



DIN VDE 0250-602 / 606 short-circuit-proof single-core wires

NSGAFÖU 1.8/3 kV

Short-Circuit-Proof Single-Core Rubber Wire

DIN VDE 0250-602 tinned copper, 3GI3 EPR & 5GM3 polychloroprene switchgear wire



1.8/3 kV (6 kV Test)

DIN VDE 0250-602

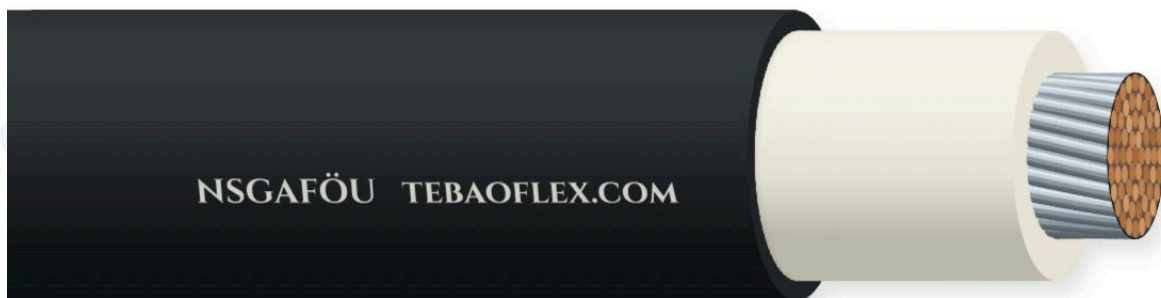
Short-Circuit Proof ≤ 1 kV

Application

Flexible 1.8/3 kV single-core rubber wire (NSGAFÖU) to DIN VDE 0250-602 with Class 5 tinned copper core, 3GI3 EPR insulation and 5GM3 polychloroprene sheath — inherently short-circuit and earth-fault proof in switchgear and rail vehicles up to 1,000 V.

Typical uses: LV & MV switchgear & distribution boards, Unprotected transformer-to-ACB busbar risers, Rail vehicles, locomotives & transit coaches, Electric & hybrid city buses & trolleybuses, Dry-room industrial machinery & rectifiers, Generator & UPS battery bank interconnections

Construction



Cross-section, not to scale

- 1 Conductor
- 2 Core insulation (3GI3)
- 3 Outer sheath (5GM3)

Technical data

Typical values

Rated voltage U0/U (max AC / DC) 1.8/3 kV AC nominal · max. 2.1/3.6 kV AC · max. 2.7/5.4 kV DC

Test voltage & short-circuit proof rating 6.0 kV AC routine test · Short-circuit & earth-fault proof in switchgear up to 1,000 V

Ambient temperature — flexing / fixed -25 to +80 °C flexing · -40 to +80 °C fixed (up to +90 °C at conductor)

Max. short-circuit conductor temperature +250 °C (max. 5 s)

Min. bending radius 4 × D to 6 × D fixed installation · 5 × D to 10 × D flexing / moving

Permissible tensile load 15 N/mm² of copper cross-section during installation (22.5 N on 1.5 mm² to 7,500 N on 500 mm²)

Standards DIN VDE 0250-602 · DIN VDE 0295 / IEC 60228 Class 5 · DIN VDE 0207-20 (3GI3) · DIN VDE 0207-21 (5GM3)

Standard packing Coils (small cross-sections) or non-returnable/returnable wooden drums

Sizes

18 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Cross-section mm ²	3GI3 wall mm	5GM3 wall mm	OD min mm	OD nom mm	OD max mm	Cu weight kg/km	Total weight ≈ kg/km	Ampacity (air) A
1.5 – 16 mm ² 6 sizes									
☐ NSGAFÖU 1 × 1.5	1 × 1.5	1.3	0.8	5.1	6.3	7.0	14	51	30
☐ NSGAFÖU 1 × 2.5	1 × 2.5	1.3	0.8	5.6	6.7	7.5	24	63	41
☐ NSGAFÖU 1 × 4	1 × 4	1.3	0.8	6.2	7.4	9.0	38	82	55
☐ NSGAFÖU 1 × 6	1 × 6	1.3	0.8	6.7	7.9	9.5	58	103	70
☐ NSGAFÖU 1 × 10	1 × 10	1.5	0.8	8.1	9.5	11.0	96	159	98
☐ NSGAFÖU 1 × 16	1 × 16	1.5	0.8	9.1	10.5	13.0	154	219	132
25 – 120 mm ² 6 sizes									
☐ NSGAFÖU 1 × 25	1 × 25	1.6	1.0	11.1	12.8	15.0	240	335	176
☐ NSGAFÖU 1 × 35	1 × 35	1.6	1.0	12.3	14.1	16.5	336	435	218
☐ NSGAFÖU 1 × 50	1 × 50	1.8	1.0	13.8	15.9	18.0	480	582	276
☐ NSGAFÖU 1 × 70	1 × 70	1.8	1.0	15.5	17.8	20.5	672	757	347
☐ NSGAFÖU 1 × 95	1 × 95	2.2	1.0	17.7	20.1	24.0	912	1,040	416
☐ NSGAFÖU 1 × 120	1 × 120	2.2	1.0	19.2	22.0	26.0	1,152	1,289	488
150 – 500 mm ² 6 sizes									
☐ NSGAFÖU 1 × 150	1 × 150	2.2	1.2	21.1	24.0	28.0	1,440	1,581	566
☐ NSGAFÖU 1 × 185	1 × 185	2.4	1.2	23.1	26.3	31.0	1,776	1,895	644
☐ NSGAFÖU 1 × 240	1 × 240	2.6	1.2	26.0	29.6	34.5	2,304	2,452	775
☐ NSGAFÖU 1 × 300	1 × 300	2.8	1.2	28.4	32.2	38.0	2,880	2,998	898
☐ NSGAFÖU 1 × 400	1 × 400	3.1	1.4	34.6	40.5	41.5	3,840	4,200	1,060
☐ NSGAFÖU 1 × 500	1 × 500	3.4	1.6	38.0	42.0	45.0	4,800	5,500	1,250

– Current ratings apply to single-core routing in free air at 30 °C ambient and 90 °C conductor temperature.

Resistance & ampacity

18 sizes

Cross-section mm ²	Max. DC resistance at 20 °C (tinned) Ω/km	Current in free air (30 °C) A	Current in conduit (30 °C) A	Max. pulling load (15 N/mm ²) N
1 × 1.5	13.700	30	15	22
1 × 2.5	8.210	41	21	38
1 × 4	5.090	55	29	60
1 × 6	3.390	70	37	90
1 × 10	1.950	98	52	150

Cross-section mm ²	Max. DC resistance at 20 °C (tinned) Ω/km	Current in free air (30 °C) A	Current in conduit (30 °C) A	Max. pulling load (15 N/mm ²) N
1 × 16	1.240	132	70	240
1 × 25	0.795	176	93	375
1 × 35	0.565	218	115	525
1 × 50	0.393	276	146	750
1 × 70	0.277	347	185	1,050
1 × 95	0.210	416	221	1,425
1 × 120	0.164	488	259	1,800
1 × 150	0.132	566	301	2,250
1 × 185	0.108	644	342	2,775
1 × 240	0.082	775	412	3,600
1 × 300	0.065	898	467	4,500
1 × 400	0.049	1,060	557	6,000
1 × 500	0.038	1,250	662	7,500

– Conductor resistance values comply with IEC 60228 Class 5 metal-coated (tinned) copper conductors at 20 °C.

Standards and approvals

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/nsgafoeu-cable



Typical values for this cable type, based on DIN VDE 0250-602 / IEC 60228. Values for your order are confirmed in the quotation. Subject to change without notice.
Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.