ANHUI FEICHUN SPECIAL CABLE CO., LTD. · INTERNATIONAL BUSINESS DEPARTMENT

FC-CFX™ CORDAFLEX (SMK)-V Equivalent (N)SHTÖU 0.6/1 kV — 37G2.5 mm² + 2 × CAN-Bus

Self-supporting vertical reeling (spreader) cable with integrated screened CAN-Bus elements · Black PCP sheath system · Full Technical Datasheet, Test Schedule and Commercial Quotation

TYPE (N)SHTÖU | 0.6/1 (1.2) kV | DIN VDE 0250-814 | 2 × CAN-Bus 120 Ω | Vertical reeling 240 m/min | Sheath colour: black | Class 6 conductor

Datasheet **FC-TDS-CFX-2026-C7V9** Quotation **FC-QTN-CFX-2026-C7V9** Drawing **FC-DRW-CFX-2026-C7V9**

Revision **01** Issue date **29 August 2026** Pages **1 of 1 (continuous)**

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1 · Scope, application and configuration

This document specifies the FeiChun FC-CFX™ self-supporting vertical reeling cable offered as a form-, fit- and function-equivalent replacement for CORDAFLEX (SMK)-V in the configuration **37 × 2.5 mm² power and control cores plus 2 screened CAN-Bus pairs**, black outer sheath, supplied as 2 rolls of 90 m.

The (N)SHTÖU family designation describes a rubber-insulated, rubber-sheathed heavy-duty flexible cable with a vulcanised twin-sheath system and an intermediate anti-torsion reinforcement. The SMK-V grade is the vertical-suspension variant of that family: the sheath

system, the reinforcement braid and the permissible dynamic conductor stress are all uprated so that the cable can carry its own suspended mass over the full working drop while being reeled at speed, without progressive core migration, sheath tearing or conductor fatigue.

1.1 Intended applications

- Container spreader and headblock cables on ship-to-shore (STS) and rubber-tyred gantry (RTG) cranes
- Mobile harbour crane spreader and grab reeling systems
- Hoist and trolley vertical reeling drums in steel plants, bulk terminals and waste-handling facilities
- Deep-shaft and hoist applications where the cable is suspended and reeled simultaneously
- Any installation combining power distribution, multi-circuit control and CAN-Bus automation data in a single cable

1.2 Not intended for

- Direct burial, permanent submersion or embedding in concrete
- Festoon systems with sharp trolley radii below the stated minimum bending radius
- Continuous torsional applications exceeding ±25°/m without prior written confirmation from FeiChun engineering
- Medium-voltage service — this construction is rated 0.6/1 kV only

CONFIGURATION POINTS TO CONFIRM BEFORE PRODUCTION RELEASE

Your enquiry states "37 conductors plus 2 CAN bus". This offer has been prepared as **37 × 2.5 mm² + 2 individually screened CAN-Bus pairs (2 × 2 × 0.5 mm²)**.

- If the requirement is in fact **one** CAN-Bus pair (2 bus conductors in total), the overall diameter reduces to approximately 39.5 mm and the unit price is revised accordingly.
- Please confirm whether the 37 cores include a green/yellow protective earth core (**37G2.5**) or are all numbered cores without earth (**37X2.5**).
- Please confirm the working drop, the reel type (monospiral, cylindrical, random-wound) and whether a central tensile support element is required.

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2 · Design philosophy and cross-reference

The original SMK-V pattern is defined by four engineering upgrades over the standard CORDAFLEX (N)SHTÖU construction: a reinforced anti-torsion braid, an increased and uprated sheath compound, a higher permissible dynamic conductor stress, and a core lay-up optimised to resist migration under suspended load. The FeiChun equivalent reproduces all four, and substitutes FeiChun's own proprietary material set where it delivers a measurable margin.

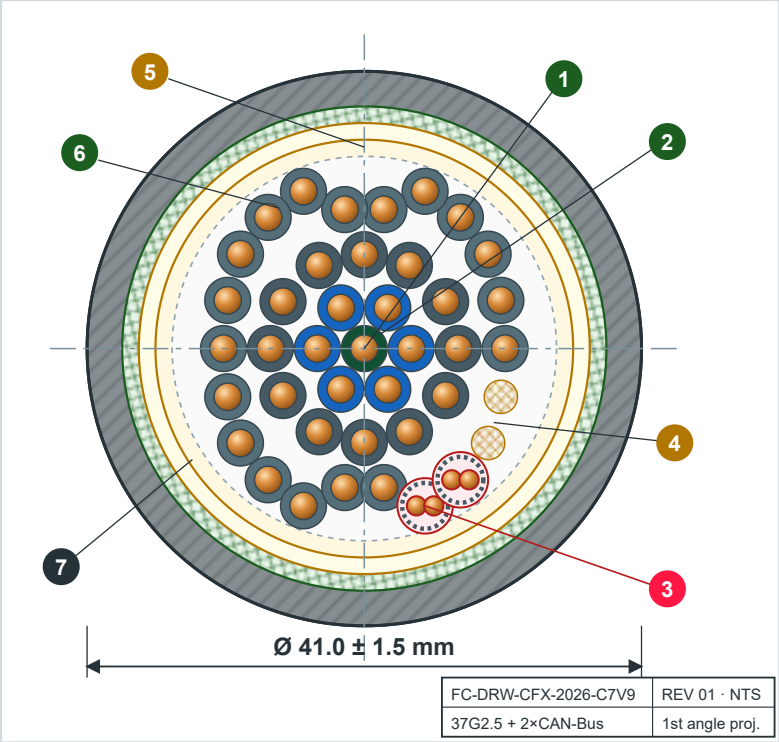
DESIGN FEATURE	REFERENCE SMK-V PATTERN	FEICHUN FC-CFX™ EQUIVALENT
Conductor	Bare copper, fine stranded	FC-FLX™ bare annealed electrolytic copper ≥ 99.97 %, IEC 60228 class 6, single-wire Ø 0.10 mm
Insulation	EPR 3GI3	EPR 3GI3, peroxide cured, continuously vulcanised (CV) line
Anti-torsion reinforcement	Polyester braid, vulcanised between sheaths	FC-ASB™ polyester/aramid hybrid braid, vulcanised bond both faces
Inner sheath	PCP, yellow	PCP 5GM5, yellow, 1.20 mm
Outer sheath	PCP 5GM5 marine grade	PCP 5GM5, black, 3.40 mm, ozone/UV/oil resistant
Dynamic conductor stress	30 N/mm²	30 N/mm² (same design basis)
Bus element	Screened bus pair, optional	2 × screened 120 Ω CAN-Bus pairs, foil + ≥ 85 % tinned copper braid
Travel speed	up to 240 m/min	up to 240 m/min

INTERCHANGEABILITY STATEMENT

The cable offered is dimensionally and electrically interchangeable with the referenced construction and may be installed on the same reel, guide and clamp hardware without modification, provided the reel drum diameter satisfies the minimum bending radius stated in section 10. FeiChun does not supply, rebadge or represent the original manufacturer's product; the cross-reference is given solely to identify the equivalent construction.

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3 · Cross-sectional construction drawing



POS.	ELEMENT	MATERIAL / SPECIFICATION
1	Conductor	Bare annealed copper, extra-fine stranded, IEC 60228 class 6, 2.5 mm², single-wire Ø 0.10 mm
2	Core insulation	EPR compound 3GI3 to DIN VDE 0207-20, radial wall 0.70 mm nominal
3	CAN-Bus element	2 × (2 × 0.5 mm²) tinned Cu, foam-skin PE, Al/PET foil + tinned Cu braid ≥ 85 %, 120 Ω, PA outer covering
4	Fillers / strength	FC-ASB™ aramid-reinforced fillers in outer-layer interstices; optional central 15 kN support element
5	Inner sheath	PCP compound 5GM5, yellow, wall 1.20 mm, vulcanised bond to braid
6	Anti-torsion braid	FC-ASB™ high-tenacity polyester/aramid hybrid, vulcanised between both sheaths
7	Outer sheath	PCP compound 5GM5, **black**, wall 3.40 mm, abrasion, oil, ozone and UV resistant

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Drawing not to scale. Layer sequence and dimensional values are indicative of the production design; the binding construction is the approved production drawing issued after order confirmation.

4 · Layer-by-layer construction description

LAYER 1

Conductor

Bare annealed electrolytic copper of purity ≥ 99.97 %, bunched and stranded to IEC 60228 class 6 with a single-wire diameter of 0.10 mm. The very fine wire diameter is what allows the 2.5 mm² core to survive several million reversed-bending cycles at the reel radius. Bunching lay lengths are held short and in the same rotational sense throughout each layer so that bending strain is shared evenly across all wires.

LAYER 2

Core insulation

Peroxide-cured EPR compound to type 3GI3, applied on a continuous-vulcanisation line at a nominal radial wall of 0.70 mm. EPR is selected over PVC and XLPE for its retained elasticity at −35 °C, its resistance to ozone cracking in outdoor port atmospheres, and its ability to recover shape after repeated compression at the reel.

LAYER 3

CAN-Bus elements

Two independently screened pairs, each 2 × 0.5 mm² tinned copper with foam-skin polyethylene insulation, twisted at a short and irregular lay to suppress crosstalk, wrapped with aluminium/polyester foil and overlaid with a tinned copper braid of at least 85 % optical coverage. Each pair carries its own polyamide covering so that the two bus circuits remain electrically independent along the entire length.

LAYER 4

Lay-up and fillers

Cores are laid up in concentric layers 1 + 6 + 12 + 18 with alternating lay direction between layers. The two bus elements occupy dedicated positions in the outer layer, with FC-ASB™ aramid-reinforced fillers placed in the adjacent interstices to hold the geometry circular and to carry a share of the suspended load. A central tensile support element rated 15 kN is available where the working drop demands it.

LAYER 5

Inner sheath

Yellow PCP compound 5GM5 extruded at 1.20 mm over the laid-up core. The inner sheath fills the outer-layer interstices, locks the core geometry and forms the first of the two vulcanised bonding faces that make the sheath system behave as a single mechanical structure rather than as loose concentric tubes.

LAYER 6

Anti-torsion braid

FC-ASB™ high-tenacity polyester/aramid hybrid braid applied directly over the inner sheath and vulcanised into both sheath faces during curing. This is the element that resists the torsional unwinding forces generated when a suspended cable rotates about its own axis, and it is the principal difference between an SMK-V grade cable and a general-purpose reeling cable.

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LAYER 7

Outer sheath

Black PCP compound 5GM5 at a nominal 3.40 mm radial wall. Polychloroprene is chosen for its combination of abrasion resistance, flame retardance, oil resistance and long-term ozone and UV stability in exposed marine and port environments. The black pigmentation provides the highest carbon-black loading available in this compound family and therefore the best UV performance of the colour range.

SYSTEM

Vulcanised sheath system

Inner sheath, braid and outer sheath are co-vulcanised so that they cannot slip relative to one another. Under suspended load the tensile force is transferred from the outer sheath into the braid rather than into the conductors, which is what keeps the permissible dynamic conductor stress at 30 N/mm^2 instead of the 15 N/mm^2 typical of a standard construction.

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5 · Core identification and colour scheme

Cores are identified to DIN VDE 0293-308. For a 37-core control and power cable, the standard scheme is black insulation with continuous white numeric printing, with an optional green/yellow protective earth core in the outermost layer.

LAYER	CORES	IDENTIFICATION
Centre	1	Black, printed "1"
Layer 1	6	Black, printed "2" to "7"; counting direction marked by a red identification thread
Layer 2	12	Black, printed "8" to "19"
Layer 3	18	Black, printed "20" to "37" — or "20" to "36" plus one green/yellow earth core in the 37G2.5 variant
Bus positions	2	Bus pairs printed "CAN 1" and "CAN 2"; within each pair, core colours white (CAN-H) and blue (CAN-L)

CUSTOM IDENTIFICATION

Alternative schemes are available at no extra cost when specified before production: full colour coding to DIN VDE 0293-308 table 2, printed numbering with an additional letter prefix, or customer-specific circuit designations printed on each core. Please supply the required schedule with your order confirmation.

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6 · Electrical characteristics

PARAMETER	VALUE
POWER AND CONTROL CORES	
Rated voltage U_0/U	0.6/1 kV
Maximum permissible operating voltage, AC	0.7/1.2 kV
Maximum permissible operating voltage, DC	0.9/1.8 kV
AC test voltage, main cores	3.5 kV, 5 min, core to core and core to screen
Spark test voltage, in-line	6 kV AC, 100 % of production length
Conductor resistance at 20 °C, 2.5 mm^2	≤ 8.21 Ω/km
Insulation resistance at 20 °C	≥ 200 MΩ·km
Insulation resistance constant at 90 °C	≥ 0.5 MΩ·km
Mutual capacitance, core to core	approx. 180 nF/km
Inductance, nominal	approx. 0.32 mH/km
Short-circuit current density, 1 s	143 A/mm^2 (from 90 °C to 250 °C)
Short-circuit current, 2.5 mm^2, 1 s	approx. 0.36 kA
CAN-BUS ELEMENTS	
Characteristic impedance	120 ± 12 Ω to ISO 11898-2
Conductor cross-section	2 × 0.5 mm^2, tinned copper, class 5
Loop resistance at 20 °C	≤ 78 Ω/km
Mutual capacitance	≤ 45 nF/km at 1 kHz
Screen coverage	Al/PET foil 100 % plus tinned copper braid ≥ 85 %
Screen transfer impedance at 10 MHz	≤ 50 mΩ/m
Signal propagation delay	approx. 5.0 ns/m

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PARAMETER	VALUE
Test voltage, bus pair	1.0 kV AC, 1 min, core to core and core to screen

7 · CAN-Bus transmission element

The two bus pairs are engineered as an integral part of the cable rather than as an add-on. The design problem is that thirty-seven power and control cores switching inductive loads sit immediately adjacent to a differential signal pair operating at millivolt noise margins, in a cable that flexes several thousand times a day.

7.1 How interference is controlled

- **Short irregular twist lay.** Each pair is twisted at a lay length shorter than the adjacent power cores and deliberately offset from the lay of the neighbouring bus pair, so that neither pair can couple resonantly into the other or into the surrounding power layer.
- **Double screening.** The aluminium/polyester foil provides complete electrostatic coverage at high frequency; the tinned copper braid provides the low transfer impedance needed at the switching frequencies produced by drive equipment.
- **Foam-skin PE insulation.** Low and stable permittivity keeps the characteristic impedance within tolerance even as the cable is bent around the reel and the pair geometry momentarily distorts.
- **Position in the lay-up.** The bus elements are placed in the outer layer, at the largest available radius, which minimises the compressive strain they experience at the reel radius and puts the maximum copper mass of the power cores between the bus pairs and the cable centre.

7.2 Transmission performance

DATA RATE	MAXIMUM LENGTH IN THIS CABLE	REMARKS
1 Mbit/s	≥ 90 m (full supplied length)	ISO 11898-2 high-speed CAN; standard for spreader automation
500 kbit/s	≥ 100 m	Typical CANopen crane network setting
250 kbit/s	≥ 250 m	Where multiple reeling drops are cascaded
125 kbit/s	≥ 500 m	Long-line or multi-drop configurations

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TERMINATION AND EARTHING OF THE BUS SCREEN

Each bus screen must be terminated at one end only, to the control cabinet earth bar, using a 360° screen clamp rather than a pigtail. Terminating both ends creates an earth loop that will inject reeling-induced noise directly into the differential pair. The 120 Ω line terminating resistors must be fitted at the two physical extremities of each bus segment, not at the cable ends, and the bus must not be used as a spur unless the stub length is kept under 0.3 m.

ALTERNATIVE DATA ELEMENTS

On request, one or both CAN-Bus pairs can be replaced by a PROFIBUS-DP pair (150 Ω), an industrial Ethernet element (Cat 5e or Cat 6, 4 × 2 × AWG 24), or an integrated optical element with 6, 12 or 24 fibres (G62.5/125 µm, G50/125 µm or E9/125 µm) in a gel-filled loose tube with aramid strain relief. Substitution changes the overall diameter and requires a revised drawing and price.

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8 · Current-carrying capacity and derating

Current ratings are established to DIN VDE 0298-4 for a free-in-air installation at 30 °C ambient with a 90 °C conductor temperature. Because the cable carries thirty-seven cores in a single bundle, the group reduction factor dominates the calculation and must not be omitted.

CONDITION	BASIS	RATING PER CORE, 2.5 MM²
Single core, free in air	DIN VDE 0298-4, 30 °C	32 A
Bundled, 37 loaded cores	Group factor 0.38	12.2 A
Bundled, 12 loaded cores	Group factor 0.50	16.0 A
Bundled, 6 loaded cores	Group factor 0.60	19.2 A
Wound on reel, 37 loaded cores	Group + reel factor 0.38 × 0.65	7.9 A

8.1 Ambient temperature correction

AMBIENT °C	20	30	40	50	60	70
Correction factor	1.07	1.00	0.93	0.85	0.76	0.65

> **REEL-WOUND DUTY**
>
> Where the cable is loaded while a substantial proportion of its length remains wound on the drum, the reel reduction factor must also be applied. For a fully wound single-layer drum use 0.80; for a multi-layer drum use 0.65; for a fully wound multi-layer drum in an enclosed housing use 0.50. These factors are cumulative with the group factor above. Where the actual duty cycle is intermittent, FeiChun engineering can perform a thermal calculation against your load profile on request.

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9 · Thermal, chemical and environmental data

PARAMETER	VALUE
Maximum conductor operating temperature	+90 °C
Maximum short-circuit temperature	+250 °C, 5 s maximum
Ambient temperature, fixed installation	−50 °C to +80 °C
Ambient temperature, flexible operation	−35 °C to +80 °C
Minimum installation temperature	−25 °C (cable to be uncoiled slowly)
Oil resistance	DIN EN 60811-404 / DIN VDE 0473-811-404, clause 10
Ozone resistance	DIN EN 50396, method B, no cracking
UV and weather resistance	Unrestricted indoor and outdoor use
Water resistance	Verified by long-term immersion testing; suitable for splash and wash-down duty
Salt-mist resistance	Suitable for coastal and port atmospheres; sheath compound resists chloride-induced degradation
Flame propagation	IEC 60332-1-2 single vertical wire test
Bundled flame test	IEC 60332-3-24 category C available on request
Halogen content	PCP sheath contains halogen; LSZH sheath system available as an option
Chemical resistance, general	Resistant to dilute acids and alkalis, mineral oils, greases and hydraulic fluids; not recommended for continuous contact with aromatic or chlorinated solvents
Silicone-free	Yes — suitable for paint-shop and coating environments
RoHS / REACH	Compliant; declarations issued with the works test certificate

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10 · Mechanical and dimensional data

PARAMETER	VALUE
Number and cross-section of main cores	37 × 2.5 mm^2
Number of bus elements	2 × (2 × 0.5 mm^2) screened pairs
Core lay-up	1 + 6 + 12 + 18, alternating lay direction
Diameter over laid-up core	approx. 31.8 mm
Diameter over inner sheath	approx. 34.2 mm
Nominal overall diameter	**41.0 ± 1.5 mm**
Approximate cable mass	2.55 kg/m
Copper content	approx. 890 kg/km
Minimum bending radius, flexible operation	10 × D = 410 mm
Minimum bending radius, fixed installation	6 × D = 246 mm
Minimum reel drum core diameter	820 mm
Minimum distance for S-type directional change	20 × D = 820 mm
Permissible dynamic conductor stress	30 N/mm^2
Permissible tensile load, standard construction	approx. 2,775 N (37 × 2.5 mm^2 × 30 N/mm^2)
Permissible tensile load with 15 kN support element	up to 15,000 N — support element must be anchored at the fixed end
Maximum free suspended length, unsupported	approx. 110 m at 2.55 kg/m with a safety factor of 4
Travel speed, vertical reeling	up to 240 m/min
Acceleration, maximum	1.5 m/s^2
Torsional capability	±25° per metre
Additional type tests	Reverse bending, roller bending, torsional stress, cold impact

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READING THE TENSILE FIGURES

The 2,775 N figure is the load the copper itself may carry in dynamic service. It is not a breaking load. Where the working drop, the acceleration profile or an ice and wind allowance produces a suspended load approaching that figure, specify the central support element and anchor it mechanically at the fixed end so that the tension is carried by the aramid and not by the conductors. Please advise the working drop and we will confirm which construction applies.

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11 · Reeling system design guidance

11.1 Drum and guide geometry

- Drum core diameter must be at least 20 × the cable outer diameter, that is 820 mm minimum for this construction. A larger drum always extends service life.
- Flange height must accommodate the wound layers with at least two cable diameters of freeboard, so that the outermost layer cannot ride over the flange.
- Guide rollers must have a groove radius matched to the cable, a minimum roller diameter of 15 × D, and free rotation under load. Fixed guides or worn rollers will abrade the sheath quickly.
- The fleet angle between the drum and the first guide should not exceed 2.5°.

11.2 Tension control

- The reeling system should maintain a constant back-tension of roughly 10–15 % of the suspended cable weight. Too little tension allows slack layers and cross-winding; too much accelerates conductor fatigue.
- Slip-ring or torque-motor drives should be commissioned with the cable installed and the drop fully paid out, and the tension re-checked after the first fifty operating cycles when the cable has bedded in.

11.3 Commissioning checks

CHECK	ACCEPTANCE
Insulation resistance	≥ 200 MΩ·km at 500 V DC, all cores to earth and core to core
Continuity	All 37 cores plus 4 bus conductors, end to end, against the core schedule
Bus loop resistance	≤ 78 Ω/km per pair; verify 120 Ω termination at both bus extremities
Bus screen isolation	Screen earthed at one end only; verify no continuity to earth at the far end
Sheath condition	No cuts, no flattening, no exposed braid after the first fifty cycles
Anchor and clamp	Strain relief clamped over the sheath, not over individual cores; support element anchored where fitted

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12 · Standards, testing and quality plan

12.1 Reference standards

STANDARD	SUBJECT
DIN VDE 0250-814	Rubber-insulated flexible cables for reeling and heavy-duty service
DIN VDE 0207-20	EPR insulating compound, type 3GI3
DIN VDE 0207-21	PCP sheathing compound, type 5GM5
DIN VDE 0293-308	Core identification by colour and numbering
DIN VDE 0298-3 / 0298-4	Use of cables and current-carrying capacity
IEC 60228	Conductors of insulated cables — class 6
IEC 60332-1-2	Flame propagation, single vertical wire
IEC 60811 series	Non-metallic materials — mechanical and thermal test methods
ISO 11898-2	CAN physical layer, high-speed medium access unit

12.2 Routine tests, performed on 100 % of production length

TEST	REQUIREMENT
Conductor resistance	≤ 8.21 Ω/km at 20 °C
In-line spark test	6 kV AC, no breakdown
High-voltage test on the finished cable	3.5 kV AC, 5 min, no breakdown
Insulation resistance	≥ 200 MΩ·km
Bus pair loop resistance and impedance	Within the values of section 6
Dimensional check	Overall diameter, insulation and sheath wall thickness
Visual and print check	Sheath finish, legibility, metre marking accuracy

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12.3 Type tests, on record and repeatable on request

TEST	METHOD AND REQUIREMENT
Reverse bending	50,000 cycles at 10 × D under rated load, no conductor breakage, no insulation failure
Roller bending	To DIN VDE 0250-814, cyclic passage over guide rollers
Torsional stress	±25°/m, 30,000 cycles, no sheath separation and no core migration
Tensile and elongation, insulation and sheath	IEC 60811-501, before and after ageing
Thermal ageing	7 × 24 h at 100 °C, retained tensile strength ≥ 70 %
Cold bend and cold impact	−35 °C, no cracking
Ozone resistance	DIN EN 50396 method B, no cracking
Oil immersion	IEC 60811-404, 24 h at 100 °C in IRM 902 oil
Abrasion resistance	Comparative sand-slurry test against the reference construction

QUALITY SYSTEM AND DOCUMENTATION

Production is carried out under a quality management system certified to ISO 9001. Each delivery is accompanied by a works test certificate to EN 10204 type 2.2 quoting the batch number, the drum numbers and the measured routine test values. An EN 10204 type 3.1 certificate or third-party witnessed testing (SGS, BV or TÜV) can be arranged at additional cost if you require it — please advise before production so that the inspection can be scheduled.

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13 · Installation, handling and storage

13.1 Handling

- Always pay the cable off the drum by rotating the drum. Never pull loops off a stationary drum — this induces torsion that the cable will retain and that will show up as birdcaging at the reel.
- Do not drop drums, roll them over the cable ends, or lift by the cable itself.
- Below +5 °C, warm the drum in a heated space for at least twelve hours before uncoiling. Below −25 °C the cable must not be installed.
- Never exceed the minimum bending radius during pulling, including at temporary sheaves and around structural steel.

13.2 Terminating

- Strip the outer sheath with a circular sheath knife set to the sheath wall only. Cutting into the braid destroys the anti-torsion system and the cable will fail progressively from that point.
- Seal the exposed braid and inner sheath at the termination with self-amalgamating tape and a heat-shrink boot to prevent moisture ingress along the braid.
- Clamp the strain relief over the intact outer sheath. Never rely on core terminations to carry mechanical load.
- Terminate the bus screens with a 360° clamp at the control cabinet end only, as described in section 7.2.

13.3 Storage

- Store drums upright on their flanges, on a firm level surface, under cover, away from direct sunlight and away from sources of ozone such as welding equipment and electric motors.
- Keep both cable ends capped and sealed until the moment of termination.
- Recommended storage temperature −20 °C to +40 °C. Shelf life is unlimited under these conditions; the sheath compound does not require rotation of stock.

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14 · Marking, packing and documentation

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14.1 Sheath marking

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FEICHUN · FC-CFX™ (N)SHTÖU 0.6/1 kV · 37G2.5 mm² + 2×CAN-Bus · VDE 0250-814 · 2026 · 0001 m 0002 m 0003 m …
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Embossed or ink-printed at intervals not exceeding 1 m, with sequential metre marking as standard. Customer-specific print text, order numbers or asset codes can be added at no extra cost when advised before production.

14.2 Packing

ITEM	DETAIL
Drum type	Non-returnable timber drum, fumigation-treated and IPPC marked
Drums required	2 drums, one per 90 m roll
Estimated drum size	approx. 1,600 mm flange × 900 mm traverse per drum
Estimated net mass per drum	approx. 230 kg cable
Estimated gross mass per drum	approx. 330 kg including drum
End protection	Both ends capped, sealed and lashed to the flange
Outer protection	Timber battens over the full winding surface
Drum plate	Order number, cable type, length, net and gross mass, drum dimensions, direction of unwinding

14.3 Documentation supplied

- Commercial invoice and packing list
- Bill of lading
- Certificate of origin (Form A or general CO as required)
- Works test certificate to EN 10204 type 2.2 with measured routine test values
- Approved production drawing and core schedule
- RoHS and REACH declarations
- Fumigation certificate for the timber drums

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Commercial Quotation

FC-QTN-CFX-2026-C7V9 · Rev 01 · Issued 29 August 2026

FOB SHANGHAI · INCOTERMS 2020

USD 13,914.00

15 · Commercial quotation

NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE (USD)	AMOUNT (USD)
1	FC-CFX™ CORDAFLEX (SMK)-V equivalent, (N)SHTÖU 0.6/1 kV, 37 × 2.5 mm² + 2 × screened CAN-Bus, black PCP sheath, vertical reeling grade, OD 41.0 ± 1.5 mm — supplied as 2 rolls × 90 m on non-returnable drums	m	180	77.30	13,914.00
				Total FOB Shanghai, Incoterms 2020	**13,914.00**

DELIVERY TERM

FOB Shanghai

Incoterms 2020

PAYMENT

T/T 50 % + 50 %

50 % with order, 50 % against copy B/L

LEAD TIME

25–30 days

From deposit and approved drawing

TOTAL

USD 13,914.00

180 m at USD 77.30/m

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TERM	DETAIL
Cutting lengths	2 rolls × 90 m, continuous, no joints; length tolerance +2 % / −0 %
Quantity tolerance	±3 % on total metreage, invoiced at actual delivered length
Country of origin	People's Republic of China — Hefei, Anhui Province
HS code	8544.49.9900 (final classification subject to customs declaration)
Port of loading	Shanghai
Packing	Non-returnable fumigated timber drums; drum charges included in the unit price
Estimated shipping volume	approx. 4.6 m³ / 660 kg gross for the two drums
Warranty	12 months from bill of lading date against defects in material and workmanship under rated service conditions
Drawing approval	Production starts on receipt of the deposit and your written approval of the production drawing

PRICE BASIS

All prices are quoted in US dollars and are subject to LME copper market fluctuation. The unit price above is based on the LME copper settlement prevailing at the date of issue. Should the LME cash settlement price move by more than ±3 % between the date of this quotation and the date of order confirmation, FeiChun reserves the right to re-issue the unit price on the same construction. Prices exclude ocean freight, insurance, destination charges, import duties and taxes.

CONNECTORS — NOT SUPPLIED

FeiChun manufactures cable only. We do not supply connectors of any type, and we do not offer connector assembly or factory-fitted terminations. Connectors, glands and terminations must be procured by the customer through their own supply channel. We are glad to provide the dimensional data needed to select a suitable gland or connector for this cable, including the overall diameter tolerance, the sheath wall thickness and the core geometry.

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OPTIONS AVAILABLE ON REQUEST

Central aramid support element rated 15 kN for working drops beyond approximately 60 m · integrated optical element with 6, 12 or 24 fibres in place of one CAN-Bus pair · PROFIBUS or industrial Ethernet element in place of a CAN-Bus pair · LSZH halogen-free sheath system · IEC 60332-3-24 category C bundled flame performance · customer-specific sheath print and core schedule · EN 10204 type 3.1 certification or third-party witnessed testing · CFR or CIF freight quotation to your nominated port.

16 · Frequently asked technical questions

Can this cable be used horizontally on a festoon or a horizontal drag chain?

It can, but it is over-specified for that duty and more expensive than the correct product. The SMK-V grade pays for reinforcement that only earns its keep under suspended vertical load. For horizontal festoon or drag-chain service, ask us for the FeiChun festoon or chain-flex range instead.

What service life should be expected?

On a high-utilisation container spreader working continuous shifts, a cable of this construction typically runs three to five years before replacement. Lower-utilisation installations extend that to five to eight years. The variables that matter most in practice are drum diameter, guide roller condition and back-tension setting — a reel running at the 820 mm minimum drum diameter will consume cable noticeably faster than one at 1,200 mm.

Why is the outer sheath black rather than yellow?

Black is your stated requirement and it is also the better choice technically. The black compound carries the highest carbon-black loading in the 5GM5 family, which gives it the best ultraviolet stability of the colour range. Yellow is more visible in service, which some operators prefer for safety, but it ages faster under strong sunlight. Both use the same base compound and the same wall thickness.

Can the two CAN-Bus pairs be used for two independent networks?

Yes. Each pair has its own foil and braid screen and its own polyamide covering, so the two circuits are electrically independent along the whole length. This is the usual arrangement where one bus serves the spreader and the second provides a redundant or diagnostic channel.

What happens if the bus screen is earthed at both ends?

An earth loop is formed, and the potential difference between the crane structure earth and the control cabinet earth drives a circulating current through the screen. In a reeling application that current is modulated by the movement itself, and it appears in the differential pair as low-frequency noise that will produce intermittent bus errors that are very difficult to diagnose. Earth at one end only.

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Can you supply a longer continuous length later?

Yes. This construction can be produced in continuous lengths up to approximately 500 m subject to drum capacity. Advise the required length and we will confirm the drum dimensions and the shipping volume.

Are shorter delivery times possible?

The 25–30 day lead time reflects compound preparation, vulcanised sheathing and the full routine test schedule. Where a project date requires it, we can sometimes bring production

forward in the schedule — please tell us the required on-site date and we will confirm what is achievable rather than commit to a date we cannot hold.

17 · Contact

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