

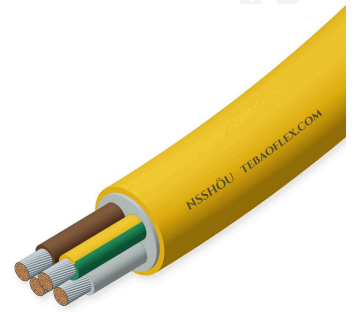


Heavy-duty rubber cable

NSSHÖU

0.6/1 kV Heavy-Duty Rubber Cable

Heavy-duty 3GI3 / 5GM5 mining & industrial rubber cable — O/J, 3E & 3E+ST



DIN VDE 0250-812

U0/U 0.6/1 kV

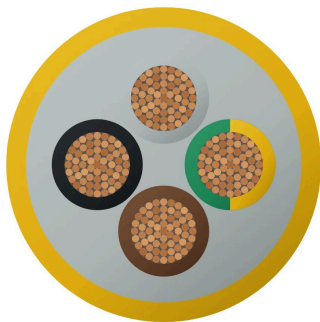
O/J · 3E · 3E+ST

Application

Mechanically robust 0.6/1 kV flexible rubber power and control cable to DIN VDE 0250-812 with Class 5 tinned copper conductors, 3GI3 EPR core insulation, GM1b elastomeric inner sheath and yellow 5GM5 abrasion-, tear- and oil-resistant outer sheath.

Typical uses: Underground & open-cast mining power and control, Tunnel boring machines (TBM), jumbo drills & shotcrete plant, Quarries, aggregate crushers & screening plant, Heavy construction sites & submersible dewatering pumps (to 100 m), Steelworks, heavy industrial machinery & Protection Class II equipment

Construction



Cross-section, not to scale

1 Flexible conductorIEC 60228 Class 5 / EN
60228 / DIN VDE 0295**2** Separator tape**3** Core insulation**4** Individual core screen (3E & 3E+ST only)**5** Inner sheath**6** Outer sheath

Technical data

Typical values

Rated voltage U0/U	0.6/1 kV AC (0.9/1.5 kV DC)	Max. operating voltage	0.7/1.2 kV AC · 0.9/1.8 kV DC (DIN VDE 0298-3)
AC test voltage	3.0 kV AC (50 Hz)	Current rating	25 to 638 A in free air at 30 °C (DIN VDE 0298-4)
Individual phase screen (3E / 3E+ST)	Tinned Cu braid ($\leq 10 \text{ mm}^2$) · helical Cu wire screen ($\geq 16 \text{ mm}^2$)	Ambient temperature, flexing	-25 to +80 °C
Ambient temperature, fixed	-40 to +80 °C	Max. conductor temperature	+90 °C continuous · +250 °C short-circuit
Min. bending radius, fixed	4 × OD (6 × OD conservative site rule)	Min. bending radius, flexing	5 × OD free movement (10 × OD guided / reeling)
Max. tensile load	15 N/mm ² mobile operation · 50 N/mm ² stationary laying (VDE 0298-3)	Abrasion & tear resistance	Abrasion $\leq 300 \text{ mm}^3$ (VDE 0472-605 A) · Tear $\geq 30 \text{ N/mm}$ (VDE 0472-613)
Oil, chemical & water	Oil resistant (VDE 0472-803 A / EN 60811-404) · Submersible to 100 m	Flame retardance	IEC 60332-1-2 / EN 60332-1-2 (DIN VDE 0472-804 Test B)
Standards	DIN VDE 0250-812 · DIN VDE 0250-1 · DIN VDE 0298-3 / -4	Standard packing	Heat-treated seaworthy timber drums with waterproof end caps

Sizes

92 standard constructions

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

Variant & size	Configuration mm ²	Cond. Ø mm	Outer Ø min mm	Outer Ø max mm	Weight ≈ kg/km	Min. bend R mm (4-D)	Max. tensile N (15 N/mm ²)	Current air A (30 °C)
O/J Single-Core · 1.5–300 mm ² 16 sizes								
☐ NSSHÖU-O 1 × 1.5 mm ²	1 × 1.5	1.5	6.3	7.0	60	28	23	25
☐ NSSHÖU-O 1 × 2.5 mm ²	1 × 2.5	1.9	7.0	7.7	75	31	38	32
☐ NSSHÖU-O 1 × 4 mm ²	1 × 4	2.4	7.6	8.3	95	34	60	43
☐ NSSHÖU-O 1 × 6 mm ²	1 × 6	2.9	8.2	8.9	120	36	90	56
☐ NSSHÖU-O 1 × 10 mm ²	1 × 10	3.8	9.5	10.2	180	41	150	78
☐ NSSHÖU-O 1 × 16 mm ²	1 × 16	4.8	10.5	11.2	245	45	240	104
☐ NSSHÖU-O 1 × 25 mm ²	1 × 25	6.1	13.0	13.7	375	55	375	138
☐ NSSHÖU-O 1 × 35 mm ²	1 × 35	7.2	14.1	14.8	480	60	525	170
☐ NSSHÖU-O 1 × 50 mm ²	1 × 50	8.9	16.2	16.9	660	68	750	212
☐ NSSHÖU-O 1 × 70 mm ²	1 × 70	10.6	18.3	19.0	875	76	1,050	263
☐ NSSHÖU-O 1 × 95 mm ²	1 × 95	12.5	20.5	21.7	1,150	87	1,425	316
☐ NSSHÖU-O 1 × 120 mm ²	1 × 120	14.2	22.8	24.0	1,430	96	1,800	370
☐ NSSHÖU-O 1 × 150 mm ²	1 × 150	15.9	25.0	26.2	1,750	105	2,250	424
☐ NSSHÖU-O 1 × 185 mm ²	1 × 185	17.7	28.2	29.4	2,180	118	2,775	484
☐ NSSHÖU-O 1 × 240 mm ²	1 × 240	20.1	31.1	32.3	2,770	130	3,600	554
☐ NSSHÖU-O 1 × 300 mm ²	1 × 300	22.5	34.9	36.1	3,510	145	4,500	638
O/J Multicore · 3C–24C & 3+3E 50 sizes								
☐ NSSHÖU-J/-O 3 × 1.5 mm ²	3 × 1.5	1.5	11.7	12.3	190	50	68	25
☐ NSSHÖU-J/-O 3 × 2.5 mm ²	3 × 2.5	1.9	13.1	13.7	255	55	113	32
☐ NSSHÖU-J/-O 3 × 4 mm ²	3 × 4	2.4	15.6	16.2	375	65	180	43
☐ NSSHÖU-J/-O 3 × 6 mm ²	3 × 6	2.9	16.8	17.4	465	70	270	56
☐ NSSHÖU-J/-O 3 × 10 mm ²	3 × 10	3.8	20.2	21.3	710	86	450	78
☐ NSSHÖU-J/-O 3 × 16 mm ²	3 × 16	4.8	22.3	23.4	930	94	720	104
☐ NSSHÖU-J/-O 3 × 25 mm ²	3 × 25	6.1	26.9	28.0	1,390	112	1,125	138
☐ NSSHÖU-J/-O 3 × 35 mm ²	3 × 35	7.2	30.2	31.4	1,880	126	1,575	170
☐ NSSHÖU-J/-O 3 × 50 mm ²	3 × 50	8.9	35.8	37.0	2,500	148	2,250	212

Variant & size	Configuration mm ²	Cond. Ø mm	Outer Ø min mm	Outer Ø max mm	Weight ≈ kg/km	Min. bend R mm (4×D)	Max. tensile N (15 N/mm ²)	Current air A (30° C)
☐ NSSHÖU-J/-O 3 × 70 mm ²	3 × 70	10.6	39.3	40.5	3,460	162	3,150	263
☐ NSSHÖU-J/-O 3 × 95 mm ²	3 × 95	12.5	45.7	47.4	4,570	190	4,275	316
☐ NSSHÖU-J/-O 3 × 120 mm ²	3 × 120	14.2	48.2	49.9	5,220	200	5,400	370
☐ NSSHÖU-J/-O 3 × 150 mm ²	3 × 150	15.9	52.6	54.4	6,460	218	6,750	424
☐ NSSHÖU-J/-O 3 × 185 mm ²	3 × 185	17.7	58.7	61.0	7,980	244	8,325	484
☐ NSSHÖU-J/-O 4 × 1.5 mm ²	4 × 1.5	1.5	12.5	13.1	225	53	90	25
☐ NSSHÖU-J/-O 4 × 2.5 mm ²	4 × 2.5	1.9	15.3	15.9	350	64	150	32
☐ NSSHÖU-J/-O 4 × 4 mm ²	4 × 4	2.4	16.7	17.3	440	70	240	43
☐ NSSHÖU-J/-O 4 × 6 mm ²	4 × 6	2.9	18.1	18.7	550	75	360	56
☐ NSSHÖU-J/-O 4 × 10 mm ²	4 × 10	3.8	21.9	23.0	860	92	600	78
☐ NSSHÖU-J/-O 4 × 16 mm ²	4 × 16	4.8	25.2	26.3	1,210	106	960	104
☐ NSSHÖU-J/-O 4 × 25 mm ²	4 × 25	6.1	30.6	31.8	1,810	128	1,500	138
☐ NSSHÖU-J/-O 4 × 35 mm ²	4 × 35	7.2	32.8	34.0	2,330	136	2,100	170
☐ NSSHÖU-J/-O 4 × 50 mm ²	4 × 50	8.9	39.0	40.2	3,300	161	3,000	212
☐ NSSHÖU-J/-O 4 × 70 mm ²	4 × 70	10.6	42.8	44.5	4,300	178	4,200	263
☐ NSSHÖU-J/-O 4 × 95 mm ²	4 × 95	12.5	49.9	51.7	5,680	207	5,700	316
☐ NSSHÖU-J/-O 4 × 120 mm ²	4 × 120	14.2	55.6	57.4	6,820	230	7,200	370
☐ NSSHÖU-J/-O 4 × 150 mm ²	4 × 150	15.9	60.6	62.9	8,270	252	9,000	424
☐ NSSHÖU-J/-O 4 × 185 mm ²	4 × 185	17.7	67.4	69.7	10,350	279	11,100	484
☐ NSSHÖU-J/-O 5 × 1.5 mm ²	5 × 1.5	1.5	13.4	14.0	270	56	113	25
☐ NSSHÖU-J/-O 5 × 2.5 mm ²	5 × 2.5	1.9	16.4	17.0	410	68	188	32
☐ NSSHÖU-J/-O 5 × 4 mm ²	5 × 4	2.4	18.0	18.6	525	75	300	43
☐ NSSHÖU-J/-O 5 × 6 mm ²	5 × 6	2.9	20.3	21.4	715	86	450	56
☐ NSSHÖU-J/-O 5 × 10 mm ²	5 × 10	3.8	23.7	24.8	1,040	100	750	78
☐ NSSHÖU-J/-O 5 × 16 mm ²	5 × 16	4.8	27.3	28.4	1,470	114	1,200	104
☐ NSSHÖU-J/-O 5 × 25 mm ²	5 × 25	6.1	33.2	34.4	2,220	138	1,875	138
☐ NSSHÖU-J/-O 7 × 1.5 mm ²	7 × 1.5	1.5	16.9	17.5	400	70	158	16
☐ NSSHÖU-J/-O 7 × 2.5 mm ²	7 × 2.5	1.9	19.2	19.8	560	80	263	21
☐ NSSHÖU-J/-O 12 × 1.5 mm ²	12 × 1.5	1.5	19.6	20.2	540	81	270	12
☐ NSSHÖU-J/-O 12 × 2.5 mm ²	12 × 2.5	1.9	22.3	23.4	790	94	450	16
☐ NSSHÖU-J/-O 18 × 1.5 mm ²	18 × 1.5	1.5	22.2	23.3	750	94	405	11
☐ NSSHÖU-J/-O 18 × 2.5 mm ²	18 × 2.5	1.9	26.5	27.6	1,110	111	675	14
☐ NSSHÖU-J/-O 24 × 1.5 mm ²	24 × 1.5	1.5	23.7	25.1	900	101	540	10
☐ NSSHÖU-J/-O 24 × 2.5 mm ²	24 × 2.5	1.9	28.4	29.6	1,350	119	900	13
☐ NSSHÖU-J/-O 3 × 50 + 3 × 25/3E mm ²	3 × 50 + 3 × 25/3E	8.9	36.3	37.5	2,790	150	2,250	212
☐ NSSHÖU-J/-O 3 × 70 + 3 × 35/3E mm ²	3 × 70 + 3 × 35/3E	10.6	39.7	41.4	3,660	166	3,150	263
☐ NSSHÖU-J/-O 3 × 95 + 3 × 50/3E mm ²	3 × 95 + 3 × 50/3E	12.5	46.3	48.0	4,800	192	4,275	316
☐ NSSHÖU-J/-O 3 × 120 + 3 × 70/3E mm ²	3 × 120 + 3 × 70/3E	14.2	48.5	50.3	5,990	202	5,400	370
☐ NSSHÖU-J/-O 3 × 150 + 3 × 70/3E mm ²	3 × 150 + 3 × 70/3E	15.9	54.3	56.1	7,030	225	6,750	424
☐ NSSHÖU-J/-O 3 × 185 + 3 × 95/3E mm ²	3 × 185 + 3 × 95/3E	17.7	61.7	64.0	9,030	256	8,325	484
☐ NSSHÖU-J/-O 3 × 240 + 3 × 120/3E mm ²	3 × 240 + 3 × 120/3E	20.1	66.5	68.8	11,280	276	10,800	554
3E Screened · 2.5–185 mm ² 13 sizes								
☐ NSSHÖU 3E 3 × 2.5 + 3 × 2.5/3E mm ²	3 × 2.5 + 3 × 2.5/3E	1.9	16.2	16.9	370	68	113	32
☐ NSSHÖU 3E 3 × 4 + 3 × 4/3E mm ²	3 × 4 + 3 × 4/3E	2.4	17.7	18.4	490	74	180	43
☐ NSSHÖU 3E 3 × 6 + 3 × 6/3E mm ²	3 × 6 + 3 × 6/3E	2.9	18.9	19.6	590	79	270	56
☐ NSSHÖU 3E 3 × 10 + 3 × 10/3E mm ²	3 × 10 + 3 × 10/3E	3.8	22.4	23.5	890	94	450	78
☐ NSSHÖU 3E 3 × 16 + 3 × 16/3E mm ²	3 × 16 + 3 × 16/3E	4.8	26.6	27.7	1,260	111	720	104
☐ NSSHÖU 3E 3 × 25 + 3 × 16/3E mm ²	3 × 25 + 3 × 16/3E	6.1	29.9	31.1	1,700	125	1,125	138
☐ NSSHÖU 3E 3 × 35 + 3 × 16/3E mm ²	3 × 35 + 3 × 16/3E	7.2	33.9	35.1	2,100	141	1,575	170

Variant & size	Configuration mm ²	Cond. Ø mm	Outer Ø min mm	Outer Ø max mm	Weight ≈ kg/km	Min. bend R mm (4×D)	Max. tensile N (15 N/mm ²)	Current air A (30 °C)
☐ NSSHÖU 3E 3 × 50 + 3 × 25/3E mm ²	3 × 50 + 3 × 25/3E	8.9	39.8	41.5	3,060	166	2,250	212
☐ NSSHÖU 3E 3 × 70 + 3 × 35/3E mm ²	3 × 70 + 3 × 35/3E	10.6	43.4	45.1	3,940	181	3,150	263
☐ NSSHÖU 3E 3 × 95 + 3 × 50/3E mm ²	3 × 95 + 3 × 50/3E	12.5	50.0	51.8	5,240	208	4,275	316
☐ NSSHÖU 3E 3 × 120 + 3 × 70/3E mm ²	3 × 120 + 3 × 70/3E	14.2	54.1	55.9	6,580	224	5,400	370
☐ NSSHÖU 3E 3 × 150 + 3 × 70/3E mm ²	3 × 150 + 3 × 70/3E	15.9	59.7	62.0	7,590	248	6,750	424
☐ NSSHÖU 3E 3 × 185 + 3 × 95/3E mm ²	3 × 185 + 3 × 95/3E	17.7	66.1	68.4	9,400	274	8,325	484
3E+ST Screened + Pilot · 2.5–185 mm ² 13 sizes								
☐ NSSHÖU 3E+ST 3 × 2.5 + 3 × 2.5/3E + 3 × 1.5ST mm ²	3 × 2.5 + 3 × 2.5/3E + 3 × 1.5ST	1.9	16.2	18.1	425	73	113	32
☐ NSSHÖU 3E+ST 3 × 4 + 3 × 4/3E + 3 × 1.5ST mm ²	3 × 4 + 3 × 4/3E + 3 × 1.5ST	2.4	17.7	19.6	540	79	180	43
☐ NSSHÖU 3E+ST 3 × 6 + 3 × 6/3E + 3 × 1.5ST mm ²	3 × 6 + 3 × 6/3E + 3 × 1.5ST	2.9	18.9	20.3	640	82	270	56
☐ NSSHÖU 3E+ST 3 × 10 + 3 × 10/3E + 3 × 2.5ST mm ²	3 × 10 + 3 × 10/3E + 3 × 2.5ST	3.8	22.4	23.5	940	94	450	78
☐ NSSHÖU 3E+ST 3 × 16 + 3 × 16/3E + 3 × 2.5ST mm ²	3 × 16 + 3 × 16/3E + 3 × 2.5ST	4.8	26.6	27.7	1,310	111	720	104
☐ NSSHÖU 3E+ST 3 × 25 + 3 × 16/3E + 3 × 2.5ST mm ²	3 × 25 + 3 × 16/3E + 3 × 2.5ST	6.1	29.9	31.1	1,800	125	1,125	138
☐ NSSHÖU 3E+ST 3 × 35 + 3 × 16/3E + 3 × 2.5ST mm ²	3 × 35 + 3 × 16/3E + 3 × 2.5ST	7.2	33.9	35.1	2,230	141	1,575	170
☐ NSSHÖU 3E+ST 3 × 50 + 3 × 25/3E + 3 × 2.5ST mm ²	3 × 50 + 3 × 25/3E + 3 × 2.5ST	8.9	39.8	41.5	3,160	166	2,250	212
☐ NSSHÖU 3E+ST 3 × 70 + 3 × 35/3E + 3 × 2.5ST mm ²	3 × 70 + 3 × 35/3E + 3 × 2.5ST	10.6	43.4	45.1	4,210	181	3,150	263
☐ NSSHÖU 3E+ST 3 × 95 + 3 × 50/3E + 3 × 2.5ST mm ²	3 × 95 + 3 × 50/3E + 3 × 2.5ST	12.5	50.0	51.8	5,520	208	4,275	316
☐ NSSHÖU 3E+ST 3 × 120 + 3 × 70/3E + 3 × 2.5ST mm ²	3 × 120 + 3 × 70/3E + 3 × 2.5ST	14.2	54.1	55.9	6,730	224	5,400	370
☐ NSSHÖU 3E+ST 3 × 150 + 3 × 70/3E + 3 × 2.5ST mm ²	3 × 150 + 3 × 70/3E + 3 × 2.5ST	15.9	59.7	62.0	7,740	248	6,750	424
☐ NSSHÖU 3E+ST 3 × 185 + 3 × 95/3E + 3 × 2.5ST mm ²	3 × 185 + 3 × 95/3E + 3 × 2.5ST	17.7	66.1	68.4	9,700	274	8,325	484

- Minimum fixed bending radius r_{min} is calculated at 4 × OD max (for flexing allow 5 × OD max; for guided deflection allow 10 × OD max per DIN VDE 0298-3).
- Maximum dynamic tensile load t_{max} is 15 N/mm² of total phase-conductor cross-section (for 3+3E and 3E+ST types, calculated on the 3 phase conductors only).
Current in free air at 30 °C includes multicore loading conversion factors for 7–24 core control sizes.

Ampacity, voltage drop & derating

16 sizes

Conductor mm ²	Max. DC R 20 °C Ω/km (tinned)	On floor A (30 °C)	Free air A (30 °C)	Reeled 1L A	Reeled 2L A	Reeled 3L A	Voltage drop V/A-km (PF 0.8)	Voltage drop V/A-km (PF 1.0)
1.5 mm ²	13.700	24	25	19	15	12	23.56	29.32
2.5 mm ²	8.210	30	32	24	18	15	14.17	17.59
4 mm ²	5.090	41	43	33	25	20	8.82	10.92
6 mm ²	3.390	53	56	42	32	26	5.90	7.27
10 mm ²	1.950	74	78	59	45	36	3.44	4.20
16 mm ²	1.240	99	104	79	60	49	2.21	2.66
25 mm ²	0.795	131	138	105	80	64	1.45	1.71
35 mm ²	0.565	162	170	130	99	79	1.06	1.23
50 mm ²	0.393	202	212	162	123	99	0.77	0.87
70 mm ²	0.277	250	263	200	153	123	0.56	0.61
95 mm ²	0.210	301	316	241	184	147	0.45	0.47
120 mm ²	0.164	352	370	282	215	172	0.36	0.36
150 mm ²	0.132	404	424	323	246	198	0.31	0.29
185 mm ²	0.108	461	484	369	281	226	0.27	0.24
240 mm ²	0.082	528	554	422	322	259	0.22	0.18
300 mm ²	0.065	608	638	486	371	298	–	–

- Ambient temperature derating factors (base 30 °C = 1.00, max conductor 90 °C): 10 °C: 1.15 · 15 °C: 1.12 · 20 °C: 1.08 · 25 °C: 1.04 · 30 °C: 1.00 · 35 °C: 0.96 · 40 °C: 0.91 · 45 °C: 0.87 · 50 °C: 0.82 · 55 °C: 0.76 · 60 °C: 0.71 · 65 °C: 0.65 · 70 °C: 0.58 · 75 °C: 0.50 · 80 °C: 0.41.
- Multicore loading derating factors (DIN VDE 0298-4): 5 loaded cores: 0.75 · 7 cores: 0.65 · 10 cores: 0.55 · 14 cores: 0.50 · 19 cores: 0.45 · 24 cores: 0.40.

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/nsshoeu-heavy-duty-rubber-cable



Typical values for this cable type, based on DIN VDE 0250-812. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.