



Mining trailing & reeling cables

(N)TSCGEH3S Luminescent Trailing Cable (3.6/6 & 6/10 kV)

(N)TSCGEH3S Luminescent Mining Trailing Cable

3.6/6 & 6/10 kV arctic -50 °C shovel trailing cable with electroluminescent string



DIN VDE 0250-813

3.6/6 & 6/10 kV · 35-240 mm²

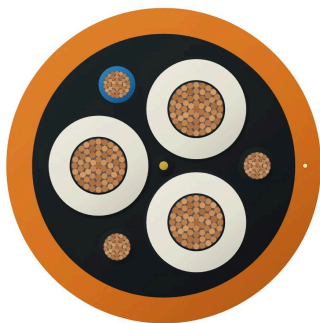
Luminescent String · -50 °C PUR

Application

DIN VDE 0250-813 (N)TSCGEH3S medium-voltage luminescent trailing cable (3.6/6 & 6/10 kV, 35-240 mm²) for opencast shovels down to -50 °C, with an electroluminescent string visible through a transparent orange PUR sheath and 25 N/mm² aramid strain relief.

Typical uses: Opencast electric rope shovels & excavators, Arctic & sub-zero surface mining (-50 °C), Walking draglines & mobile pit crushers, 24-hour haul-road & pit-floor cable crossings, High-tension sled-towed mining skids

Construction



Cross-section, not to scale

1	Phase conductor	DIN VDE 0295 · IEC 60228
2	Inner semiconductive layer	DIN VDE 0250-813
3	Core insulation	DIN VDE 0207-20
4	Cold-strippable outer semicon	DIN VDE 0250-813
5	Protective earth conductors	DIN VDE 0250-813
6	Pilot conductor	DIN VDE 0250-813
7	Electroluminescent string	
8	Aramid central cradle	DIN VDE 0250-813
9	Outer sheath	DIN VDE 0250-813

Technical data

Typical values

Rated voltage U0/U	3.6/6 kV (Um 7.2 kV AC / 10.8 kV DC) · 6/10 kV (Um 12 kV AC / 18 kV DC)	AC test voltage	11 kV AC for 3.6/6 kV · 17 kV AC for 6/10 kV
Electroluminescent string	Max. 125 V AC · Max. 2,000 Hz inverter supply · ~15 mA/km current · Zero heat development	Max. conductor temperature	+90 °C continuous operation · +250 °C short-circuit (1 s)
Arctic ambient temperature	-50 °C to +90 °C in both fixed installation and fully flexible operation	Max. permissible tensile load	25 N/mm ² of phase copper area (2,625 N to 18,000 N) via central aramid strain-relief yarns
Bending radius & torsion	Minimum bending radius to DIN VDE 0298-3 (10 × D flexing) · Max. torsional stress ±25 °/m	Oil, UV & abrasion resistance	Transparent orange PUR jacket resistant to mineral oils (IEC 60811-404), UV, ozone, microbes and rock abrasion
Run-over & visibility safety	360° continuous electroluminescent glow through transparent orange PUR sheath prevents haul-truck run-overs	Standards	Based on DIN VDE 0250-813 · DIN VDE 0295 / IEC 60228 Class 5

Sizes

16 standard constructions

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

Designation (N)TSC GEH3S	Voltage kV	Phase mm ²	Split PE mm ²	Pilot mm ²	Cond. Ø mm	Min. OD mm	Max. OD mm	Mass ≈ kg/km	Tensile 25N/mm ² N	DC Res. 20°C Ω/km	Ind. mH/km	Current 30°C A	1s Short-Cct kA
☐ 3.6/6 kV · 3×35 + 2×16 + 16	3.6/6	35	2×16	16	7.8	39.0	42.0	2,240	2,625	0.565	0.31	162	5.01
☐ 3.6/6 kV · 3×50 + 2×16 + 16	3.6/6	50	2×16	16	9.3	42.5	45.5	2,790	3,750	0.393	0.30	202	7.15
☐ 3.6/6 kV · 3×70 + 2×25 + 16	3.6/6	70	2×25	16	11.2	47.0	50.0	3,690	5,250	0.277	0.28	250	10.01
☐ 3.6/6 kV · 3×95 + 2×35 + 16	3.6/6	95	2×35	16	12.9	51.0	54.0	4,660	7,125	0.210	0.27	301	13.59
☐ 3.6/6 kV · 3×120 + 2×35 + 16	3.6/6	120	2×35	16	14.5	55.0	58.0	5,560	9,000	0.164	0.26	352	17.16
☐ 3.6/6 kV · 3×150 + 2×50 + 16	3.6/6	150	2×50	16	16.2	59.5	62.5	6,780	11,250	0.129	0.25	404	21.45
☐ 3.6/6 kV · 3×185 + 2×50 + 16	3.6/6	185	2×50	16	18.0	64.0	67.0	7,980	13,875	0.106	0.25	461	26.46
☐ 3.6/6 kV · 3×240 + 2×70 + 16	3.6/6	240	2×70	16	20.6	70.5	74.0	10,150	18,000	0.080	0.24	540	34.32
☐ 6/10 kV · 3×35 + 2×16 + 16	6/10	35	2×16	16	7.8	41.0	44.0	2,410	2,625	0.565	0.32	162	5.01
☐ 6/10 kV · 3×50 + 2×16 + 16	6/10	50	2×16	16	9.3	44.5	47.5	2,980	3,750	0.393	0.30	202	7.15
☐ 6/10 kV · 3×70 + 2×25 + 16	6/10	70	2×25	16	11.2	49.0	52.0	3,910	5,250	0.277	0.29	250	10.01
☐ 6/10 kV · 3×95 + 2×35 + 16	6/10	95	2×35	16	12.9	53.0	56.0	4,910	7,125	0.210	0.27	301	13.59
☐ 6/10 kV · 3×120 + 2×35 + 16	6/10	120	2×35	16	14.5	57.0	60.0	5,840	9,000	0.164	0.27	352	17.16
☐ 6/10 kV · 3×150 + 2×50 + 16	6/10	150	2×50	16	16.2	61.5	64.5	7,090	11,250	0.129	0.26	404	21.45
☐ 6/10 kV · 3×185 + 2×50 + 16	6/10	185	2×50	16	18.0	66.0	69.0	8,320	13,875	0.106	0.26	461	26.46
☐ 6/10 kV · 3×240 + 2×70 + 16	6/10	240	2×70	16	20.6	72.5	76.0	10,540	18,000	0.080	0.25	540	34.32

- Nominal current carrying capacity is stated for trailing cables laid on the pit floor at 30 °C ambient temperature.
- Permissible tensile load is 25 N/mm² of total phase copper cross-section (supported by the central aramid strain-relief element).

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-tscgeh3s-cable



Typical values for this cable type, based on DIN VDE 0250-813 · IEC 60228 Class 5. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.