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

DOCUMENT FC-PDS-NGFLGOU-2026-008
REVISION Rev. A1 | **DATE** 2026-02-24
CLASS Product Data Sheet | Chloroprene-Rubber Flat Flexible Cable — Crane, Conveyor & Mobile Machinery
STANDARDS DIN VDE 0250-809 | IEC 60228 Cl. 6 | IEC 60332-1-2 | VDE 0298-4

PRODUCT SPECIFICATION — NGFLGÖU / NGFLGOU-J SERIES · NEOPRENE FLAT FLEXIBLE CABLE · EPR INSULATION · CHLOROPRENE SHEATH · 0.5 KV – 1 KV

NGFLGOU 4G16 0.75kV | NGFLGOU-J 4G16 / 4×10 / 5×1.5 / 7×1.5 / 8×1.5 / 12×1.5 / 12×2.5

Eight variants of the NGFLGÖU/NGFLGOU-J chloroprene rubber flat cable family for overhead cranes, conveyors, hoists, and mobile industrial machinery subject to continuous one-plane flexing.
EPR (3GI3) Core Insulation | Polychloroprene / Neoprene (5GM3) Flat Sheath | Class 6 Ultra-Flexible Stranded Conductors | DIN VDE 0250-809

Contact: tech@feichuncables.com | +86 138 5512 3218 | www.feichuncables.com

FC NEOPRENE / EPR | 0.5 kV – 1 kV | FLAT FLEXIBLE | CRANE & CONVEYOR | DIN VDE 0250-809

★ FEICHUN CABLE SERIES
8-Variant Range
Flat Flex Cable
Crane · Conveyor · Mobile Machinery
1.5 mm² – 16 mm² · EPR · Neoprene
Feichun Engineering Cables · RoHS Compliant · DIN VDE

NGFLGOU / NGFLGOU-J — NEOPRENE FLAT FLEXIBLE CABLE FAMILY

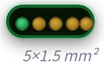
NGFLGOU SERIES — FAMILY OVERVIEW

★ FLAT FLEXIBLE CRANE & CONVEYOR CABLE — DIN VDE 0250-809

The **NGFLGÖU / NGFLGOU-J** family are heavy-duty flat flexible cables constructed to **DIN VDE 0250-809**, designed for applications where the cable is required to flex **repeatedly in a single plane** — the defining operational condition for overhead travelling cranes, monorail hoists, cable-chain festoon systems, reciprocating conveyor drives, and similar machinery. The flat geometry enables neat, low-clearance routing through festoon cable-clips and guide channels without twisting or tangling. Conductors are ultra-fine Class 6 bare-copper strands per IEC 60228, providing the fatigue resistance necessary for tens of millions of flex cycles. Each core is individually insulated in a **special ethylene-propylene rubber (EPR) compound (type 3GI3)**, selected for its high dielectric strength and wide thermal working range. The outer **polychloroprene (Neoprene) flat sheath (type 5GM3)** delivers outstanding resistance to mineral oils, ozone, UV radiation, mechanical abrasion, and atmospheric weathering. Suffix **G** in the core count designates the inclusion of a green/yellow protective earth conductor; suffix **X** denotes cores without a dedicated earth. The **-J** designation indicates a construction with an integrated protective earth core (Schutzleiter) as standard.

0.5 kV | 0.6 kV | 0.75 kV | 1 kV

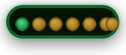
NGFLGOU-J 5×1.5 — 0.5 KV



5×1.5 mm²
Flat · Neoprene
1× G/Y earth

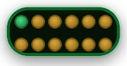
5×1.5 — CORE DATA (0.5 KV)	
Configuration	5 × 1.5 mm²
Flat dimensions (H×W)	6.0×20.0 – 7.0×23.0 mm
Copper weight	72 kg/km
Total weight	≈ 280 kg/km
Current capacity	18 A @ 30 °C
AWG equivalent	≈ 16 AWG

NGFLGOU-J 7×1.5 — 0.5 KV



7×1.5 — CORE DATA (0.5 KV)	
Configuration	7 × 1.5 mm²
Flat dimensions (H×W)	6.0×26.0 – 7.0×30.0 mm
Copper weight	101 kg/km

NGFLGOU-J 12×1.5 — 0.5 KV



12×1.5 mm²
Flat · Neoprene
1× G/Y earth

12×1.5 — CORE DATA (0.5 KV)	
Configuration	12 × 1.5 mm²
Flat dimensions (H×W)	6.0×45.0 – 7.5×51.0 mm
Copper weight	180 kg/km
Total weight	≈ 620 kg/km
Current capacity	12 A @ 30 °C*
AWG equivalent	≈ 16 AWG

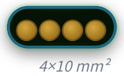
NGFLGOU-J 12×2.5 — 0.5 KV



12×2.5 mm²
Flat · Neoprene
1× G/Y earth

12×2.5 — CORE DATA (0.5 KV)	
Configuration	12 × 2.5 mm²
Flat dimensions (H×W)	7.5×53.0 – 9.0×59.0 mm
Copper weight	288 kg/km
Total weight	≈ 1 020 kg/km
Current capacity	16 A @ 30 °C*
AWG equivalent	≈ 14 AWG

NGFLGOU-J 4×10 — 1 KV

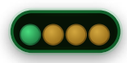


4×10 mm²
Flat · Neoprene
No dedicated earth

4×10 — CORE DATA (1 KV)	
Configuration	4 × 10 mm²
Flat dimensions (H×W)	10.0×31.0 – 12.0×36.0 mm
Copper weight	384 kg/km
Total weight	≈ 840 kg/km
Current capacity	77 A @ 30 °C
AWG equivalent	≈ 8 AWG

1 KV RATED — SUFFIX "X" — NO DEDICATED EARTH CORE

NGFLGOU 4G16 — 0.75 KV



4G16 mm²
Flat · Neoprene
1× G/Y earth

NGFLGOU 4G16 — CORE DATA (0.75 KV)	
Configuration	4G × 16 mm²
Flat dimensions (H×W)	11.5×35.0 – 13.5×40.0 mm
Copper weight	614 kg/km
Total weight	≈ 1 210 kg/km
Current capacity	100 A @ 30 °C
AWG equivalent	≈ 6 AWG

NGFLGOU-J 4G16 — 0.6 KV



4G16 mm²
Flat · Neoprene (-J)
1× G/Y earth

NGFLGOU-J 4G16 — CORE DATA (0.6 KV)	
Configuration	4G × 16 mm²
Flat dimensions (H×W)	11.5×35.0 – 13.5×40.0 mm
Copper weight	614 kg/km
Total weight	≈ 1 210 kg/km
Current capacity	100 A @ 30 °C
AWG equivalent	≈ 6 AWG

NGFLGOU VS. NGFLGOU-J — DESIGNATION DIFFERENCE

Both **4G16** variants share identical physical construction and electrical ratings. The difference lies solely in compliance reference: the **NGFLGOU** root designation references the original DIN VDE 0250-809 construction specification directly, while the **NGFLGOU-J** suffix confirms that a **protective earth (Schutzleiter) core is included as a standardised feature** of the factory build. In jurisdictions where machine safety regulations require a documented earth core, specify the **-J** variant to ensure the cable supply documentation explicitly records the earth conductor.

KEY TECHNICAL PROPERTIES — ALL VARIANTS

- **Conductor:** Bare copper, IEC 60228 Class 6 (ultra-fine stranded) for all 1.5–2.5 mm² cross-sections; Class 5 or 6 for 10 mm² and 16 mm². Ensures multi-million-cycle fatigue life in festoon and reeling duty.
- **Test voltage:** 3 000 V AC (0.5–0.75 kV rated variants) or 3 500 V AC (1 kV rated variant) applied between conductor and screen for 5 minutes without breakdown per VDE 0250-809 §8.

7×1.5 mm²
Flat · Neoprene
1× G/Y earth

Total weight	≈ 380 kg/km
Current capacity	15 A @ 30 °C*
AWG equivalent	≈ 16 AWG

NGFLGOU-J 8×1.5 — 0.5 kV



8×1.5 mm²
Flat · Neoprene
1× G/Y earth

8×1.5 — CORE DATA (0.5 kV)	
Configuration	8 × 1.5 mm²
Flat dimensions (H×W)	6.0×29.0 – 7.0×33.0 mm
Copper weight	115 kg/km
Total weight	≈ 420 kg/km
Current capacity	13 A @ 30 °C*
AWG equivalent	≈ 16 AWG

⚠ MULTI-CORE DE-RATING — VDE 0298-4

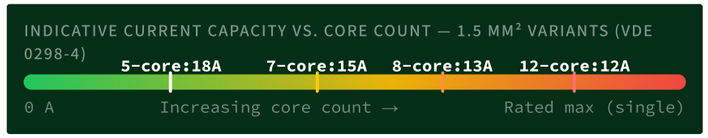
Rated currents are calculated per **VDE 0298-4 with multi-core de-rating applied at 30 °C**. For 7-core and 8-core variants, heat accumulation within the flat sheath reduces the per-core allowable current relative to a 5-core cable. The base single-conductor free-air rating for 1.5 mm² Class 6 Cu is approximately 24 A; de-rating to the tabulated values reflects full simultaneous loading of all cores.

The **4×10** variant carries the "X" designation, indicating that **no green/yellow protective earth core** is included in the cable bundle. A separate protective earth conductor (green/yellow) must be routed alongside this cable unless the machinery frame provides a confirmed low-impedance earth return path per IEC 60364-4-41. At 1 kV rating this cable is appropriate for main power feeder circuits to large crane drives.

CONSTRUCTION DETAILS — ALL NGFLGOU VARIANTS

EPR INSULATION (3GI3) + POLYCHLOROPRENE SHEATH (5GM3)

Conductor: Ultra-fine bare copper strands — **IEC 60228 Class 6** (highest flexibility class). This construction maximises resistance to conductor-strand fatigue under the cyclic bending duty imposed by festoon systems and cable reels. For cross-sections of 16 mm² and above, Class 5 stranding may be applied. **Core insulation:** Type 3GI3 EPR rubber compound, coloured cores for identification (brown, black, grey for power; blue for neutral; green/yellow for PE). The EPR compound retains its dielectric integrity at elevated temperatures and after prolonged immersion in mineral oil. **Assembly:** Cores are arranged in a single or dual horizontal row and embedded in the flat-profile polychloroprene sheath without a binding tape — the sheath fuses directly to the insulation surfaces, eliminating the risk of individual cores separating under flexing loads.



- **Minimum bend radius — dynamic:** 5 × cable height H (festoon, continuous flex). Minimum bend radius — static: 3–4 × H (fixed installation).
- **Maximum tensile load:** Static maximum 15 N/mm² conductor cross-section in mobile operation. Cables must not be used as the primary load-bearing member — strain relief clamps must transfer tensile loading to the sheath.
- **Operating temperature:** −35 °C to +90 °C conductor continuous (mobile use); fixed installation down to −50 °C. Short-circuit conductor max: 250 °C.
- **Flame retardance:** Polychloroprene sheath complies with IEC 60332-1-2 (single cable, vertical flame propagation test).

CONSOLIDATED VARIANT TABLE — ALL EIGHT PRODUCTS

TYPE	CONFIG.	U (KV)	H×W (MM)	CU KG/KM	TOTAL KG/KM	I (A)†
NGFLGOU	4G16	0.75	11.5×35–13.5×40	614	1210	100
NGFLGOU-J	4G16	0.6	11.5×35–13.5×40	614	1210	100
NGFLGOU-J	4×10	1.0	10.0×31–12.0×36	384	840	77
NGFLGOU-J	5×1.5	0.5	6.0×20–7.0×23	72	280	18
NGFLGOU-J	7×1.5	0.5	6.0×26–7.0×30	101	380	15
NGFLGOU-J	8×1.5	0.5	6.0×29–7.0×33	115	420	13
NGFLGOU-J	12×1.5	0.5	6.0×45–7.5×51	180	620	12
NGFLGOU-J	12×2.5	0.5	7.5×53–9.0×59	288	1020	16

† Per VDE 0298-4 at 30 °C ambient with multi-core de-rating applied. Dimensions H×W are (Height × Width) of flat cable cross-section. All values nominal; tolerance per DIN VDE 0250-809.

STANDARDS & CLASSIFICATION

- `DIN VDE 0250-809` — Chloroprene rubber flat flexible cables for cranes and conveyors
- `IEC 60228 Class 5/6` — Flexible conductor specification (ultra-fine stranded)
- `VDE 0298-4` — Current-carrying capacities and de-rating for rubber-insulated cables
- `IEC 60332-1-2` — Flame propagation test — single cable, vertical installation
- `IEC 60364-4-41` — Protection against electric shock — requirements for -J / earth core use

EPR 3GI3 Insulation	Neoprene 5GM3 Sheath	IEC 60228 Class 6
Flat Profile	Crane / Festoon	0.5 – 1 kV Rated
Oil & UV Resistant	−35 °C Mobile	RoHS Compliant

ORDERING REFERENCE & CONTACT

Specify using the full type designation, e.g. `NGFLGOU 4G16 0.75kV`, `NGFLGOU-J 12×2.5 0.5kV`, `NGFLGOU-J 4×10 1kV`. Custom flat-cable widths, alternative cross-sections, and screened-core variants (e.g. for encoder or control circuits within the same festoon) available on request. Drum-free coil supply available for widths up to 35 mm.

tech@feichuncables.com | **+86 138 5512 3218** | **www.feichuncables.com**