

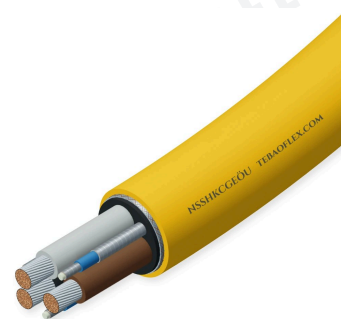


Armoured & cradle coal cutter cables (DIN VDE 0250-812)

NSSHKCGEÖU

0.6/1 kV Armoured & Cradle Coal Cutter Trailing Cable

Semiconductive cradle K & 45 kN steel-braid armoured shearer cable — DIN VDE 0250-812



DIN VDE 0250-812

K Cradle · 45 kN Braid

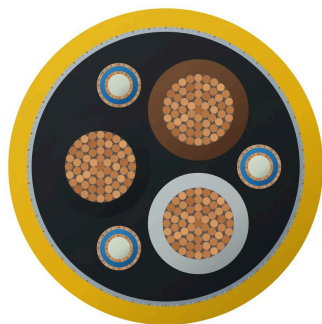
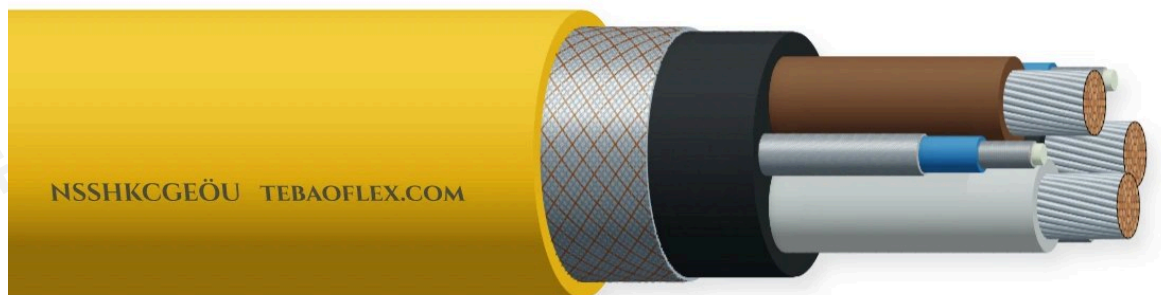
40 / 15 N/mm² · 0.6/1 kV

Application

Heavy-duty 0.6/1 kV coal cutter trailing cable to DIN VDE 0250-812 with Class FS tinned Cu cores, 3GI3 EPR insulation, semiconductive cradle (K) and core screens, ST/ÜL/KON control units, GM1b inner sheath, 45 kN steel/Cu braid armour, and yellow 5GM5 jacket.

Typical uses: Free-Trailing Longwall Coal Shearers & Roadheaders, Chain-Guided Underground Coal Cutters (2.3 × D Bend), Tunnel Boring Machines (TBMs) & Continuous Miners, Underground LHD Scoops & Heavy Drilling Rigs

Construction



Cross-section, not to scale

- 1 Extra-flexible Class FS tinned copper conductor
- 2 Core insulation (3GI3 EPR)
- 3 Central semiconductive cradle separator (K) & core screens (E)
- 4 Interstitial control, earth & monitoring units (ST / ÜL / KON)
- 5 Inner sheath (GM1b / semiconductive elastomer)
- 6 Pliable steel/copper braid armour (C) or anti-torsion braid
- 7 Outer sheath (5GM5 yellow 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 kV AC on main phase cores · 2.0 kV AC on control (ST) and monitoring (ÜL/UEL) cores	Cradle, screening & armour	Central semiconductive rubber cradle separator (K) + semiconductive core/inner layers + double-concentric PE/control (STKON) & steel/Cu pliable braid armour (C)
Current rating (30 °C)	99 A (16 mm ²) to 620 A (300 mm ²) laid on floor at 30 °C ambient (DIN VDE 0298-4 Table 15)	Ambient temperature, flexing	-20 °C to +60 °C in fully flexible operation
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	40 N/mm ² in free-trailing operation (Z-series, 3,000 N to 36,000 N) · 15 N/mm ² in cable protection chains (CTE-series, 1,125 N to 6,750 N)	Steel braid breaking load (Z-series)	≥ 45 kN minimum breaking load of vulcanized steel strand braid armour (Z-series)
Minimum bending radius	2.3 × D at ≤ 5 N/mm ² · 5 × D at 15 N/mm ² (chain operation) · per DIN VDE 0298-3 (free trailing)	Max. travel speed & torsion	Up to 150 m/min travel speed · ±10 %m torsional stress rating (Z-series)
Oil, ozone & impact resistance	Oil-resistant per IEC 60811-404; resistant to ozone, moisture & severe underground rock abrasion	Flame retardance	Flame-retardant per IEC 60332-1-2 / DIN EN 60332-1-2
Standards	DIN VDE 0250-812 & DIN VDE 0207-20 / -21 (3GI3 EPR, GM1b inner sheath, 5GM5 yellow outer sheath)		

Sizes

24 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	Cu weight	Weight ≈	Max. pull	Min. bend R	Current 30 °C
Z-Series Free-Trailing · 40 N/mm² & 45 kN Braid 10 sizes										
☐ NSSHKCGEÖU-Z 3×25 + 3×(1.5STKON+16/3KON)	3	25 + 3×16/3KON	7.1	39.2	42.2	1,050	2,700	3,000	211	131
☐ NSSHKCGEÖU-Z 3×35 + 3×(1.5STKON+16/3KON)	3	35 + 3×16/3KON	8.4	40.8	43.8	1,350	3,100	4,200	219	162
☐ NSSHKCGEÖU-Z 3×50 + 3×(1.5STKON+25/3KON)	3	50 + 3×25/3KON	10.1	46.2	49.2	1,870	4,000	6,000	246	202
☐ NSSHKCGEÖU-Z 3×70 + 3×(1.5STKON+35/3KON)	3	70 + 3×35/3KON	11.9	49.6	53.6	2,550	5,100	8,400	268	250
☐ NSSHKCGEÖU-Z 3×95 + 3×(1.5STKON+50/3KON)	3	95 + 3×50/3KON	14	56.8	60.8	3,410	6,700	11,400	304	301
☐ NSSHKCGEÖU-Z 3×120 + 3×(1.5STKON+70/3KON)	3	120 + 3×70/3KON	15.5	60.6	64.6	4,330	8,000	14,400	323	352
☐ NSSHKCGEÖU-Z 3×150 + 3×(1.5STKON+70/3KON)	3	150 + 3×70/3KON	17.6	67	71	5,180	9,620	18,000	355	404
☐ NSSHKCGEÖU-Z 3×185 + 3×(1.5STKON+95/3KON)	3	185 + 3×95/3KON	19.1	72	76	6,480	11,500	22,200	380	461
☐ NSSHKCGEÖU-Z 3×240 + 3×(1.5STKON+120/3KON)	3	240 + 3×120/3KON	22	80.4	85.4	8,350	14,600	28,800	427	540
☐ NSSHKCGEÖU-Z 3×300 + 3×(1.5STKON+150/3KON)	3	300 + 3×150/3KON	24.8	89.1	94.1	10,420	18,700	36,000	470	620
V-Series Pliable Steel/Cu Armoured · 2ST+ÜL 7 sizes										
☐ NSSHKCGEÖU-V 3×16/16CON + 2×2.5ST + 2.5ÜL	3	16 / 16CON	5.8	33	38	690	2,000	720	152	99
☐ NSSHKCGEÖU-V 3×25/16CON + 3×(2×1.5ST+1.5ÜL)	3	25 / 16CON	7.1	41	46	1,050	3,000	1,125	184	131
☐ NSSHKCGEÖU-V 3×35/16CON + 3×(2×1.5ST+1.5ÜL)	3	35 / 16CON	8.4	41	46	1,350	3,200	1,575	184	162
☐ NSSHKCGEÖU-V 3×50/25CON + 3×(2×1.5ST+1.5ÜL)	3	50 / 25CON	10.1	46	51	1,870	4,200	2,250	204	202
☐ NSSHKCGEÖU-V 3×70/35CON + 3×(2×1.5ST+1.5ÜL)	3	70 / 35CON	11.9	50	55	2,550	5,400	3,150	220	250
☐ NSSHKCGEÖU-V 3×95/50CON + 3×(2×1.5ST+1.5ÜL)	3	95 / 50CON	14	57	62	3,410	6,900	4,275	248	301
☐ NSSHKCGEÖU-V 3×120/70CON + 3×(2×1.5ST+1.5ÜL)	3	120 / 70CON	15.5	62	67	4,330	8,600	5,400	268	352

Designation	Main Cores	Phase / Earth	Cond. Ø	Outer Ø min	Outer Ø max	Cu weight	Weight ≈	Max. pull	Min. bend R	Current 30 °C
CTE-Series Chain Cradle K · 15 N/mm² 7 sizes										
☐ NSSHKCGEÖU-CTE 3×25 + 3×(1.5ST+16/3)	3	25 + 3×16/3	7	36	40	1,050	2,790	1,125	92	131
☐ NSSHKCGEÖU-CTE 3×35 + 3×(1.5ST+16/3)	3	35 + 3×16/3	8.2	38	42	1,350	2,620	1,575	97	162
☐ NSSHKCGEÖU-CTE 3×50 + 3×(1.5ST+25/3)	3	50 + 3×25/3	10.2	43	48	1,870	3,600	2,250	110	202
☐ NSSHKCGEÖU-CTE 3×70 + 3×(1.5ST+35/3)	3	70 + 3×35/3	12.2	44	49	2,550	4,180	3,150	113	250
☐ NSSHKCGEÖU-CTE 3×95 + 3×(1.5ST+50/3)	3	95 + 3×50/3	13.2	53	57	3,410	5,490	4,275	131	301
☐ NSSHKCGEÖU-CTE 3×120 + 3×(1.5ST+70/3)	3	120 + 3×70/3	15.2	58	63	4,330	8,300	5,400	145	352
☐ NSSHKCGEÖU-CTE 3×150 + 3×(1.5ST+70/3)	3	150 + 3×70/3	17.1	62	68	5,180	9,300	6,750	156	404

- Z-series free-trailing coal cutter cables feature a vulcanized steel strand braid with a minimum breaking load of 45 kN and a permissible dynamic conductor tensile stress of 40 N/mm² (up to 36,000 N on 3 × 300 mm²).
- CTE-series chain-handler coal cutter cables use a semiconductive rubber cradle (K) and polyester anti-torsion braid with a minimum bend radius of $2.3 \times D_{\text{max}}$ at $\leq 5 \text{ N/mm}^2$ ($5 \times D_{\text{max}}$ at 15 N/mm²).
- V-series pliable steel/copper braided cables integrate three pre-laid control units in the outer interstices, each consisting of two 1.5 mm² control cores (ST) and one 1.5 mm² monitoring core (ÜL).

Electrical parameters (R20, capacitance, inductance & Isc)

24 sizes

Designation	Max. DC R 20 °C	Capacitance	Inductance	Ampacity 30 °C	1 s Isc
Z-Series Free-Trailing · 40 N/mm² & 45 kN Braid 10 sizes					
NSSHKCGEÖU-Z 3×25 + 3×(1.5STKON+16/3KON)	0.795	0.37	0.33	131	3.58
NSSHKCGEÖU-Z 3×35 + 3×(1.5STKON+16/3KON)	0.565	0.42	0.3	162	5.01
NSSHKCGEÖU-Z 3×50 + 3×(1.5STKON+25/3KON)	0.393	0.45	0.28	202	7.15
NSSHKCGEÖU-Z 3×70 + 3×(1.5STKON+35/3KON)	0.277	0.52	0.27	250	10.01
NSSHKCGEÖU-Z 3×95 + 3×(1.5STKON+50/3KON)	0.21	0.55	0.27	301	13.59
NSSHKCGEÖU-Z 3×120 + 3×(1.5STKON+70/3KON)	0.164	0.59	0.26	352	17.16
NSSHKCGEÖU-Z 3×150 + 3×(1.5STKON+70/3KON)	0.132	0.61	0.26	404	21.45
NSSHKCGEÖU-Z 3×185 + 3×(1.5STKON+95/3KON)	0.108	0.63	0.26	461	26.46
NSSHKCGEÖU-Z 3×240 + 3×(1.5STKON+120/3KON)	0.0817	0.67	0.25	540	34.32
NSSHKCGEÖU-Z 3×300 + 3×(1.5STKON+150/3KON)	0.0654	0.7	0.25	620	42.9
V-Series Pliable Steel/Cu Armoured · 2ST+ÜL 7 sizes					
NSSHKCGEÖU-V 3×16/16CON + 2×2.5ST + 2.5ÜL	1.24	0.45	0.3	99	2.29
NSSHKCGEÖU-V 3×25/16CON + 3×(2×1.5ST+1.5ÜL)	0.795	0.5	0.29	131	3.58
NSSHKCGEÖU-V 3×35/16CON + 3×(2×1.5ST+1.5ÜL)	0.565	0.56	0.28	162	5.01
NSSHKCGEÖU-V 3×50/25CON + 3×(2×1.5ST+1.5ÜL)	0.393	0.6	0.27	202	7.15
NSSHKCGEÖU-V 3×70/35CON + 3×(2×1.5ST+1.5ÜL)	0.277	0.68	0.26	250	10.01
NSSHKCGEÖU-V 3×95/50CON + 3×(2×1.5ST+1.5ÜL)	0.21	0.72	0.26	301	13.59
NSSHKCGEÖU-V 3×120/70CON + 3×(2×1.5ST+1.5ÜL)	0.164	0.78	0.25	352	17.16
CTE-Series Chain Cradle K · 15 N/mm² 7 sizes					
NSSHKCGEÖU-CTE 3×25 + 3×(1.5ST+16/3)	0.795	0.52	0.29	131	3.58
NSSHKCGEÖU-CTE 3×35 + 3×(1.5ST+16/3)	0.565	0.59	0.28	162	5.01
NSSHKCGEÖU-CTE 3×50 + 3×(1.5ST+25/3)	0.393	0.62	0.27	202	7.15
NSSHKCGEÖU-CTE 3×70 + 3×(1.5ST+35/3)	0.277	0.72	0.26	250	10.01
NSSHKCGEÖU-CTE 3×95 + 3×(1.5ST+50/3)	0.21	0.69	0.26	301	13.59
NSSHKCGEÖU-CTE 3×120 + 3×(1.5ST+70/3)	0.164	0.86	0.25	352	17.16
NSSHKCGEÖU-CTE 3×150 + 3×(1.5ST+70/3)	0.132	0.78	0.25	404	21.45

- Nominal 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.

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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.