FeiChun Special Cables
Anhui FeiChun Special Cable Co., Ltd. · Hefei, China

Technical Data Sheet
FC-TDS-BXP-2026-S3Q7

TDS · REELING CABLE | 0.6/1 kV | 4G16 mm² | Yellow outer sheath

Equivalent to BUFLEX X'PREM

FC-FLX™ BX-P 4G16 — Heavy-Duty Power Reeling Cable, 0.6/1 kV, Yellow

Rubber-insulated, anti-torsion braided reeling cable for motorised cable drums, gantry and overhead cranes — engineered as a direct equivalent to Nexans BUFLEX X'PREM 4G16 (Part No. 0426030 / Manufacturer Product Code 9426030).

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Prepared for **QANBAR DYWIDAG Precast Concrete Co. Ltd., KSA**

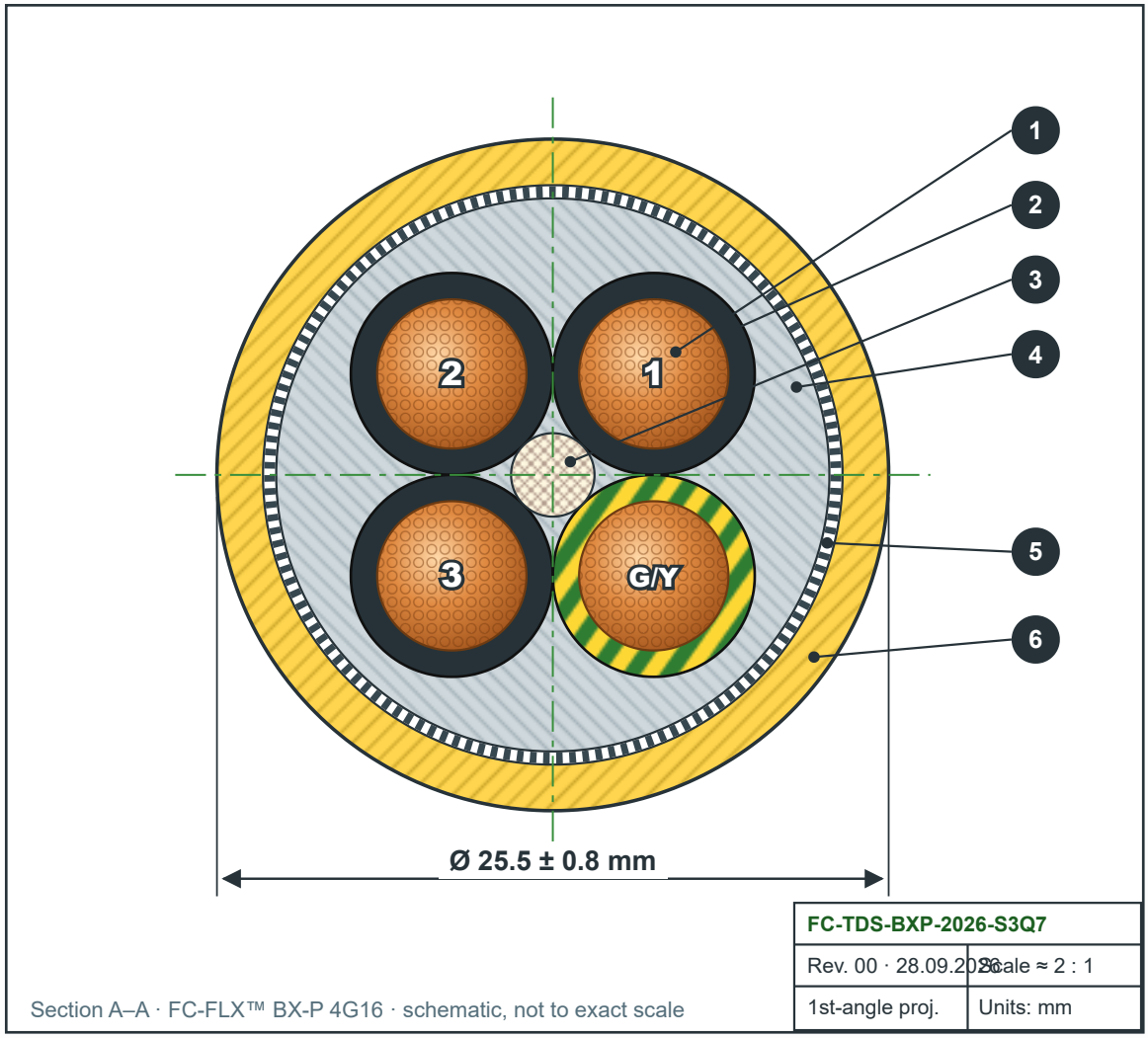
1 Application

FC-FLX™ BX-P is designed for power supply to mobile equipment where the cable is repeatedly wound onto and paid off from motorised or spring-driven drums, and for high-cycle festoon and guided-trolley systems. The anti-torsion textile braid embedded between the two sheaths holds the cable geometry under combined tensile, bending and torsional stress, preventing corkscrewing and core displacement at high travel speeds.

- Gantry & portal cranes in precast yards
- Motorised cable reels
- Overhead travelling cranes
- Stacker / transfer cars
- Outdoor, UV & ozone exposure
- Oil-contaminated environments

> The yellow outer sheath provides high visibility on crane runways and yard floors, reducing the risk of vehicle strikes on the trailing section — an important safety feature for precast concrete handling yards with forklift and truck traffic.

2 Construction



Section A–A · FC-FLX™ BX-P 4G16 · schematic, not to exact scale

Pos.	Element	Material / design
1	Conductor	Bare annealed copper, finely stranded, Class 5 to IEC 60228 / VDE 0295
2	Insulation	EPR rubber compound type 3GI3 (VDE 0207-20), 90 °C
3	Central element	Textile / elastomer anti-strain filler
4	Inner sheath	Special rubber compound, type 5GM3, pressure-extruded into interstices
5	Anti-torsion braid	High-tenacity polyester textile braid, vulcanised between sheaths
6	Outer sheath	Heavy-duty polychloroprene (PCP) type 5GM5 (VDE 0207-21), yellow

Core identification: three black cores printed 1-2-3 plus one green/yellow protective earth core (to VDE 0293-308). Cores laid up with short lay length around the central element.

3 Dimensional data

Parameter	Value	Note
Number of cores × nominal cross-section	4 × 16 mm²	3 phases + PE (G/Y)
Conductor diameter (approx.)	5.6 mm	Class 5 flexible
Nominal insulation thickness	1.0 mm	IEC 60502-1 / VDE 0250-814
Nominal inner sheath thickness	1.2 mm	Over laid-up cores
Nominal outer sheath thickness	1.8 mm	Yellow PCP 5GM5
Overall diameter	25.5 ± 0.8 mm	Measured over outer sheath
Net cable weight (approx.)	1,060 kg/km	±5 %
Copper index	614 kg/km	For LME copper adjustment

4 Electrical data

Parameter	Value
Rated voltage U_0/U	0.6/1 kV AC
Maximum permissible AC voltage U_m	1.2 kV
Maximum DC voltage (to earth)	0.9 kV
Routine test voltage	3.5 kV AC, 5 min
Max. conductor resistance at 20 °C	1.21 Ω/km
Insulation resistance at 20 °C	≥ 20 MΩ·km
Max. conductor temperature (operation)	90 °C
Max. short-circuit temperature (≤ 5 s)	250 °C
Short-circuit current, 1 s (approx.)	2.3 kA

Current-carrying capacity	Ampacity
Laid straight in free air, 30 °C, 3 loaded cores	100 A
Same, at 45 °C ambient (Jeddah summer design)	87 A
Wound on drum, 1 layer, 30 °C	80 A
Wound on drum, 2 layers, 30 °C	61 A
Wound on drum, 3 layers, 30 °C	49 A

Basis: DIN VDE 0298-4 (tables 11, 16 and 17). Apply ambient and reeling factors cumulatively.

Correction factors for ambient temperature (90 °C conductor)

Ambient °C	30	35	40	45	50	55	60
Factor	1.00	0.96	0.91	0.87	0.82	0.76	0.71

5 Mechanical & operating data

Parameter	Value	Note
Ambient temperature, flexing / reeling	−25 … +80 °C	Suitable for Red Sea coastal climate
Ambient temperature, fixed installation	−40 … +80 °C	
Min. bending radius, fixed	4 × D ≈ 102 mm	
Min. bending radius, reeling / free movement	5 × D ≈ 128 mm	Drum barrel
Min. bending radius, over guide rollers	7.5 × D ≈ 191 mm	S-bends: 10 × D
Maximum travel speed	180 m/min	Reeling and festoon duty
Max. dynamic tensile load on conductors	1,280 N	20 N/mm² × 64 mm²
Permissible torsional stress	± 25 °/m	Anti-torsion braid
Flame propagation	Flame retardant to IEC 60332-1-2 / EN 60332-1-2	
Oil resistance	EN 60811-404 (IRM 902, 24 h / 100 °C)	
UV, ozone & weather resistance	EN 50396 / HD 605 S2 — suitable for permanent outdoor use	
Water	AD7 (temporary immersion) — suitable for wet yard conditions	

6 Standards, compliance & testing

Design and material standards

DIN VDE 0250-814 (design basis) · IEC 60228 / VDE 0295 · VDE 0207-20 and 0207-21 · IEC 60502-1 · DIN VDE 0298-3 / 0298-4 (application and ampacity) · IEC 60332-1-2.

Conformity

CE marked, RoHS and REACH compliant. FeiChun factory certifications include VDE, CE, UKCA, EAC, ATEX and IECEx. Every drum is supplied with an in-house routine test report (conductor resistance, high-voltage test, dimensions). Third-party witness testing on request at buyer's cost.

7 Cross-reference

Requested item	FeiChun equivalent	Interchangeability
Nexans BUFLEX X'PREM 4G16, yellow, 0.6/1 kV — Part No. 0426030 / Mfr. code 9426030	**FC-FLX™ BX-P 4G16, yellow, 0.6/1 kV**	Same core configuration, voltage rating, conductor class, EPR/rubber-sheath system and anti-torsion design — suitable for the same drums, guides and cable glands (Ø 25.5 mm).

8 Marking & packing

Sheath marking (embossed or ink-jet, every metre): FEICHUN FC-FLX™ BX-P 4G16 0.6/1 kV CE — year of manufacture — metre counter.

Packing for this order: 1 × 400 m on one ISPM-15 fumigated wooden drum, approx. Ø 1,100 × 800 mm, approx. 0.97 m³; net weight approx. 424 kg, gross weight approx. 535 kg. Both cable ends sealed with heat-shrink caps; drum lagged with plywood battens for sea freight.

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