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

DOCUMENT FC-PDS-NSGAFOU-NSSHOU-2026-009
REVISION Rev. A1 | **DATE** 2026-02-24
CLASS Product Data Sheet | EPR/Neoprene Flexible Power Cables — Mining, Conveyor & Heavy Industrial
STANDARDS DIN VDE 0250-814 | IEC 60228 Cl. 5 | IEC 60332-1-2 | VDE 0298-4 | VDE 0293

PRODUCT SPECIFICATION — NSGAFOU (3 KV) · NSSHOU-J / NSSHOU-JB (1 KV) SERIES · EPR INSULATION · NEOPRENE SHEATH · FLEXIBLE POWER & CONTROL CABLE

NSGAFOU 1×50 / 1×150 | NSSHOU-J 3×1.5 thru 24×2.5 | NSSHOU-JB 4×35 ★

Fourteen variants across two product families — NSGAFOU high-voltage single-core cables for switchgear & rail traction, and NSSHOU-J/JB heavy-duty mining & conveyor flexible power cables.
EPR (3GI3) Core Insulation | Polychloroprene / Neoprene (5GM3/5GM5) Sheath | Class 5 Tinned-Copper Stranded Conductors | Oil, UV & Ozone Resistant | DIN VDE 0250-814

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

FC EPR / NEOPRENE | 1 kV – 3 kV | ROUND FLEXIBLE | MINING & RAIL & CONVEYOR | DIN VDE 0250-814

★ FEICHUN CABLE SERIES

14-Variant Range
EPR Power Cable

Mining · Rail · Conveyor · Switchgear
1.5 mm² – 150 mm² · EPR · Neoprene

Feichun Engineering Cables · RoHS Compliant · DIN VDE

● NSGAFOU — 1.8/3 KV SINGLE-CORE HV FLEXIBLE POWER CABLE

● NSGAFOU SERIES — FAMILY OVERVIEW

★ 1.8/3 KV SHORT-CIRCUIT–PROOF FLEXIBLE POWER CABLE — DIN VDE 0250-814

The **NSGAFÖU** (also rendered NSGAFOU) is a **single-core, high-voltage flexible rubber cable** rated at 1.8/3 kV, constructed to DIN VDE 0250-814. The designation encodes: **N** = German standard cable; **S** = special rubber sheath; **G** = rubber insulation; **A** = tinned copper conductor; **F** = fine-stranded; **O** = without metallic screen; **U** = oil-resistant. The cable is certified **short-circuit proof** (kurzschlusssicher) per VDE, permitting direct installation in switchgear without additional conduit. Conductors are Class 5 or 6 fine-stranded **tinned copper** per IEC 60228 — the tin layer prevents rubber-to-copper adhesion at elevated temperature and preserves solderability. The EPR (3GI3) insulation is extruded over the conductor; the 5GM3 polychloroprene sheath provides excellent oil, ozone, and UV resistance. Primary applications include **rail traction motor wiring, high-current switchgear connections, transformer feeds, and sub-station flexible connectors** where repeated bending is required in a rated voltage environment above 1 kV.

3 kV Rated | Short-Circuit Proof

● NSGAFOU 1×50 — 1.8/3 KV



1×50 mm²
Single-Core Round
3 kV · Neoprene

NSGAFOU 1×50 — CORE DATA (3 KV)	
Configuration	1 × 50 mm²
Outer diameter (min–max)	14.2 – 19.5 mm
Copper weight	480 kg/km
Total weight	≈ 625 kg/km
Current capacity	~290 A @ 30 °C
AWG equivalent	≈ 1/0 AWG

● NSGAFOU 1×150 — 1.8/3 KV



1×150 mm²
Single-Core Round
3 kV · Neoprene

NSGAFOU 1×150 — CORE DATA (3 KV)	
Configuration	1 × 150 mm²
Outer diameter (min–max)	22.3 – 27.5 mm
Copper weight	1 440 kg/km
Total weight	≈ 1 750 kg/km
Current capacity	566 A @ 30 °C

● NSSHOU-J 4×2.5 — 1 KV



4×2.5 mm²
Round · Neoprene
1× G/Y earth

4×2.5 — CORE DATA (1 KV)	
Configuration	4 × 2.5 mm²
Outer diameter (min–max)	15.1 – 15.5 mm
Copper weight	96 kg/km
Total weight	≈ 360 kg/km
Current capacity	30 A @ 30 °C
AWG equivalent	≈ 14 AWG

● NSSHOU-J 5×2.5 — 1 KV



5×2.5 mm²
Round · Neoprene
1× G/Y earth

5×2.5 — CORE DATA (1 KV)	
Configuration	5 × 2.5 mm²
Outer diameter (min–max)	16.1 – 17.5 mm
Copper weight	120 kg/km
Total weight	≈ 420 kg/km
Current capacity	24 A @ 30 °C*
AWG equivalent	≈ 14 AWG

● NSSHOU-J 5×6 — 1 KV



5×6 mm²
Round · Neoprene
1× G/Y earth

5×6 — CORE DATA (1 KV)	
Configuration	5 × 6 mm²
Outer diameter (min–max)	18.1 – 21.0 mm
Copper weight	288 kg/km
Total weight	≈ 740 kg/km
Current capacity	41 A @ 30 °C*
AWG equivalent	≈ 10 AWG

● NSSHOU-J 5×16 — 1 KV

● NSSHOU-J 12×1.5 — 1 KV



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

12×1.5 — CORE DATA (1 KV)	
Configuration	12 × 1.5 mm²
Outer diameter (min–max)	21.5 – 23.5 mm
Copper weight	173 kg/km
Total weight	≈ 640 kg/km
Current capacity	12 A @ 30 °C*
AWG equivalent	≈ 16 AWG

● NSSHOU-J 12×2.5 — 1 KV



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

12×2.5 — CORE DATA (1 KV)	
Configuration	12 × 2.5 mm²
Outer diameter (min–max)	24.0 – 26.0 mm
Copper weight	288 kg/km
Total weight	≈ 860 kg/km
Current capacity	16 A @ 30 °C*
AWG equivalent	≈ 14 AWG

● NSSHOU-J 24-CORE VARIANTS — 1 KV

24×1.5 (1 KV)	
Config.	24×1.5 mm²
Ø (mm)	30.0–32.0
Cu kg/km	346
Total kg/km	~1 300
I (A)†	10 A
AWG	≈ 16 AWG

24×2.5 (1 KV)	
Config.	24×2.5 mm²
Ø (mm)	35.0–37.0
Cu kg/km	576
Total kg/km	~1 800
I (A)†	13 A
AWG	≈ 14 AWG

⚠ 24-CORE DE-RATING — VDE 0298-4

Per **VDE 0298-4 Table 11**, heavy multi-core de-rating applies to 24-core cables. The base single-conductor current for 1.5 mm² is ~24 A free-air; grouped de-rating for 24 simultaneously loaded

AWG equivalent	≈ 300 MCM

NSSHOU-J — 1 KV HEAVY-DUTY MINING & CONVEYOR FLEXIBLE POWER CABLE

NSSHOU-J 3×1.5 — 1 KV



3×1.5 mm²
Round · Neoprene
1× G/Y earth

3×1.5 — CORE DATA (1 KV)	
Configuration	3 × 1.5 mm²
Outer diameter (min–max)	11.5 – 12.5 mm
Copper weight	43 kg/km
Total weight	≈ 200 kg/km
Current capacity	23 A @ 30 °C
AWG equivalent	≈ 16 AWG

NSSHOU-J 3×2.5 — 1 KV



3×2.5 mm²
Round · Neoprene
1× G/Y earth

3×2.5 — CORE DATA (1 KV)	
Configuration	3 × 2.5 mm²
Outer diameter (min–max)	12.9 – 13.5 mm
Copper weight	72 kg/km
Total weight	≈ 260 kg/km
Current capacity	30 A @ 30 °C
AWG equivalent	≈ 14 AWG



5×16 mm²
Round · Neoprene
1× G/Y earth

5×16 — CORE DATA (1 KV)	
Configuration	5 × 16 mm²
Outer diameter (min–max)	26.1 – 28.5 mm
Copper weight	768 kg/km
Total weight	≈ 1 720 kg/km
Current capacity	75 A @ 30 °C*
AWG equivalent	≈ 6 AWG

NSSHOU-J 7×2.5 — 1 KV



7×2.5 mm²
Round · Neoprene
1× G/Y earth

7×2.5 — CORE DATA (1 KV)	
Configuration	7 × 2.5 mm²
Outer diameter (min–max)	18.0 – 20.0 mm
Copper weight	168 kg/km
Total weight	≈ 600 kg/km
Current capacity	21 A @ 30 °C*
AWG equivalent	≈ 14 AWG

NSSHOU-JB 4×35 — 1 KV ★ HIGHLIGHTED

★ HIGHLIGHTED VARIANT



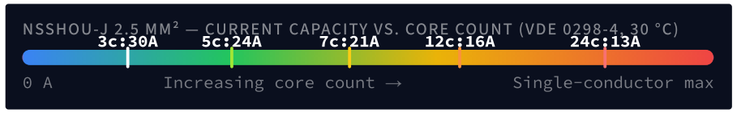
4×35 mm²
Round · Neoprene (-JB)
1× G/Y earth

NSSHOU-JB 4×35 — CORE DATA (1 KV)	
Configuration	4 × 35 mm²
Outer diameter (min–max)	33.2 – 34.5 mm
Copper weight	1 344 kg/km
Total weight	≈ 2 700 kg/km
Current capacity	119 A @ 30 °C
AWG equivalent	≈ 2 AWG

★ NSSHOU-JB — ENHANCED COLOUR-CODED IDENTIFICATION (VDE 0293)

The **-JB** suffix designates cores colour-coded to **VDE 0293 / HD 361** colour identification standard, facilitating rapid and unambiguous core identification during installation, maintenance, and fault finding in multi-cable mining installations. At **35 mm² × 4 cores**, this variant is a primary power feeder cable for large conveyor drive motors, submersible pump feeds, and heading machine supply circuits. The expanded conductor cross-section provides a voltage drop budget suited to the long cable runs typical of underground workings.

cores in a round bundle reduces this to 10 A (1.5 mm²) and 13 A (2.5 mm²). Ensure adequate spacing where cables are laid in trays or bundles to maximise heat dissipation.



CONSOLIDATED VARIANT TABLE — ALL 14 PRODUCTS

TYPE	CONFIG.	U (KV)	Ø (MM)	CU KG/KM	TOTAL KG/KM	I (A)†
NSGAFOU	1×50	3.0	14.2–19.5	480	625	~290
NSGAFOU	1×150	3.0	22.3–27.5	1440	1750	566
NSSHOU-J	3×1.5	1.0	11.5–12.5	43	200	23
NSSHOU-J	3×2.5	1.0	12.9–13.5	72	260	30
NSSHOU-J	4×2.5	1.0	15.1–15.5	96	360	30
NSSHOU-J	5×2.5	1.0	16.1–17.5	120	420	24
NSSHOU-J	5×6	1.0	18.1–21.0	288	740	41
NSSHOU-J	5×16	1.0	26.1–28.5	768	1720	75
NSSHOU-J	7×2.5	1.0	18.0–20.0	168	600	21
NSSHOU-J	12×1.5	1.0	21.5–23.5	173	640	12
NSSHOU-J	12×2.5	1.0	24.0–26.0	288	860	16
NSSHOU-J	24×1.5	1.0	30.0–32.0	346	1300	10
NSSHOU-J	24×2.5	1.0	35.0–37.0	576	1800	13
NSSHOU-JB ★	**4×35**	**1.0**	**33.2–34.5**	**1344**	**2700**	**119**

† Per VDE 0298-4 at 30 °C ambient with multi-core de-rating applied. Ø = outer diameter range. All values nominal; tolerance per DIN VDE 0250-814. ★ = Highlighted variant (NSSHOU-JB colour-coded per VDE 0293).

KEY TECHNICAL PROPERTIES — ALL VARIANTS

- **Conductor:** Class 5 fine-stranded tinned copper per IEC 60228 / DIN VDE 0295. Tin layer prevents rubber-to-copper bonding at operating temperature and facilitates soldering. Suitable for frequent flexing and mobile installations.
- **Test voltage:** 5 000 V AC (1 kV variants) or 10 000 V AC (3 kV NSGAFOU) applied between conductor and screen/earth for 5 minutes per VDE 0250-814 §8 without breakdown.
- **Operating temperature:** Fixed installation: −40 °C to +90 °C. Mobile/flexing: −25 °C to +90 °C. Short-circuit conductor maximum: 250 °C.
- **Minimum bend radius — dynamic:** 10 × outer diameter for NSGAFOU (single-core HV); 6 × outer diameter for NSSHOU-J multi-core variants (mobile use). Static: 5 × OD minimum.
- **Flame retardance:** Polychloroprene outer sheath complies with IEC 60332-1-2 (single cable, vertical flame test). Oil resistance per EN 60811-404 / IEC 60811-2-1.

STANDARDS & CLASSIFICATION

- `DIN VDE 0250-814` — Rubber-insulated cables for mining, quarries, and heavy industrial use
- `IEC 60228 Class 5` — Fine-stranded flexible conductor (tinned copper)
- `VDE 0298-4` — Current-carrying capacities and de-rating for rubber-insulated cables
- `IEC 60332-1-2` — Flame propagation test — single cable, vertical installation
- `VDE 0293 / HD 361` — Core colour identification for NSSHOU-JB variants
- `EN 60811-404` — Oil immersion resistance test for sheaths and insulation

EPR 3GI3 Insulation | Neoprene 5GM3 Sheath | IEC 60228 Class 5

Tinned-Cu Conductor | JB: VDE 0293 Colour | 1 kV – 3 kV Rated

Mining · Rail · Conveyor | −25 °C Mobile Flex | RoHS Compliant

ORDERING REFERENCE & CONTACT

Specify using full type designation, e.g. `NSGAFOU 1×150 3kV`, `NSSHOU−J 12×2.5 1kV`, `NSSHOU−JB 4×35 1kV`. Custom cross-sections, screened variants, and armoured constructions available on request. Drum or coil supply available. Minimum order quantity applies to special configurations.

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

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

NSGAFOU 1×50/150 · NSSHOU-J 3×1.5 thru 24×2.5 · NSSHOU-JB 4×35 | EPR · Neoprene · DIN VDE 0250-814