

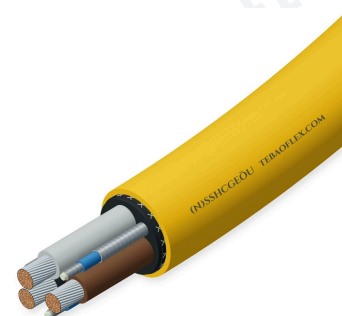


Screened mining & coal cutter cables (DIN VDE 0250-812)

(N)SSHCGEÖU

0.6/1 kV Screened Coal Cutter & Mining Reeling Cable

Screened 3GI3 / 5GM5 shearer chain & LHD reeling cable — C + E + ST/ÜL/KON



DIN VDE 0250-812

0.6/1 kV (640/1140 V)

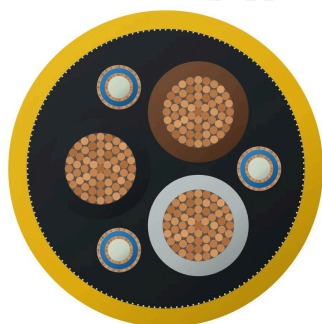
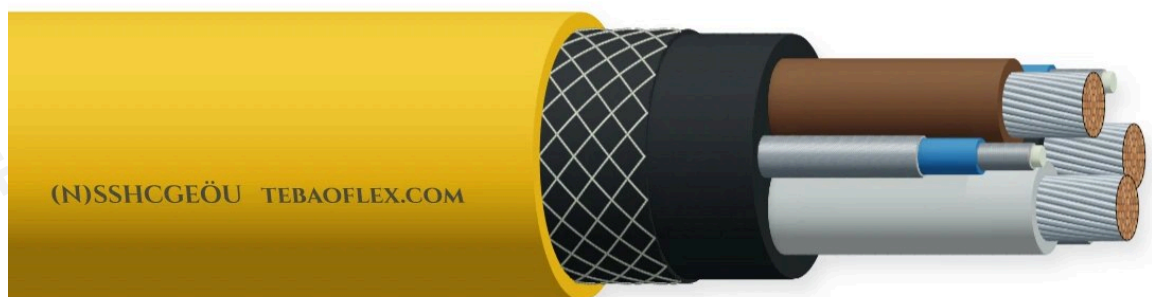
C + E + ST/ÜL/KON

Application

Heavy-duty 0.6/1 kV (and 640/1140 V) screened mining cable to DIN VDE 0250-812 with Class FS tinned copper cores, 3GI3 EPR insulation, cold-strippable semiconductive screen (E), KON/ST/ÜL pilot/earth elements, GM1b inner sheath, and yellow 5GM5 jacket.

Typical uses: Underground Longwall Shearers & Coal Cutters (Cable Chains), Underground LHD Loaders, Scooptrams & Drilling Jumbos, Roadheaders, Continuous Miners & Shiftable Conveyors, Screened Underground Mine & Tunnel Lighting Feeders

Construction



Cross-section, not to scale

- 1 Extra-flexible Class FS tinned copper conductor
- 2 Core insulation (3GI3 EPR)
- 3 Cold-strippable semiconductive screen (E)
- 4 Interstitial pilot, earth & monitoring elements (STKON / ÜLKON)
- 5 Inner sheath (GM1b vulcanized EPR)
- 6 Concentric earth / monitoring spinning or torsion braid (C)
- 7 Outer sheath (5GM5 yellow CM/CR rubber)

Technical data

Typical values

Rated voltage U₀/U	U ₀ /U = 0.6/1 kV (600/1000 V AC), also permitted for U ₀ /U = 640/1140 V AC in underground coal mining	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 on main phase cores · 2.0 kV AC on control/pilot (ST) and monitoring (ÜL/U _{EL}) cores	Field control & screening	Cold-strippable outer semiconductive elastomer layer (E) over each 3GI3 EPR phase core plus concentric copper/steel screen/monitoring spinning (C / KON)
Current rating (30 °C)	53 A (6 mm ²) to 540 A (240 mm ²) laid on floor at 30 °C ambient (DIN VDE 0298-4 Table 15)	Ambient temperature, flexing	-20 °C to +60 °C (V-series coal cutter chain) · -25 °C to +60 °C (S-series underground reeling)
Ambient temperature, fixed	-40 °C to +80 °C	Max. conductor & short-circuit temp.	+90 °C continuous · +250 °C short-circuit (5 s)
Max. permissible tensile load	15 N/mm ² in coal-cutter cable chains (V-series, up to 10,800 N) · 30 N/mm ² on central-aramid LHD reels (S-series, up to 10,800 N)	Minimum bending radius	2.3 × D at ≤ 5 N/mm ² in cable protection chains (V-series) · 4 × D on underground LHD reels (S-series) · 20 × D at S-type directional changes
Reeling speed & torsion (S-series)	Up to 160 m/min on underground LHD / scoop reels (S-series) with ±50 %/m torsional stress rating	Oil, ozone & moisture resistance	Oil-resistant per IEC 60811-404; resistant to ozone, UV, moisture & underground mine water
Flame retardance	Flame-retardant per IEC 60332-1-2 / DIN EN 60332-1-2	Standards	DIN VDE 0250-812 & DIN VDE 0250-1 (application & ampacity per DIN VDE 0298-3 & 0298-4)

Sizes

34 standard constructions

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

Designation	Main Cores	Phase / Earth	Cond. Ø	Outer Ø min	Outer Ø max	Weight ≈	Max. pull	Min. bend R	Current 30 °C
Chain Coal Cutter · Sheath KON 11 sizes									
☐ NSSHCGEÖU 3×25/16KON + 3×(1.5STKON/1.5ÜLKON)	3	25 / 16KON	7.1	36.9	39.9	2,760	1,125	92	131
☐ NSSHCGEÖU 3×35/16KON + 3×(1.5STKON/1.5ÜLKON)	3	35 / 16KON	8.4	36.9	39.9	2,960	1,575	92	162
☐ NSSHCGEÖU 3×50/35KON + 3×(1.5STKON/1.5ÜLKON)	3	50 / 35KON	10.1	42.7	45.7	3,920	2,250	105	202
☐ NSSHCGEÖU 3×70/35KON + 3×(1.5STKON/1.5ÜLKON)	3	70 / 35KON	11.9	47.7	50.7	5,000	3,150	117	250
☐ NSSHCGEÖU 3×95/50KON + 3×(1.5STKON/1.5ÜLKON)	3	95 / 50KON	14	56	60	6,690	4,275	138	301
☐ NSSHCGEÖU 3×120/70KON + 3×(1.5STKON/1.5ÜLKON)	3	120 / 70KON	15.5	58.3	62.3	7,690	5,400	143	352
☐ NSSHCGEÖU 3×150/70KON + 3×(1.5STKON/1.5ÜLKON)	3	150 / 70KON	17.2	65.9	69.9	9,570	6,750	161	404
☐ (N)SSHCGEÖU (3+3)×50/35KON + 3×(2×1.5STKON)/3×1.5ÜLKON	6	(3+3)×50 / 35KON	10.1	63.3	67.3	8,140	4,500	155	137
☐ (N)SSHCGEÖU (3+3)×70/70KON + 3×(2×1.5STKON)/3×1.5ÜLKON	6	(3+3)×70 / 70KON	11.9	65.4	69.4	9,470	6,300	160	170
☐ (N)SSHCGEÖU (3+3)×95/70KON + 3×(2×1.5STKON)/3×1.5ÜLKON	6	(3+3)×95 / 70KON	14	71.9	73.9	11,270	8,550	170	205
☐ (N)SSHCGEÖU (3+3)×120/70KON + 3×(2×1.5STKON)/3×1.5ÜLKON	6	(3+3)×120 / 70KON	15.8	76.7	80.7	15,030	10,800	186	239
Chain Coal Cutter · Control KON 9 sizes									
☐ NSSHCGEÖU 3×25 + 3×(1.5STKON+16/3KON) + ÜLKON	3	25 + 3×16/3KON	7.1	38.4	41.4	2,900	1,125	95	131
☐ NSSHCGEÖU 3×35 + 3×(1.5STKON+16/3KON) + ÜLKON	3	35 + 3×16/3KON	8.4	41	44	3,520	1,575	101	162
☐ NSSHCGEÖU 3×50 + 3×(1.5STKON+25/3KON) + ÜLKON	3	50 + 3×25/3KON	10.1	45.4	48.4	4,300	2,250	111	202
☐ NSSHCGEÖU 3×70 + 3×(1.5STKON+35/3KON) + ÜLKON	3	70 + 3×35/3KON	11.9	48.8	52.8	5,400	3,150	121	250
☐ NSSHCGEÖU 3×95 + 3×(1.5STKON+50/3KON) + ÜLKON	3	95 + 3×50/3KON	14	56	60	7,020	4,275	138	301
☐ NSSHCGEÖU 3×120 + 3×(1.5STKON+70/3KON) + ÜLKON	3	120 + 3×70/3KON	15.5	60.3	64.3	8,600	5,400	148	352
☐ NSSHCGEÖU 3×150 + 3×(1.5STKON+70/3KON) + ÜLKON	3	150 + 3×70/3KON	17.2	66.7	70.7	10,310	6,750	163	404
☐ NSSHCGEÖU 3×185 + 3×(1.5STKON+95/3KON) + ÜLKON	3	185 + 3×95/3KON	19.1	71.7	75.7	12,300	8,325	174	461
☐ NSSHCGEÖU 3×240 + 3×(1.5STKON+120/3KON) + ÜLKON	3	240 + 3×120/3KON	22	80.1	85.1	15,400	10,800	196	540

Designation	Main Cores Phase / Earth	Cond. Ø	Outer Ø min	Outer Ø max	Weight ≈	Max. pull	Min. bend R	Current 30 °C
Lighting & 2ST+ÜL Cutter 7 sizes								
☐ (N)SSHCGEÖU 3×6/6CON + 2×1.5ST + 1.5ÜL	3 6 / 6CON	3.4	24	28	900	270	112	53
☐ NSSHCGEÖU 3×16/16KON + 2ST + ÜL	3 16 / 16KON	5.8	35	38	2,130	720	87	99
☐ NSSHCGEÖU 3×25/16KON + 2ST + ÜL	3 25 / 16KON	7.1	38	41	2,790	1,125	94	131
☐ NSSHCGEÖU 3×35/16KON + 2ST + ÜL	3 35 / 16KON	8.4	41	45	3,390	1,575	103	162
☐ NSSHCGEÖU 3×50/25KON + 2ST + ÜL	3 50 / 25KON	10.1	47	51	4,340	2,250	117	202
☐ NSSHCGEÖU 3×70/35KON + 2ST + ÜL	3 70 / 35KON	11.9	52	56	5,680	3,150	129	250
☐ NSSHCGEÖU 3×95/50KON + 2ST + ÜL	3 95 / 50KON	14	58	62	7,180	4,275	143	301
LHD Reeling · 30 N/mm² Aramid 7 sizes								
☐ (N)SSHCGEÖU-S 3×16 + 3×(1.5STKON+10/3KON)	3 16 + 3×10/3KON	5.8	31.1	34.4	1,820	1,440	138	99
☐ (N)SSHCGEÖU-S 3×25 + 3×(1.5STKON+16/3KON)	3 25 + 3×16/3KON	7.3	36.3	39.3	2,500	2,250	157	131
☐ (N)SSHCGEÖU-S 3×35 + 3×(1.5STKON+16/3KON)	3 35 + 3×16/3KON	8.4	41.2	44.2	2,990	3,150	177	162
☐ (N)SSHCGEÖU-S 3×50 + 3×(1.5STKON+25/3KON)	3 50 + 3×25/3KON	10.3	44.5	47.5	3,800	4,500	190	202
☐ (N)SSHCGEÖU-S 3×70 + 3×(1.5STKON+35/3KON)	3 70 + 3×35/3KON	12	47.3	50.3	4,500	6,300	201	250
☐ (N)SSHCGEÖU-S 3×95 + 3×(1.5STKON+50/3KON)	3 95 + 3×50/3KON	14	54.8	58.8	5,300	8,550	235	301
☐ (N)SSHCGEÖU-S 3×120 + 3×(1.5STKON+70/3KON)	3 120 + 3×70/3KON	15.8	58.7	62.7	6,100	10,800	251	352

- In V-series chain-handler coal cutter cables, minimum bending radius $r_{min} = 2.3 \times D_{max}$ applies in cable protection chains where tensile stress on the conductor does not exceed 5 N/mm² (maximum permissible pull = 15 N/mm²).
- In S-series underground reeling cables (with central aramid yarn support element and vulcanized polyester anti-torsion braid), permissible tensile load is 30 N/mm² (up to 10,800 N on $3 \times 120 \text{ mm}^2$) with $r_{min} = 4 \times D_{max}$ and travel speed up to 160 m/min.
- Six-core (3+3) coal cutter cables split the phase load across six power cores (two parallel 3-phase circuits) to keep overall diameter compact in high-power longwall shearer chains.

Electrical parameters (R20, capacitance, inductance & Isc)

34 sizes

Designation	Max. DC R 20 °C	Capacitance	Inductance	Ampacity 30 °C	1 s Isc
Chain Coal Cutter · Sheath KON 11 sizes					
NSSHCGEÖU 3×25/16KON + 3×(1.5STKON/1.5ÜLKON)	0.795	0.6	0.25	131	3.58
NSSHCGEÖU 3×35/16KON + 3×(1.5STKON/1.5ÜLKON)	0.565	0.69	0.24	162	5.01
NSSHCGEÖU 3×50/35KON + 3×(1.5STKON/1.5ÜLKON)	0.393	0.72	0.24	202	7.15
NSSHCGEÖU 3×70/35KON + 3×(1.5STKON/1.5ÜLKON)	0.277	0.84	0.23	250	10.01
NSSHCGEÖU 3×95/50KON + 3×(1.5STKON/1.5ÜLKON)	0.21	0.86	0.23	301	13.59
NSSHCGEÖU 3×120/70KON + 3×(1.5STKON/1.5ÜLKON)	0.164	0.9	0.22	352	17.16
NSSHCGEÖU 3×150/70KON + 3×(1.5STKON/1.5ÜLKON)	0.132	0.93	0.22	404	21.45
(N)SSHCGEÖU (3+3)×50/35KON + 3×(2×1.5STKON)/3×1.5ÜLKON	0.393	0.5	0.4	137	7.15
(N)SSHCGEÖU (3+3)×70/70KON + 3×(2×1.5STKON)/3×1.5ÜLKON	0.277	0.53	0.4	170	10.01
(N)SSHCGEÖU (3+3)×95/70KON + 3×(2×1.5STKON)/3×1.5ÜLKON	0.21	0.54	0.37	205	13.59
(N)SSHCGEÖU (3+3)×120/70KON + 3×(2×1.5STKON)/3×1.5ÜLKON	0.164	0.59	0.35	239	17.16
Chain Coal Cutter · Control KON 9 sizes					
NSSHCGEÖU 3×25 + 3×(1.5STKON+16/3KON) + ÜLKON	0.795	0.35	0.33	131	3.58
NSSHCGEÖU 3×35 + 3×(1.5STKON+16/3KON) + ÜLKON	0.565	0.4	0.3	162	5.01
NSSHCGEÖU 3×50 + 3×(1.5STKON+25/3KON) + ÜLKON	0.393	0.46	0.28	202	7.15
NSSHCGEÖU 3×70 + 3×(1.5STKON+35/3KON) + ÜLKON	0.277	0.53	0.27	250	10.01
NSSHCGEÖU 3×95 + 3×(1.5STKON+50/3KON) + ÜLKON	0.21	0.54	0.27	301	13.59
NSSHCGEÖU 3×120 + 3×(1.5STKON+70/3KON) + ÜLKON	0.164	0.58	0.26	352	17.16
NSSHCGEÖU 3×150 + 3×(1.5STKON+70/3KON) + ÜLKON	0.132	0.64	0.26	404	21.45
NSSHCGEÖU 3×185 + 3×(1.5STKON+95/3KON) + ÜLKON	0.108	0.7	0.26	461	26.46
NSSHCGEÖU 3×240 + 3×(1.5STKON+120/3KON) + ÜLKON	0.0817	0.79	0.25	540	34.32

Designation	Max. DC R 20 °C	Capacitance	Inductance	Ampacity 30 °C	1 s Isc
Lighting & 2ST+ÜL Cutter 7 sizes					
(N)SSHCGEÖU 3×6/6CON + 2×1.5ST + 1.5ÜL	3.39	0.32	0.29	53	0.86
NSSHCGEÖU 3×16/16KON + 2ST + ÜL	1.24	0.5	0.3	99	2.29
NSSHCGEÖU 3×25/16KON + 2ST + ÜL	0.795	0.55	0.27	131	3.58
NSSHCGEÖU 3×35/16KON + 2ST + ÜL	0.565	0.62	0.26	162	5.01
NSSHCGEÖU 3×50/25KON + 2ST + ÜL	0.393	0.68	0.25	202	7.15
NSSHCGEÖU 3×70/35KON + 2ST + ÜL	0.277	0.75	0.24	250	10.01
NSSHCGEÖU 3×95/50KON + 2ST + ÜL	0.21	0.8	0.24	301	13.59
LHD Reeling · 30 N/mm² Aramid 7 sizes					
(N)SSHCGEÖU-S 3×16 + 3×(1.5STKON+10/3KON)	1.24	0.5	0.3	99	2.29
(N)SSHCGEÖU-S 3×25 + 3×(1.5STKON+16/3KON)	0.795	0.52	0.29	131	3.58
(N)SSHCGEÖU-S 3×35 + 3×(1.5STKON+16/3KON)	0.565	0.6	0.28	162	5.01
(N)SSHCGEÖU-S 3×50 + 3×(1.5STKON+25/3KON)	0.393	0.61	0.27	202	7.15
(N)SSHCGEÖU-S 3×70 + 3×(1.5STKON+35/3KON)	0.277	0.7	0.26	250	10.01
(N)SSHCGEÖU-S 3×95 + 3×(1.5STKON+50/3KON)	0.21	0.72	0.26	301	13.59
(N)SSHCGEÖU-S 3×120 + 3×(1.5STKON+70/3KON)	0.164	0.79	0.25	352	17.16

- Current carrying capacity is specified for rubber cables laid on a surface at 30 °C ambient temperature per DIN VDE 0298-4 Table 15.
- 1-second short-circuit current (Isc) is calculated for a conductor temperature rise from +90 °C to +250 °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/n-sshcgeoeu-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.