ANHUI FEICHUN SPECIAL CABLE CO., LTD.

TYPE FC-YSLZ3SOE-J

Basket / Spreader Crane Control Cable
44 × 12 AWG (44 G 3.31 mm²) — 300/500 V

Highly flexible PVC control cable with three integrated central strain-relief elements (Z3), engineered for vertical basket festoon systems on container crane spreaders, telescopic spreader bars and hoisting equipment with high travel speeds and severe torsional duty.

DIN VDE 0250 design basis | 3 × central strain elements | Class 5 flexible copper | Basket / festoon service | GN/YE earth core (-J)

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1. Product Overview

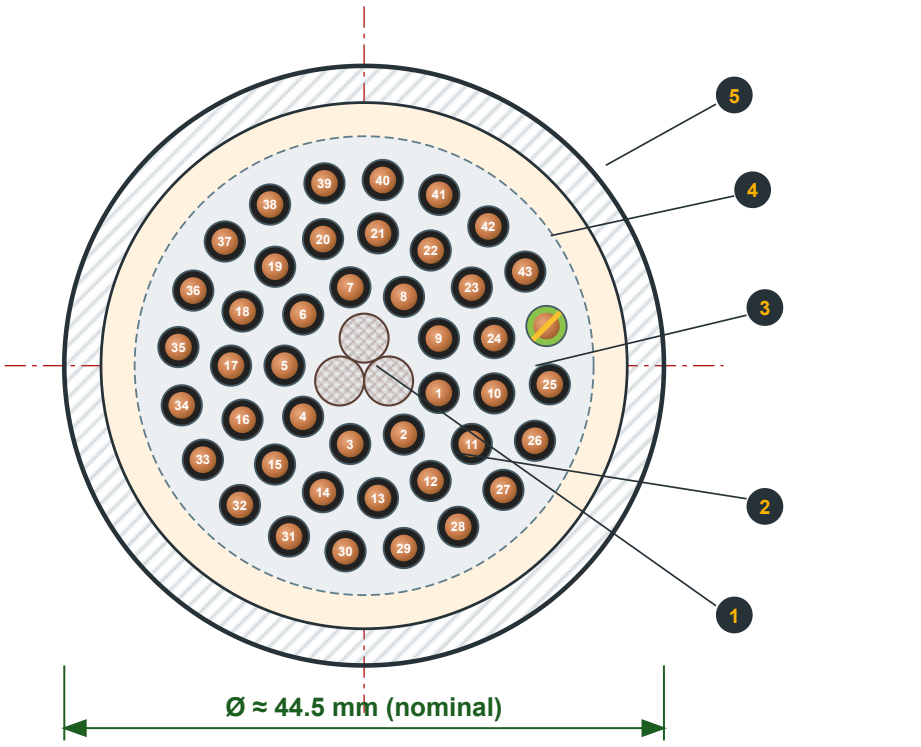
The FC-YSLZ3SOE-J is a special PVC-insulated, PVC-sheathed flexible control cable in which all 44 conductors are stranded in concentric layers around **three central anti-torsion strain-relief elements**. This construction absorbs the tensile and torsional loads generated when the cable is stored in, and paid out of, a spreader basket at high hoisting speeds, keeping the copper conductors mechanically decoupled from the hang load.

Industry cross-reference. This FeiChun type is manufactured as a form, fit and function equivalent to the industry designation **RHEYCORD® (BS) YSLZ3SOE-J 44×12 AWG** (RHEYCORD® is a registered trademark of Nexans). FeiChun is not affiliated with, endorsed by, or sponsored by Nexans; the designation is cited solely to identify interchangeability for procurement purposes. Dimensional and electrical values below are FeiChun nominal design values.

2. Construction

Conductor	Fine-stranded bare annealed copper, Class 5 per IEC 60228, 12 AWG (3.31 mm² nominal)
Insulation	Special flexible PVC compound (TI2 basis), high resistance to notching and abrasion
Core identification	Black cores with continuous white numbering; one green/yellow earth core (-J)
Central elements (Z3)	Three high-tenacity strain-relief / anti-torsion elements laid at the cable centre
Lay-up	Cores stranded in concentric layers around the central elements with optimised short lay lengths; separator tape over the assembly
Outer sheath	Special PVC compound (TM2 basis), abrasion-, weather- and UV-resistant; black (yellow on request)
Sheath marking	FEICHUN CABLES FC-YSLZ3SOE-J 44G12AWG 300/500V — metre marking — batch no.

3. Cross-Section Diagram



Pos.	Element	Material
1	Central strain-relief elements (×3)	High-tenacity anti-torsion fibre
2	Conductors, 44 × 12 AWG, numbered	Bare Cu, Class 5, IEC 60228
3	Core insulation	Special flexible PVC (TI2)
4	Separator tape	Non-woven polyester
5	Outer sheath	Special PVC (TM2), black

Diagram is schematic and not to scale. Cores are laid in concentric layers with alternating lay directions around the three central elements; the green/yellow earth core occupies the outer layer.

4. Technical Data

4.1 Electrical

Rated voltage U_0/U	300/500 V
Test voltage	2,000 V AC, 5 min
Max. conductor resistance at 20 °C	5.09 Ω/km (3.31 mm², Class 5)
Insulation resistance	≥ 20 MΩ·km
Current rating (30 °C, free air, guide value)	approx. 25 A per conductor, subject to grouping de-rating

4.2 Dimensional & Mechanical

Number of cores × size	44 × 12 AWG (44 G 3.31 mm², incl. GN/YE)
Nominal outer diameter	approx. 44.5 mm ± 1.5 mm
Nominal weight	approx. 2,450 kg/km
Copper weight	approx. 1,300 kg/km
Min. bending radius, moving	10 × OD
Min. bending radius, fixed	5 × OD
Max. permissible tensile load (moving)	15 N/mm² of Cu cross-section ≈ 2,180 N
Max. travel speed (basket service)	up to 160 m/min
Operating temperature, moving	−25 °C to +80 °C
Operating temperature, fixed	−40 °C to +80 °C

Note: Values marked "approx." are nominal design values; certified figures for a production batch are confirmed on the FeiChun factory test report supplied with each shipment.

5. Applications

Container crane spreaders

Telescopic spreader bars

Hoisting & lifting gear

General festoon service

STS / RTG / RMG spreader basket festoon systems where the cable coils freely into a basket at high hoisting speeds.	Control and pilot circuits on telescoping spreaders and headblocks subject to combined bending and torsion.	Vertical suspension service on hoists, grab cranes and basket-stored pendant systems with defined hang loads.	Trolley festoon and cable-trolley systems in ports, steelworks and heavy handling plants.

6. Standards & Quality Assurance

Design basis	DIN VDE 0250 series (special constructions); conductors per IEC 60228 Class 5
Routine tests	Conductor resistance, high-voltage withstand (2 kV/5 min), insulation resistance, dimensional checks — 100 % of production length
Type/sample tests	Tensile & elongation of insulation and sheath (before/after ageing), flexing endurance, cold bend, marking durability
Traceability	Batch number printed on sheath; mill test certificate (EN 10204 3.1 format) issued per drum

7. Packing & Delivery

Standard put-up	Export-grade wooden drums or coils, seaworthy packing; roll lengths to order (e.g. 250 ft per roll)
Commercial terms	FOB Shanghai, Incoterms 2020; payment T/T 50 % advance, 50 % before shipment
Lead time	2–3 weeks after receipt of order (typical for this construction)
Pricing basis	Prices are subject to LME copper market fluctuation at the time of order confirmation

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Contact — International Business Department

Anhui FeiChun Special Cable Co., Ltd. — Hefei, Anhui Province, China
Zihao Yang · Global Sales Manager
Email: zihao.yang@feichuncables.com · Tech@feichuncables.com · mining@feichuncables.com
WhatsApp: +86 138 5512 3218 · Web: www.feichuncables.com
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