanised polyester anti-torsion braid.

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01 Application and product overview

Heavy-duty LV reeling cables designed for high travel speeds, dynamic tension, direction changes in several planes and frequent torsion. They supply motor-driven reels on container cranes and port handling equipment; the series covers 3-, 4- and 5-core power cables and 1.5 / 2.5 mm² control cables.

Very finely stranded tinned copper (class FS / 5), special EPR insulation and a yellow PCP sheath (min. 5GM5) give abrasion and tear resistance. A polyester anti-torsion braid vulcanised between the sheaths prevents bird-caging and corkscrewing; the earth is split in three in the interstices for symmetry and good bending performance.

Typical applications

- Rail-mounted RMG and automated stacking cranes (ASC) — gantry reels
- Grid-powered E-RTG supply reels (large sizes up to 3×300+3×150/3 mm²)
- Portal and multipurpose crane gantry reels (400 V)
- STS trolley, machinery house and auxiliary reels
- LV auxiliary reels on ship loaders and stacker-reclaimers

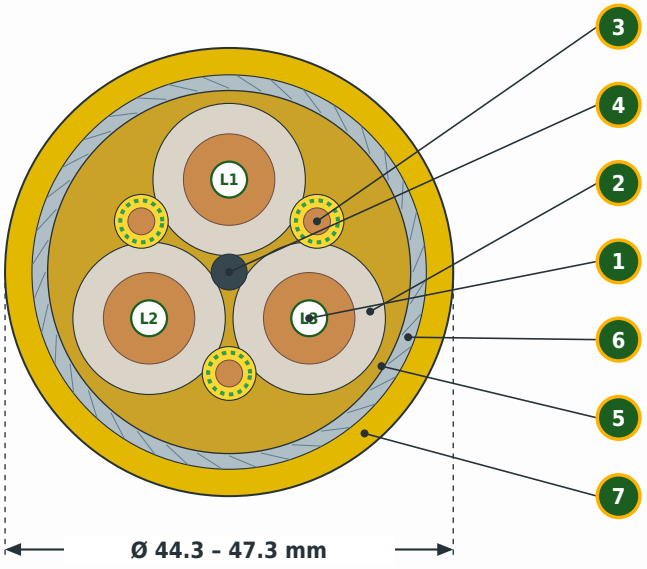
33 types	0.6/1 kV	30 N/mm²	240 m/min
Type variants in the series	Rated voltage U_0/U	Max. tensile stress on conductors	Max. travel speed

Equivalent reference type

REFERENCE TYPE	FEICHUN EQUIVALENT
CORDAFLEX XPRT 0.6/1 kV	FC-CFX-HD (N)SHÖU-J

Functional equivalent of the reference type with similar diameter and weight, suitable for existing reels and guides. Port application tip: Preferred series for monospiral reels; for travel above 200 m or speeds above 120 m/min, check tension and bending radius as shown in the reel system design rules.

02 Construction



Section A–A · FC-CFX-HD 0.6/1 kV · reference size 3×95+3×50/3
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 filler**	Profiled rubber element
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 (33 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-HD-001	8.4	28.7	31.7	159	1,990	3,150	0.565	162	5.01
3×50+3×25/3	FC-CFX-HD-002	10.3	34.4	37.4	187	2,810	4,500	0.393	202	7.15
3×70+3×35/3	FC-CFX-HD-003	12.0	39.7	42.7	214	3,860	6,300	0.277	250	10.01
3×95+3×50/3	FC-CFX-HD-004	14.0	44.3	47.3	237	4,950	8,550	0.210	301	13.59
3×120+3×70/3	FC-CFX-HD-005	15.8	51.0	55.0	275	6,440	10,800	0.164	352	17.16
3×150+3×70/3	FC-CFX-HD-006	17.5	53.9	57.9	290	7,500	13,500	0.132	404	21.45
3×185+3×95/3	FC-CFX-HD-007	19.4	58.9	62.9	315	8,990	16,650	0.108	461	26.46
3×240+3×120/3	FC-CFX-HD-008	22.5	67.4	71.4	357	11,940	21,600	0.0817	540	34.32
3×300+3×150/3	FC-CFX-HD-009	25.2	75.6	79.6	398	14,740	27,000	0.0654	620	42.90
Power cables, 4-core										
4G4	FC-CFX-HD-010	3.0	16.0	18.0	90	450	480	5.09	41	0.57
4G6	FC-CFX-HD-011	3.6	17.4	19.4	97	600	720	3.39	53	0.86
4G10	FC-CFX-HD-012	4.6	21.6	23.6	118	900	1,200	1.95	74	1.43
4G16	FC-CFX-HD-013	5.6	23.7	26.7	134	1,240	1,920	1.24	99	2.29
4G25	FC-CFX-HD-014	7.3	28.5	31.5	158	1,850	3,000	0.795	131	3.58
Power cables, 5-core										
5G4	FC-CFX-HD-015	3.0	17.4	19.4	97	550	600	5.09	41	0.57
5G6	FC-CFX-HD-016	3.6	19.0	21.0	105	690	900	3.39	53	0.86
5G10	FC-CFX-HD-017	4.6	23.4	25.4	127	1,070	1,500	1.95	74	1.43
5G16	FC-CFX-HD-018	5.6	26.1	29.1	146	1,500	2,400	1.24	99	2.29
5G25	FC-CFX-HD-019	7.3	33.7	36.7	184	2,340	3,750	0.795	131	3.58
Control cables, 1.5 mm²										
7G1.5	FC-CFX-HD-020	1.6	15.2	17.2	86	390	310	13.7	23	0.21
12G1.5	FC-CFX-HD-021	1.6	21.4	23.4	117	720	540	13.7	23	0.21
18G1.5	FC-CFX-HD-022	1.6	21.3	23.3	117	770	810	13.7	23	0.21
24G1.5	FC-CFX-HD-023	1.6	23.8	26.8	134	1,020	1,080	13.7	23	0.21
30G1.5	FC-CFX-HD-024	1.6	26.5	29.5	148	1,240	1,350	13.7	23	0.21
36G1.5	FC-CFX-HD-025	1.6	26.5	29.5	148	1,290	1,620	13.7	23	0.21
56G1.5	FC-CFX-HD-026	1.6	35.9	38.9	195	2,040	2,520	13.7	23	0.21
Control cables, 2.5 mm²										
7G2.5	FC-CFX-HD-027	2.0	16.6	18.6	93	500	520	8.21	30	0.36
12G2.5	FC-CFX-HD-028	2.0	23.4	25.4	127	910	900	8.21	30	0.36
18G2.5	FC-CFX-HD-029	2.0	23.3	25.3	127	1,010	1,350	8.21	30	0.36
24G2.5	FC-CFX-HD-030	2.0	26.2	29.2	146	1,340	1,800	8.21	30	0.36
30G2.5	FC-CFX-HD-031	2.0	29.4	32.4	162	1,660	2,250	8.21	30	0.36
36G2.5	FC-CFX-HD-032	2.0	30.3	33.3	167	1,750	2,700	8.21	30	0.36
44G2.5	FC-CFX-HD-033	2.0	34.1	37.1	186	2,180	3,300	8.21	30	0.36

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

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-HD (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
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

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Document control

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