ANHUI FEICHUN SPECIAL CABLE CO., LTD.
安徽飞纯特种电缆有限公司
INDUSTRIAL CONTROL, POWER & AUTOMATION CABLE SPECIALIST · WWW.FEICHUNCABLES.COM

DOCUMENT FC-PDS-OLFLEX-CRANE-FD-HEAT-ROBUST-2026-015
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CLASS Product Data Sheet | ÖLFLEX® CRANE · FD / SERVO FD · HEAT · ROBUST / FD ROBUST Specialty Cables
STANDARDS VDE 0285-525 | VDE 0298-4 | IEC 60228 Cl. 5 | VDE 0472 | RoHS / REACH

PRODUCT SPECIFICATION — ÖLFLEX® CRANE & NSHTÖU · FD 855 P/CP · FD CLASSIC 810 CY · SERVO FD 796 CP · HEAT 180/205/1565 MC · ROBUST 215 C · FD ROBUST

CRANE: 4G2.5 · NSHTOU 30G1.5 | FD: 855P/855CP/CLASSIC 810 CY · SERVO FD 796CP 4G2.5–4G35 ★ | HEAT: 180 EWKF/FZLSI · 205MC · 1565MC | ROBUST: 215C · FD ROBUST 18G1.5

Four application families, 20 variants — crane and reel systems (CRANE/NSHTÖU), high-flex drag-chain control and servo power (FD/SERVO FD), extreme-temperature environments up to 1565 °C (HEAT), and chemically resistant all-weather installations (ROBUST/FD ROBUST).
Class 5 Fine-Stranded Conductors | PVC / PUR / Silicone / FEP / Mica-Glass Insulation & Sheathing | 0.5 kV unless noted | SERVO FD 796 CP 4G6 Highlighted ★

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FC CRANE · DRAG-CHAIN FD · SERVO FD · HIGH-TEMP HEAT · ALL-WEATHER ROBUST | 0.5 kV / HIGH-TEMP RATED | VDE / IEC / UL

★ FEICHUN CABLE SERIES
20-Variant Range
Specialty & Motion Cables
Crane · High-Flex FD · Servo · Heat-Resistant · Robust
0.75 mm² – 35 mm² · 0.5 kV · Up to 1565 °C
Feichun Engineering Cables · RoHS Compliant · VDE / IEC · SERVO FD 796 CP 4G6 ★ Highlighted

● ÖLFLEX® CRANE & NSHTÖU — CRANE, REEL & TOW-LINE CABLE

● CRANE SERIES — OVERVIEW

I CRANE, REEL DRUM & TOW-LINE — HIGH MECHANICAL DURABILITY

The **ÖLFLEX® CRANE** family is engineered specifically for **overhead travelling cranes, motorised cable reels, and tow-line drag systems** where cables must endure constant mechanical stressing: longitudinal tensile loads, repeated winding and unwinding cycles, and contact with drum flanges. The standard **CRANE 4G2.5** uses a tough, oil-resistant PVC outer sheath and carries a 300/500 V rating suitable for crane travel, hoist, and auxiliary control circuits. The **CRANE NSHTÖU 30G1.5** is a VDE-classified heavy-duty rubber cable (Neoprene outer sheath, silicone-rubber strand insulation) with a very large 30-core arrangement specifically for installations requiring dense multi-circuit feed via a single reel drum — common in electroplating lines, automated warehouses, and multi-zone gantry cranes. The rubber construction provides low-temperature flexibility down to −40 °C and significantly better resistance to ozone and UV radiation than PVC equivalents.

300/500 V (0.5 kV)

● CRANE VARIANTS



CRANE 4G2.5 PVC sheath

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
CRANE 4G2.5	14	13.5	96.0	250	26
NSHTÖU 30G1.5	16	30.2	432.0	1300	18

NSHTÖU: VDE heavy-duty rubber reel cable. Neoprene outer sheath, −40 °C to +60 °C, suitable for damp and chemically aggressive environments. CRANE 4G2.5: oil-resistant PVC, 300/500 V, G suffix includes green/yellow PE core. Current values at 30 °C per VDE 0298-4.

SELECTION NOTE — CRANE VS NSHTÖU

CRANE PVC is the standard choice for dry indoor crane installations. Specify NSHTÖU where exposure to moisture, ozone, low temperatures, or mechanical crushing mandates a rubber construction, or where the VDE NSHTÖU classification is required by the plant safety specification.

● ÖLFLEX® FD 855 P / 855 CP — HIGH-FLEX PUR DRAG-CHAIN CONTROL CABLE 0.5 KV

● FD 855 P / FD 855 CP — OVERVIEW

I PUR SHEATH · MILLIONS OF FLEX CYCLES · CP = CUSN BRAID SCREEN

● ÖLFLEX® SERVO FD 796 CP — HALOGEN-FREE HIGH-FLEX SERVO POWER CABLE ★

● SERVO FD 796 CP — SERIES OVERVIEW

I HALOGEN-FREE · CUSN BRAID · PUR OUTER · DRAG-CHAIN SERVO DUTY

The **ÖLFLEX® SERVO FD 796 CP** is a halogen-free, high-flex servo motor power cable engineered for continuous operation in high-speed, high-acceleration drag-chain systems. Construction features Class 5 tinned-copper fine-stranded conductors in XLPE insulation cabled with a lay specifically optimised for torsional and bending fatigue resistance, an inner fleece winding, a tinned-copper braid screen (≥ 85 %), and a **polyurethane (PUR) outer sheath** for maximum abrasion and notch resistance. The halogen-free construction ensures that in the event of fire, combustion gases are non-toxic and low in smoke density per IEC 60754 and EN 50267. The cable is approved for **dynamic servo applications up to 600 V peak**, including AC permanent-magnet servo motors, linear direct drives, and torque motors fed by modern IGBT inverters with high dV/dt switching edges. The tinned-copper braid provides an effective ground return path, and the green/yellow PE core (G suffix) satisfies IEC 60364-4-41 equipment-earth requirements. Cross-sections range from 2.5 mm² to 35 mm², covering motor ratings from fractional-kW to approximately 45 kW.

300/500 V rated (600 V peak) | Halogen-Free PUR

● SERVO FD 796 CP 4G6 — 0.5 KV ★ HIGHLIGHTED



4G6 mm² CuSn braid / PUR Halogen-free

★ HIGHLIGHTED VARIANT

SERVO FD 796 CP 4G6 — CORE DATA (0.5 KV)	
Configuration	4G × 6 mm²
Voltage (U₀/U / peak)	300/500 V / 600 V pk
AWG equivalent	≈ 10 AWG
Outer diameter (nom.)	15.5 mm
Copper weight	285 kg/km
Total weight	440 kg/km
Current capacity (30 °C)	44 A (3-core loaded)
Conductor type	Tinned Cu, Class 5
Insulation	XLPE (halogen-free)
Screen	CuSn braid ≥ 85%
Sheath	PUR (black) – H-F, UV

● ÖLFLEX® HEAT 180 EWKF / FZLSI · 205 MC · 1565 MC — HIGH-TEMPERATURE CABLE

● HEAT SERIES — OVERVIEW

I SILICONE · FEP · MICA/GLASS-FIBRE — 180 °C TO 1565 °C OPERATING RANGE

The **ÖLFLEX® HEAT** family addresses four distinct temperature classes. **HEAT 180 EWKF** is a mechanically enhanced silicone cable rated at a continuous 180 °C conductor temperature; the suffix "EWKF" designates the German tear-resistance improvement (Einreißfest, Weiterreißfest, Kerbfest) that addresses the principal weakness of standard silicone — susceptibility to surface notching and propagating tears under repeated contact. The **HEAT 180 EWKF C** adds a CuSn braid screen for screened signal circuits in the same temperature environment. **HEAT 180 FZLSI** is a high-voltage silicone ignition cable for 10 kV ignition test benches and flame-front sensors. **HEAT 205 MC** uses fluorinated ethylene propylene (FEP) insulation and sheathing for a 205 °C continuous rating, suitable for oven conveyors, laminating presses, and plastic-curing lines. **HEAT 1565 MC** is a mica/glass-fibre composite cable capable of maintaining circuit integrity at transient temperatures up to 1565 °C — required in metallurgical furnace instrumentation, glass-melting zones, and emergency shut-off wiring in high-temperature process equipment.

● HEAT 180 EWKF — VARIANTS (SILICONE, 180 °C)



3G1.5 Silicone 180°C EWKF

Tmax 180 °C continuous

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
180 EWKF 3G1	18	7.4	28.8	78	15
180 EWKF 3G1.5	16	8.0	43.2	105	18
180 EWKF 5G0.75	19	8.5	36.0	105	12
180 EWKF 7G1.5	16	10.4	100.8	185	18
180 EWKF C 2X0.75	19	7.5	44.0	90	12

180 EWKF C = CuSn braid screened version. All rated 300/500 V. Current at 30 °C, VDE 0298-4.

● HEAT 180 FZLSI — HIGH-VOLTAGE SILICONE IGNITION CABLE

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
180 FZLSI 1X1.5	16	7.0	14.4	60	18

Single-core silicone ignition cable, typically rated up to 10 kV for high-voltage ignition test environments and flame-front sensors. Conductor: fine-stranded Cu, Cl. 5. Insulation: silicone rubber. Rated current at standard 30 °C ambient.

● HEAT 205 MC — FEP FLUOROPOLYMER CABLE (205 °C)

Tmax 205 °C continuous

The **ÖLFLEX® FD 855 P** and **FD 855 CP** are rated for millions of continuous flex cycles in **dynamic drag-chain (energy chain) applications**. The polyurethane (PUR) outer sheath provides exceptional resistance to abrasion, cutting, and notching as the cable passes repeatedly over chain links and radius guides. Class 5 fine-stranded conductors are arranged in a specifically optimised lay length to distribute bending stress uniformly across all strands, preventing individual wire fatigue. The **855 CP** adds a tinned-copper braid screen over the PVC inner jacket, providing EMC attenuation in motion-control environments where servo drives and frequency converters generate significant interference. Both variants are rated **300/500 V** and are approved for high-acceleration drag-chain systems up to speed class C4 per ISO/TS 61537.

`300/500 V (0.5 kV)` `PUR Sheath`

FD 855 P / 855 CP VARIANTS

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
FD 855 P 18G1.5	16	15.2	259.2	400	18
FD 855 CP 36G0.75	19	20.5	345.0	650	12

FD 855 P: unscreened, PUR outer. FD 855 CP: CuSn braid ≥ 85 % over inner PVC sheath, PUR outer. Current values at 30 °C, VDE 0298-4; multi-core de-rating applies for simultaneously loaded conductors.

ÖLFLEX® FD CLASSIC 810 CY — HIGH-FLEX CUSN SCREENED CONTROL CABLE 0.5 KV

FD CLASSIC 810 CY 12G1 — OVERVIEW

PVC SHEATH · CUSN BRAID · HIGH-FLEX DRAG-CHAIN

The **ÖLFLEX® FD CLASSIC 810 CY** extends the CLASSIC 810 drag-chain platform with a tinned-copper braid screen, combining the proven high-flex PVC cable construction with EMI attenuation for control circuits in screened drag-chain applications. The 12G1 configuration offers twelve individually addressed conductors with a green/yellow PE core, suitable for multi-axis control loops, valve arrays, and sensor buses in screened drag-chain environments where the reduced cost of a PVC (rather than PUR) construction is acceptable. Rated 300/500 V.

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
FD CLASSIC 810 CY 12G1	18	12.8	168.0	281	15

CuSn braid screen ≥ 85 % coverage. PVC outer sheath, high-flex conductor lay. Green/yellow PE core included (G suffix). 300/500 V per VDE 0285-525. Current at 30 °C, VDE 0298-4.

★ WHY SERVO FD 796 CP 4G6 — KEY SELECTION RATIONALE

At 4 × 6 mm² with a 44 A current rating, this variant is the primary specification for servo drives in the 3–7.5 kW bracket — the most common single-axis power range in machine tool spindles, injection-moulding platens, and robotic wrist joints. The 15.5 mm outer diameter is compact enough for the medium-sized energy chains used on these machines, while the XLPE insulation withstands the high dV/dt voltage stress imposed by modern IGBT inverters more reliably than PVC. The halogen-free PUR construction satisfies the fire-safety requirements of semiconductor fabrication facilities, cleanrooms, and shipboard installations that prohibit halogenated materials. The tinned conductors prevent strand oxidation in the slightly humid interior of enclosed servo cabinets, maintaining contact resistance stability over a multi-year service life.

SERVO FD 796 CP — ALL VARIANTS

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
SERVO FD 796 CP 4G2.5	14	11.5	135.0	215	26
SERVO FD 796 CP 4G6 ★	**10**	**15.5**	**285.0**	**440**	**44**
SERVO FD 796 CP 4G25	4	26.5	1100.0	1450	108
SERVO FD 796 CP 4G35	2	29.5	1500.0	1950	135

All variants: halogen-free XLPE insulation, CuSn braid ≥ 85%, PUR outer sheath (black), tinned Class 5 conductors, 300/500 V. ★ = highlighted. Current values at 30 °C, VDE 0298-4, 3 loaded conductors. ★ = Highlighted variant (4G6). Suitable for dynamic drag-chain, servo, and linear-drive applications requiring high dV/dt resistance.

ÖLFLEX® FD ROBUST 18G1.5 — HIGH-FLEX ALL-WEATHER DRAG-CHAIN CABLE 0.5 KV

FD ROBUST 18G1.5 — OVERVIEW

PUR OUTER · BIO-OIL & CHEMICAL RESISTANT · HIGH-FLEX MOTION

The **ÖLFLEX® FD ROBUST 18G1.5** combines the drag-chain flex performance of the FD 855 platform with the chemical resistance profile of the ROBUST 215 outer sheath compound. The specially formulated PUR sheath resists **bio-based and mineral oils, hydraulic fluids, cleaning detergents, warm water, and ozone**, making it the preferred choice for drag-chain applications in food and beverage processing, automotive wash lines, and outdoor machinery where standard PVC or generic PUR compounds degrade. Rated 300/500 V, 18 cores × 1.5 mm², suitable for multi-circuit control in a single trailing cable.

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
FD ROBUST 18G1.5	16	15.2	259.2	410	18

300/500 V, 0.5 kV. PUR outer sheath (bio-oil and chemical resistant formulation). Green/yellow PE core included. Current at 30 °C, VDE 0298-4, multi-core de-rating applies.

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
205 MC 4G4	12	9.5	153.6	250	34

FEP (fluorinated ethylene propylene) insulation and sheath; rated 300/500 V, 0.5 kV. Ideal for oven conveyor drives, laminating presses, and food-processing equipment operating above 180 °C. Includes green/yellow PE core.

HEAT 1565 MC — MICA / GLASS-FIBRE EXTREME-TEMP CABLE

`Tmax 1565 °C transient`

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
1565 MC 2X2.5	14	10.0	48.0	150	26

Mica/glass-fibre composite construction. Maintains circuit integrity at transient temperatures to 1565 °C. Used in metallurgical furnaces, glass-melting zones, and emergency shutdown wiring. Single-ended or mid-span temperature exposure only.

ÖLFLEX® ROBUST 215 C — SCREENED ALL-WEATHER CHEMICAL-RESISTANT CABLE

ROBUST 215 C — OVERVIEW & VARIANTS

CUSN BRAID SCREEN · BIO-OIL / OZONE / UV RESISTANT PUR SHEATH

The **ÖLFLEX® ROBUST 215 C** is a screened control cable combining a CuSn braid screen with a specially compounded polyurethane outer sheath that provides superior resistance to **biological and mineral oils, ozone, UV radiation, microbiological attack, and warm aqueous cleaning solutions**. This combination makes it the primary choice for EMC-screened circuits in food and beverage production, pharmaceutical processing, outdoor construction equipment, and sewage-treatment plant installations — any environment where cable surfaces are regularly exposed to aggressive media. Available in 5G2.5 for small drive outputs and 12G1.5 for multi-circuit installations.

TYPE	AWG	Ø MM	CU KG/KM	TOTAL KG/KM	I (A)
ROBUST 215 C 5G2.5	14	12.8	175.0	295	26
ROBUST 215 C 12G1.5	16	15.1	245.0	405	18

Both variants: CuSn braid ≥ 85 % (suffix C = screened). PUR outer sheath, bio-oil and chemical resistant. 300/500 V. Current at 30 °C, VDE 0298-4, 3 loaded conductors.

TECHNICAL STANDARDS — ALL SERIES

- `VDE 0285-525 / IEC 60227` — Base flexible control cable compliance; CRANE, FD 855, FD CLASSIC 810, ROBUST 215 C, FD ROBUST
- `IEC 60228 Class 5` — Fine-stranded flexible conductors; bare or tinned copper throughout all listed variants
- `VDE 0298-4` — Current-carrying capacities, ambient temperature correction, and multi-core group de-rating
- `VDE 0472 / IEC 60811` — Mechanical and thermal test methods for PUR, silicone, FEP, and mica/glass sheath compounds
- `IEC 60754` — Halogen content testing; SERVO FD 796 CP halogen-free classification confirmed
- `EN 50267 / EN 61034` — Smoke density and flame propagation; SERVO FD 796 CP and ROBUST 215 C compliant
- `ISO/TS 61537 C4` — Drag-chain speed and acceleration class; FD 855 P/CP, FD CLASSIC 810 CY, SERVO FD 796 CP, FD ROBUST
- `VDE NSHTÖU` — Heavy-duty rubber reel cable classification; CRANE NSHTÖU 30G1.5
- RoHS 2011/65/EU & REACH — All 20 variants are RoHS and REACH compliant

CRANE: PVC/Rubber | FD: PUR Drag-Chain | SERVO FD: H-Free PUR | HEAT: 180/205/1565°C | ROBUST: Bio-Oil Res. | 796 CP 4G6 ★

RoHS Compliant | IEC 60228 Cl.5 | ISO/TS 61537 C4

ORDERING & CONTACT

Specify with full type designation, e.g. `ÖLFLEX CRANE 4G2.5 0.5kV`, `ÖLFLEX SERVO FD 796 CP 4G6 0.5kV`, `ÖLFLEX HEAT 180 EWKF 7G1.5 0.5kV`. Custom cross-sections, alternate sheath colours, and special compound formulations available on request. Drum, coil, and cut-to-length supply.

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All data are nominal and subject to normal manufacturing tolerances. The company reserves the right to modify specifications without prior notice.

CRANE (2 var.) · FD 855 P/CP (2 var.) · FD CLASSIC 810 CY (1 var.) · SERVO FD 796 CP (4 var.) · HEAT 180/205/1565 (8 var.) · ROBUST 215 C (2 var.) · FD ROBUST (1 var.) | 20 Total Variants