ANHUI FEICHUN SPECIAL CABLE CO., LTD. · 安徽飞纯特种电缆有限公司

CORDAFLEX (SMK)-V / (N)SHTÖU-J 0.6/1 kV — 36 G 2.5 mm² Technical Data Sheet & Commercial Quotation

Heavy-duty EPR-insulated, PCP/HD-rubber sheathed flexible control cable for cable drums, festoon systems and port handling equipment — prepared for **iPort Services, Panamá**

FC-TDS-CFX-2026-P4S8 | FC-QTN-PA-2026-P4S8 | 36 G 2.5 mm² | 170 m · 2 × 85 m drums | VDE 0250 / DIN VDE 0282

Revision **01** Issue date **05 September 2026** Attention **Mr Sebastian Garcia — Sales Director**

Prepared by **Zihao Yang, International Business Dept.**

1. Scope & Enquiry Reference

This document responds to your enquiry for one heavy-duty 36-core control cable, quantity 170 m supplied on two drums of 85 m. It combines the full technical data sheet and the commercial quotation in a single controlled document. The offered product is FeiChun's **FC-CFX (SMK)-V**, a full technical and dimensional equivalent to the CORDAFLEX (SMK)-V / (N)SHTÖU-J construction.

Item	Description	Cores × size	Quantity	Delivery form
1	CORDAFLEX (SMK)-V (N)SHTÖU-J 0.6/1 kV flexible control cable, black HD rubber sheath	36 G 2.5 mm²	170 m	2 drums × 85 m

Note on core designation. "G" denotes that one core is a green/yellow protective earth conductor (35 numbered cores + 1 GNYE). Should the application require 36 numbered cores with a separate earth, please confirm and we will re-issue as 36 × 2.5 mm² + earth at no change to lead time.

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2. Applicable Standards

Design & construction	VDE 0250 Part 812 / DIN VDE 0282-4 · (N)SHTÖU-J heavy rubber flexible cable
Conductor	IEC 60228 Class 5 / VDE 0295 Class 5 — plain annealed fine-wire copper
Insulation	EPR (3GI3) to DIN VDE 0207-20
Sheath	Polychloroprene / heavy-duty rubber compound 5GM5 to DIN VDE 0207-21
Core identification	DIN VDE 0293-308 — numbered black cores + green/yellow earth
Type tests	IEC 60245-1 · flame retardance IEC 60332-1-2 · halogen content < 0.5 % (sheath)
Quality system	ISO 9001:2015 · ISO 14001 · CE marked · RoHS 3 compliant

3. Construction Details

Pos.	Element	Material & construction	Nominal dimension
1	Conductor	Fine-wire bare annealed copper, IEC 60228 Class 5, bunched and stranded for high flex life	2.5 mm² · 0.10 mm wire Ø
2	Core insulation	EPR (ethylene-propylene rubber), type 3GI3, extruded and vulcanised	0.60 mm wall · core Ø 3.6 mm
3	Core identification	Black cores, continuous white printed numbering 1…35, plus one green/yellow PE core	—
4	Core assembly	Concentric layers stranded in three layers (5 / 11 / 20) with short lay length and alternate lay direction for torsional balance	Layers 5 + 11 + 20 = 36
5	Filler / bedding	Elastomeric fillers and a rubber-compatible bedding layer to secure a fully circular cross-section	as required
6	Separator	Synthetic textile tape, helically applied, non-hygroscopic	0.4 mm
7	Outer sheath	Heavy-duty polychloroprene / rubber compound 5GM5, oil-, ozone-, abrasion- and UV-resistant, matt black	2.8 mm wall
8	Surface marking	FEICHUN · CORDAFLEX (SMK)-V · (N)SHTÖU-J 0.6/1 kV · 36G2.5 · metre marks · year	embossed / printed

4. Cross-Sectional Drawing

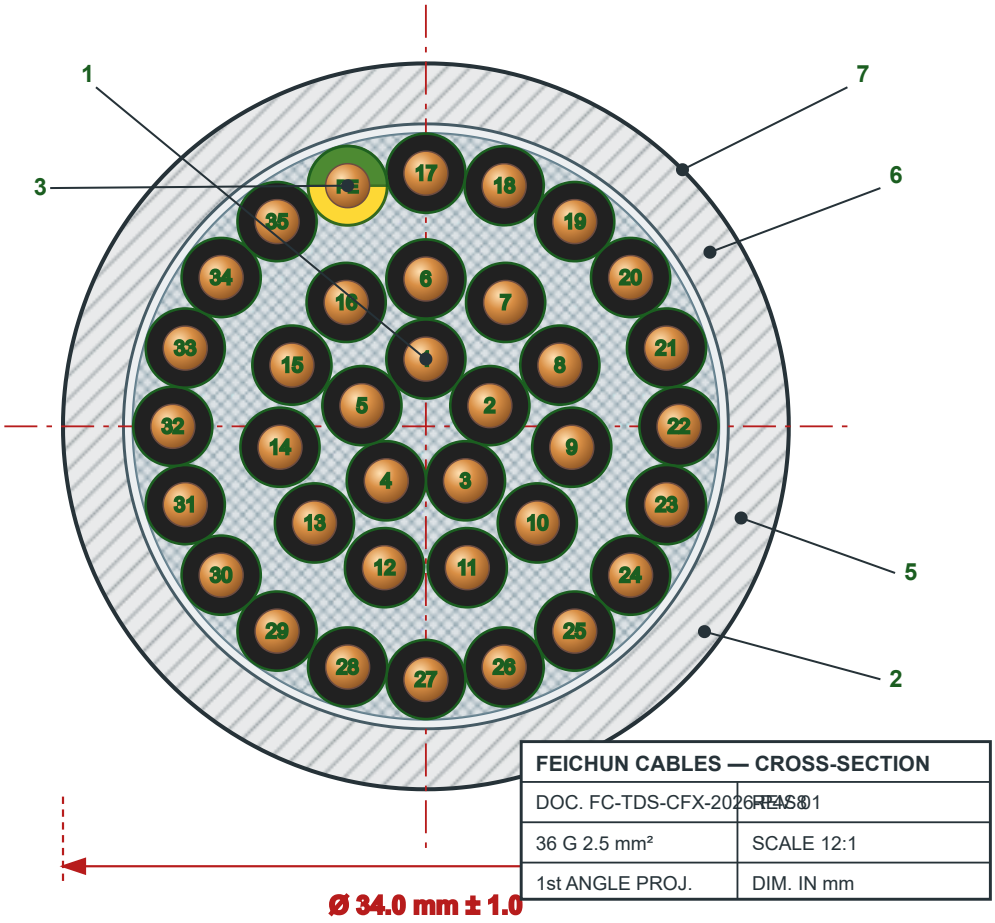


Figure 1 — Sectional view, 36 G 2.5 mm² CORDAFLEX (SMK)-V. Section hatching at 45° indicates the cut rubber sheath. Dimensions are nominal and not to be scaled from print.

Pos.	Element	Material
1	Conductor	Bare annealed Cu, Class 5 fine wire
2	Insulation	EPR 3GI3, 0.60 mm wall
3	PE core	Green/yellow, 2.5 mm², Class 5
4	Core layup	3 layers, 5 / 11 / 20, alternate lay
5	Filler / bedding	Elastomeric filler, rubber compatible
6	Separator	Synthetic textile tape, 0.4 mm
7	Outer sheath	PCP / HD rubber 5GM5, 2.8 mm, black

> **Layup rationale.** The three-layer concentric layup with alternating lay direction balances torsional stress when the cable is spooled on a drum, so no core migration or "birdcaging" occurs after repeated winding cycles.

5. Electrical & Mechanical Characteristics

5.1 Electrical

Rated voltage U_0/U	0.6/1 kV (600/1000 V)
Maximum operating voltage U_m	1.2 kV a.c.
Test voltage (routine, 5 min)	3.5 kV a.c. 50 Hz, core-to-core and core-to-earth
Conductor DC resistance at 20 °C	≤ 7.98 Ω/km per core
Insulation resistance at 20 °C	≥ 200 MΩ·km
Current-carrying capacity (30 °C ambient, free air, single-layer)	21 A per core; apply a group reduction factor of 0.45–0.55 for the full 36-core bundle
Max. conductor temperature	90 °C continuous · 250 °C short-circuit (max 5 s)

5.2 Mechanical & environmental

Nominal overall diameter	34.0 mm ± 1.0 mm
Approximate weight	2,140 kg/km (copper content approx. 801 kg/km)
Minimum bending radius — fixed / flexing	4 × Ø (136 mm) / 7.5 × Ø (255 mm); cable drum sheave ≥ 12.5 × Ø
Maximum tensile stress	15 N/mm² of copper cross-section — 1,350 N total for this construction
Travel speed / acceleration	up to 60 m/min · 0.8 m/s²
Ambient temperature range	−25 °C to +80 °C (mobile use) · −40 °C to +90 °C (fixed installation)
Resistance	Oil (IEC 60811-2-1), ozone, UV, seawater spray, abrasion; suitable for coastal port environments
Flame behaviour	Flame retardant to IEC 60332-1-2 · low halogen sheath
Service life indication	> 1.5 million bending cycles at the specified radius under standard drum duty

> **Application.** Ship-to-shore and RTG crane control circuits, drum-wound festoon and reeling applications, container-handling equipment, port and terminal machinery subject to continuous flexing, moisture and mechanical impact.

6. Packing, Marking & Delivery

Parameter	Detail
Delivery lengths	2 continuous drum lengths × 85 m (no joints, no factory splices)
Length tolerance	+2 % / −0 % per drum
Drum type	Fumigation-free plywood/timber drums, ISPM 15 compliant, both ends sealed with heat-shrink caps
Drum marking	Order no., cable type, cores × size, length, net/gross weight, drum no., rotation arrow, FeiChun logo, "MADE IN CHINA"
Estimated net weight	approx. 364 kg total (2 × 182 kg)
Estimated gross weight	approx. 470 kg total including drums
Documentation supplied	Routine test report per drum, certificate of conformity, packing list, commercial invoice, certificate of origin (Form CO), and any consular/legalisation documents required for Panamá at cost

7. Commercial Quotation — FC-QTN-PA-2026-P4S8

To: **iPort Services**, Urb. Los Ángeles, C.63 Oeste, Panamá — attention Mr Sebastian Garcia, Sales Director.

Item	Description	Qty	Unit price USD/m	Amount USD
1	CORDAFLEX (SMK)-V (N)SHTÖU-J 0.6/1 kV **36 G 2.5 mm²** flexible drum/festoon cable, EPR insulated, black HD rubber sheathed — supplied on 2 drums × 85 m	170 m	68.00	11,560.00
2	Export drums, sealing caps, marking and seaworthy packing	2 drums	included	0.00
3	Routine test reports, certificate of conformity, Form CO	1 set	included	0.00
TOTAL — EX-WORKS HEFEI, INCOTERMS 2020				**USD 11,560.00**

Amount in words: *United States Dollars eleven thousand five hundred and sixty only.*

7.1 Terms and conditions

Price basis	Ex-Works Hefei, Anhui, Incoterms® 2020 (converted from RMB ex-works price at the reference rate USD 1 = RMB 7.10)
Currency	United States Dollars (USD)
Payment terms	T/T — 50 % deposit with purchase order, 50 % balance against copy of bill of lading prior to shipment
Production lead time	15–18 working days from receipt of deposit and confirmed technical approval
Onward terms	FOB Shanghai / CFR Balboa or Colón available on request; inland haulage, export clearance and freight quoted separately at cost
Country of origin	People's Republic of China
HS code	8544.49 (indicative; final classification per customs declaration)
Warranty	12 months from date of commissioning or 18 months from bill of lading date, whichever occurs first, against defects in material and workmanship
Price adjustment	All prices are ex-works figures subject to fluctuation of the LME copper market and to the prevailing USD/RMB exchange rate, and are to be reconfirmed at the time of order placement

Optional additions. Factory-fitted cable gland assemblies, moulded plug terminations, or an aramid central strength member for higher tensile duty can be quoted separately on request. If the drum system requires a specific drum barrel diameter or flange width, please advise and we will match the drum specification to your reeler.

8. General Notes

Technical values stated in this data sheet are nominal design figures determined under standard test conditions and may vary within the tolerances permitted by the referenced standards. Current ratings must be de-rated for grouping, ambient temperature and installation method in accordance with IEC 60364-5-52. Installation, termination and drum tensioning must follow the manufacturer's handling instructions; failure to observe the minimum bending radius will void the warranty.

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Anhui FeiChun Special Cable Co., Ltd. · 安徽飞纯特种电缆有限公司

International Business Department · Hefei, Anhui Province, People's Republic of China
Zihao Yang — Global Sales Manager
Email: zihao.yang@feichuncables.com · Tech@feichuncables.com · mining@feichuncables.com
WhatsApp / Mobile: +86 138 5512 3218
Web: www.feichuncables.com

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