



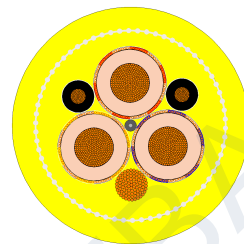
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

(N)TSCGECEWÖU-GCC

1.8/3 kV, 3.6/6 kV and 6/10 kV ATB cable with ground check conductor



APPLICATION

Flexible cable for the energy supply to heavy mobile equipment such as draglines, shovels, dredges, drills and other moving machinery operating in opencast mines and demanding industrial sites. Designed for trailing and reeling duty under severe mechanical stress, abrasion and frequent movement. Special construction includes an additional ground-check conductor for earth-continuity monitoring circuits. Suitable for indoor and outdoor applications where reliable medium-voltage power supply, ground-check function and anti-torsion performance are required.

CONSTRUCTION

Component	Description
Phase conductor	Class 5 tinned copper conductor
Insulation	Rubber compound Type 3GI3
Semi-conductive layers	Semi-conductive tape over the conductor, plus inner and outer semi-conductive rubber layers on the insulation from 3.6/6 kV
Earth conductor	Individual copper braid; two copper earth conductors and one copper ground-check conductor
Central filler	Rubber compound on a textile polyester support
Inner sheath	Abrasion resistant rubber compound
Anti-Torsion Braid	Polyester braid between the inner and outer sheath
Outer sheath	Abrasion resistant rubber compound
Sheath colour	Yellow

CHARACTERISTICS

- Flexible medium-voltage trailing and reeling cable for opencast mining equipment.
- Additional ground-check conductor for earth-continuity monitoring circuits.
- Flame retardant according to IEC/EN 60332-1-2.
- Anti-torsion braid and abrasion resistant sheath for demanding operating conditions.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating U _o /U	1.8/3 kV; 3.6/6 kV; 6/10 kV
Test voltage	6 kV for 1.8/3 kV; 11 kV for 3.6/6 kV; 17 kV for 6/10 kV
Ambient temperature	Fixed -40 °C to +90 °C; flexed -25 °C to +90 °C
Maximum short circuit temperature	+250 °C
Minimum bending radius	6 x overall diameter fixed; 10 x overall diameter flexed

STANDARDS

Parameter	Value
Cable standards	VDE 0250 Part 813, VDE 0295, EN 60228
Flame retardant	IEC/EN 60332-1-2
Regulatory compliance	RoHS Directive ; REACH EC

PACKING

Standard length cable packing on drums; other packing and delivery forms available on request.

TECHNICAL DATA

DIMENSIONS

Values are technical parameters only. Cable dimensions may vary due to manufacturing tolerances.

Voltage kV	Cores	Phase mm2	Earth mm2	Ground check mm2	Cond. dia. mm	Min OD mm	Max OD mm	Tensile N	Weight kg/km
1.8/3	3+2+1	25	25/2	10	6.8	38.2	42.3	1125	2530
1.8/3	3+2+1	35	25/2	10	7.8	39.7	44	1575	2930
1.8/3	3+2+1	50	25/2	10	9.4	42.7	47.2	2250	3540
1.8/3	3+2+1	70	35/2	10	11.2	48.1	53	3150	4730
1.8/3	3+2+1	95	50/2	10	12.7	53	58.3	4257	5930
1.8/3	3+2+1	120	70/2	10	14.4	57.4	63.1	5400	7270
1.8/3	3+2+1	150	70/2	10	16.3	63.8	70	6750	8920
1.8/3	3+2+1	185	95/2	10	17.6	65.6	71.9	8325	10220
3.6/6	3+2+1	25	25/2	10	6.8	45.4	50.1	1125	3300
3.6/6	3+2+1	35	25/2	10	7.8	46.7	51.5	1575	3710
3.6/6	3+2+1	50	25/2	10	9.4	51.5	56.7	2250	4600
3.6/6	3+2+1	70	35/2	10	11.2	55.2	60.7	3150	5710
3.6/6	3+2+1	95	50/2	10	12.7	58.9	64.8	4257	6820
3.6/6	3+2+1	120	70/2	10	14.4	65.1	71.4	5400	8540
3.6/6	3+2+1	150	70/2	10	16.3	69.9	76.3	6750	9890
6/10	3+2+1	25	25/2	10	6.8	48.1	53	1125	3640
6/10	3+2+1	35	25/2	10	7.8	49.5	54.6	1575	4070
6/10	3+2+1	50	25/2	10	9.4	54.2	59.7	2250	4980
6/10	3+2+1	70	35/2	10	11.2	57.9	63.6	3150	6070
6/10	3+2+1	95	50/2	10	12.7	61.6	67.7	4257	7280
6/10	3+2+1	120	25/2		14.4	67.9	74.4	5400	9070

CURRENT CARRYING CAPACITY

Area mm2	Floor A	Air A	1 layer	2 layer	3 layer	4 layer	5 layer	6 layer	7 layer
25	131	138	105	80	64	55	50	35	29
35	162	170	130	99	79	68	62	44	36
50	202	212	162	123	99	85	77	55	44
70	250	263	200	153	123	105	95	68	55
95	301	316	241	184	147	126	114	81	66
120	352	370	282	215	172	148	134	95	77
150	404	424	323	246	198	170	154	109	89
185	461	484	369	281	226	194	175	124	101

Ambient temperature of 30 °C.

VOLTAGE DROP

Area mm2	PF 0.7	PF 0.8	PF 0.9	PF 1.0
25	1.29	1.45	1.6	1.71
35	0.95	1.06	1.16	1.23
50	0.69	0.77	0.83	0.87
70	0.51	0.56	0.6	0.61
95	0.41	0.45	0.47	0.47
120	0.34	0.36	0.38	0.36
150	0.29	0.31	0.32	0.29
185	0.25	0.27	0.27	0.24

ELECTRICAL DATA

DE-RATING FACTORS

Ambient temp.	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
De-rating factor	1.15	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

NOTES

- Current carrying capacity values are stated for the operating conditions shown above.
- Cable dimensions may vary due to manufacturing tolerances.

CERTIFICATIONS



TEBAOFLEX CABLE