



Heavy-duty rubber cable (DIN VDE 0250-812)

(N)SHÖU

0.6/1 kV Flexible Mining & Industrial Rubber Cable

Flexible 3GI3 / 5GM5 mining rubber cable — -O, -J, 3E & ...KON



DIN VDE 0250-812

U0/U 0.6/1 kV

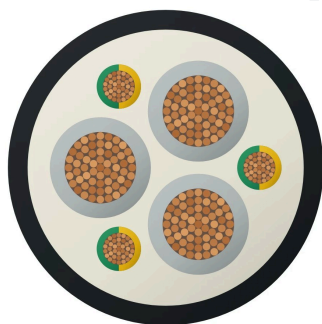
-O · -J · 3E · KON

Application

Flexible 0.6/1 kV rubber power and control cable based on DIN VDE 0250-812 with Class 5 copper conductors, 3GI3 EPR insulation, elastomeric inner sheath, optional KON copper screen, and yellow or black 5GM5 outer sheath.

Typical uses: Open-Cast & Underground Mining Conveyor Lines, Tunneling Sites, Jumbo Drills & LHD Loaders, Submersible Dewatering Pumps (to 500 m Depth), Quarries, Bulk Material Handling & Explosion-Hazard Plants

Construction



Cross-section, not to scale

- 1 Flexible Class 5 copper conductor
- 2 Core insulation (3GI3 EPR)
- 3 Inner sheath (EPR elastomer)
- 4 Concentric copper screen (...KON control types only)
- 5 Outer sheath (5GM5 CM/CR rubber)

Technical data

Typical values

Rated voltage U0/U	U0/U = 0.6/1 kV (600/1000 V AC)	Max. operating voltage	0.7/1.2 kV AC · 0.9/1.8 kV DC (DIN VDE 0298-3)
AC test voltage	3.0–3.5 kV AC (5 min) on main cores · 2.0 kV AC on control cores	Current rating (30 °C)	23 to 620 A laid on floor · 25 to 638 A in free air at 30 °C (DIN VDE 0298-4 Table 15)
Screening options	Unscreened (-O / -J / 3E split earth) or closed concentric copper wire spinning over core assembly (...KON control types)	Ambient temperature, flexing	–25 °C to +80 °C (continuous full-flexing operation –25 °C to +60 °C per DIN VDE 0298-3)
Ambient temperature, fixed	–40 °C to +80 °C	Max. conductor & short-circuit temp.	+90 °C continuous · +250 °C short-circuit (5 s)
Submersible water rating	Up to +40 °C water temperature · up to 500 m submersion depth (EN 50525-2-21)	Max. permissible tensile load	15 N/mm ² of total phase conductor cross-section (45 N on 2×1.5 mm ² up to 13,500 N on 3×300 mm ²)
Minimum bending radius	4 × D fixed installation · 5 × D free flexing (DIN VDE 0298-3 Table 3)	Max. reeling / drum-car speed	Up to 60 m/min on drum cars, drills & LHD reels
Permissible torsional stress	±100 °/m (MT trailing/conveyor) · ±25 °/m (M+ LHD reel)	Oil, ozone & weather resistance	Oil-resistant per IEC 60811-404 / DIN VDE 0473-811-2-1; ozone, UV, moisture & weather resistant for unrestricted indoor/outdoor use
Flame retardance	Flame-retardant per IEC 60332-1-2 / EN 60332-1-2 / DIN VDE 0482-332-1-2	Standards	DIN VDE 0250-812 & DIN VDE 0250-1 (selection & installation per DIN VDE 0298-3 & 0298-4)

Sizes

80 standard constructions

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

Designation	Cores	Cross-section	Cond. Ø	Outer Ø min	Outer Ø max	Weight ≈	Max. pull	Min. bend R 5×Ø	Current 30 °C
1-Core & 2-Core (N)SHÖU-O 14 sizes									
☐ (N)SHÖU-O 1 × 16	1	16	5.2	9.5	11.1	230	240	56	99
☐ (N)SHÖU-O 1 × 25	1	25	6.4	11	12.6	335	375	63	131
☐ (N)SHÖU-O 1 × 35	1	35	7.5	12.3	13.9	435	525	70	162
☐ (N)SHÖU-O 1 × 50	1	50	9	14.5	16.5	615	750	82	202
☐ (N)SHÖU-O 1 × 70	1	70	11.1	16.4	18.4	830	1,050	92	250
☐ (N)SHÖU-O 1 × 95	1	95	12.8	18.5	20.5	1,060	1,425	102	301
☐ (N)SHÖU-O 1 × 120	1	120	14.5	20.4	22.4	1,300	1,800	112	352
☐ (N)SHÖU-O 1 × 150	1	150	16.5	22.8	24.8	1,600	2,250	124	404
☐ (N)SHÖU-O 1 × 185	1	185	17.9	24.7	27.7	2,020	2,775	138	461
☐ (N)SHÖU-O 1 × 240	1	240	21.2	27.6	30.6	2,548	3,600	153	540
☐ (N)SHÖU-O 1 × 300	1	300	23.6	31.6	34.6	3,200	4,500	173	620
☐ (N)SHÖU-O 2 × 1.5	2	1.5	1.6	9.8	11.4	150	45	57	23
☐ (N)SHÖU-O 2 × 2.5	2	2.5	2	10.7	12.3	185	75	62	30
☐ (N)SHÖU-O 2 × 4	2	4	2.4	11.9	13.5	220	120	68	41
3-Core (N)SHÖU-O / -J 14 sizes									
☐ (N)SHÖU-J 3 × 1.5	3	1.5	1.5	9.7	10.3	141	68	52	24
☐ (N)SHÖU-J 3 × 2.5	3	2.5	1.9	11.1	12.7	210	113	64	30
☐ (N)SHÖU-J 3 × 4	3	4	2.4	12.1	13.8	290	180	69	41
☐ (N)SHÖU-J 3 × 6	3	6	2.9	13.2	15	360	270	75	53
☐ (N)SHÖU-O 3 × 10	3	10	3.8	16.1	18.5	590	450	92	74

Designation	Cores	Cross-section	Cond. Ø	Outer Ø min	Outer Ø max	Weight ≈	Max. pull	Min. bend R 5×D	Current 30 °C
☐ (N)SHÖU-O 3 × 16	3	16	4.8	19	21	797	720	105	99
☐ (N)SHÖU-O 3 × 25	3	25	6.1	22.9	24.9	1,206	1,125	124	131
☐ (N)SHÖU-O 3 × 35	3	35	7.2	24.9	27.9	1,649	1,575	140	162
☐ (N)SHÖU-O 3 × 50	3	50	8.9	29.4	33	2,195	2,250	165	202
☐ (N)SHÖU-O 3 × 70	3	70	10.6	34.8	37.8	3,124	3,150	189	250
☐ (N)SHÖU-O 3 × 95	3	95	12.3	40.9	43.9	4,100	4,275	220	301
☐ (N)SHÖU-O 3 × 120	3	120	13.8	43.4	47.7	4,723	5,400	238	352
☐ (N)SHÖU-O 3 × 150	3	150	15.5	47.8	54	5,916	6,750	270	404
☐ (N)SHÖU-O 3 × 185	3	185	17	53.1	58.6	7,271	8,325	293	461
4-Core (N)SHÖU-J 14 sizes									
☐ (N)SHÖU-J 4 × 1.5	4	1.5	1.5	10.5	12.6	200	90	63	24
☐ (N)SHÖU-J 4 × 2.5	4	2.5	1.9	12	13.6	270	150	68	30
☐ (N)SHÖU-J 4 × 4	4	4	2.4	13	14.9	356	240	74	41
☐ (N)SHÖU-J 4 × 6	4	6	2.9	14.9	16.9	459	360	84	53
☐ (N)SHÖU-J 4 × 10	4	10	3.8	17.4	20.2	690	600	101	74
☐ (N)SHÖU-J 4 × 16	4	16	4.8	21	23.1	1,038	960	116	99
☐ (N)SHÖU-J 4 × 25	4	25	6.1	24.5	28.1	1,576	1,500	140	131
☐ (N)SHÖU-J 4 × 35	4	35	7.2	28.4	31.4	2,078	2,100	157	162
☐ (N)SHÖU-J 4 × 50	4	50	8.9	33.6	36.6	2,967	3,000	183	202
☐ (N)SHÖU-J 4 × 70	4	70	10.6	38.8	42.5	3,931	4,200	212	250
☐ (N)SHÖU-J 4 × 95	4	95	12.3	44.8	47.8	5,165	5,700	239	301
☐ (N)SHÖU-J 4 × 120	4	120	13.8	49.8	53.8	6,200	7,200	269	352
☐ (N)SHÖU-J 4 × 150	4	150	15.5	54.9	58.9	7,537	9,000	294	404
☐ (N)SHÖU-J 4 × 185	4	185	17	61	63.3	9,420	11,100	316	461
5-Core (N)SHÖU-J 8 sizes									
☐ (N)SHÖU-J 5 × 1.5	5	1.5	1.5	11.4	13.5	234	113	68	24
☐ (N)SHÖU-J 5 × 2.5	5	2.5	1.9	12.9	14.6	318	188	73	30
☐ (N)SHÖU-J 5 × 4	5	4	2.4	14.7	16.7	434	300	84	41
☐ (N)SHÖU-J 5 × 6	5	6	2.9	16.1	18.6	594	450	93	53
☐ (N)SHÖU-J 5 × 10	5	10	3.8	19	22	820	750	110	74
☐ (N)SHÖU-J 5 × 16	5	16	4.8	22.8	25.2	1,283	1,200	126	99
☐ (N)SHÖU-J 5 × 25	5	25	6.1	28	31	1,880	1,875	155	131
☐ (N)SHÖU-J 5 × 35	5	35	7.5	34.5	37.5	2,650	2,625	188	162
3+3 Split-Earth (N)SHÖU-J 8 sizes									
☐ (N)SHÖU-J 3 × 50 + 3 × 25/3E	3	50 + 3×25/3E	9	29.4	33.5	2,481	2,250	168	202
☐ (N)SHÖU-J 3 × 70 + 3 × 35/3E	3	70 + 3×35/3E	10.6	35.1	38.1	3,319	3,150	190	250
☐ (N)SHÖU-J 3 × 95 + 3 × 50/3E	3	95 + 3×50/3E	12.8	40.7	43.7	4,324	4,275	218	301
☐ (N)SHÖU-J 3 × 120 + 3 × 70/3E	3	120 + 3×70/3E	14.4	44.5	47.5	5,476	5,400	238	352
☐ (N)SHÖU-J 3 × 150 + 3 × 70/3E	3	150 + 3×70/3E	16.5	49.5	55.6	6,950	6,750	278	404
☐ (N)SHÖU-J 3 × 185 + 3 × 95/3E	3	185 + 3×95/3E	17.9	54.5	58.5	8,298	8,325	292	461
☐ (N)SHÖU-J 3 × 240 + 3 × 120/3E	3	240 + 3×120/3E	20.6	60.9	66.2	10,700	10,800	331	540
☐ (N)SHÖU-J 3 × 300 + 3 × 150/3E	3	300 + 3×150/3E	23.4	70.3	74.3	13,300	13,500	372	620
Control & Screened KON 22 sizes									
☐ (N)SHÖU-J 7 × 1.5	7	1.5	1.6	12.9	15.1	300	158	76	16
☐ (N)SHÖU-J 8 × 1.5	8	1.5	1.6	13.8	15.4	325	180	77	15
☐ (N)SHÖU-J 10 × 1.5	10	1.5	1.6	15.5	17.5	400	225	88	13
☐ (N)SHÖU-J 12 × 1.5	12	1.5	1.6	15.8	17.8	422	270	89	12
☐ (N)SHÖU-J 14 × 1.5	14	1.5	1.6	16.8	18.8	495	315	94	12

Designation	Cores	Cross-section	Cond. Ø	Outer Ø min	Outer Ø max	Weight ≈	Max. pull	Min. bend R 5×D	Current 30 °C
□ (N)SHÖU-J 18 × 1.5	18	1.5	1.6	18.5	20.5	610	405	102	11
□ (N)SHÖU-J 19 × 1.5	19	1.5	1.6	18.9	20.9	650	428	104	11
□ (N)SHÖU-J 24 × 1.5	24	1.5	1.6	20	22	752	540	110	10
□ (N)SHÖU-J 7 × 2.5	7	2.5	2	14.9	17.4	458	263	87	20
□ (N)SHÖU-J 8 × 2.5	8	2.5	2	15.8	17.8	480	300	89	19
□ (N)SHÖU-J 10 × 2.5	10	2.5	2	16.4	18.4	500	375	92	17
□ (N)SHÖU-J 12 × 2.5	12	2.5	2	18	20.6	653	450	103	16
□ (N)SHÖU-J 15 × 2.5	15	2.5	2	20.7	22.7	780	563	114	15
□ (N)SHÖU-J 18 × 2.5	18	2.5	2	21.2	24.4	900	675	122	14
□ (N)SHÖU-J 19 × 2.5	19	2.5	2	22.3	24.3	900	713	122	14
□ (N)SHÖU-J 24 × 2.5	24	2.5	2	22.8	26.3	1,140	900	132	12
□ (N)SHÖU-J 37 × 2.5	37	2.5	2	29	31	1,600	1,388	155	10
□ (N)SHÖU-J 7 × 1.5 / 4 KON	7	1.5 + 4 KON	1.6	15.5	17.5	360	158	88	16
□ (N)SHÖU-J 12 × 1.5 / 4 KON	12	1.5 + 4 KON	1.6	18	20	517	270	100	12
□ (N)SHÖU-J 18 × 1.5 / 1.5 KON	18	1.5 + 1.5 KON	1.6	22	24	720	405	120	11
□ (N)SHÖU-J 7 × 2.5 / 2.5 KON	7	2.5 + 2.5 KON	2	14	15.6	418	263	78	20
□ (N)SHÖU-J 12 × 2.5 / 2.5 KON	12	2.5 + 2.5 KON	2	16	18	630	450	90	16

- Permissible continuous tensile load is 15 N/mm² of active phase conductor cross-section per DIN VDE 0298-3.
- In 3+3 split-earth constructions (50 to 300 mm²), the protective earth conductor is divided into three symmetrical interstitial conductors (e.g. 3 × 50 + 3 × 25/3E) to reduce overall diameter and improve bending symmetry on drill and LHD reels.
- Current ratings shown are for cables laid on the floor at 30 °C ambient (DIN VDE 0298-4 Table 15); for 7–37 core control cables, DIN VDE 0298-4 multicore grouping factors (0.65 down to 0.35) are applied.

Ampacity, reel derating & voltage drop

16 sizes

Conductor	Max. DC R 20 °C	On floor	Free air	Reel 1L	Reel 2L	Reel 3L	ΔU cosφ 0.8	ΔU cosφ 1.0	1 s Isc
1.5 mm ²	13.3	24	25	19	15	12	23.56	29.32	0.18
2.5 mm ²	7.98	30	32	24	18	15	14.17	17.59	0.31
4 mm ²	4.95	41	43	33	25	20	8.82	10.92	0.57
6 mm ²	3.3	53	56	42	32	26	5.9	7.27	0.86
10 mm ²	1.91	74	78	59	45	36	3.44	4.2	1.43
16 mm ²	1.21	99	104	79	60	49	2.21	2.66	2.29
25 mm ²	0.78	131	138	105	80	64	1.45	1.71	3.58
35 mm ²	0.554	162	170	130	99	79	1.06	1.23	5.01
50 mm ²	0.386	202	212	162	123	99	0.77	0.87	7.15
70 mm ²	0.272	250	263	200	153	123	0.56	0.61	10.01
95 mm ²	0.206	301	316	241	184	147	0.45	0.47	13.59
120 mm ²	0.161	352	370	282	215	172	0.36	0.36	17.16
150 mm ²	0.129	404	424	323	246	198	0.31	0.29	21.45
185 mm ²	0.106	461	484	369	281	226	0.27	0.24	26.46
240 mm ²	0.0801	528	554	422	322	259	0.22	0.18	34.32
300 mm ²	0.0641	620	651	496	378	304	0.19	0.15	42.9

- Ambient temperature derating factors (base 30 °C = 1.00, 90 °C max conductor): 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.

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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.