



TEBAOFLEX CABLE

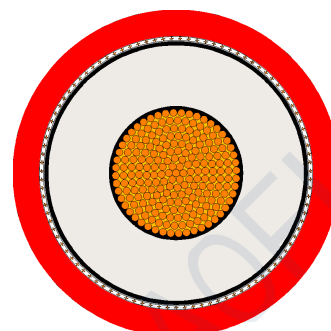
DATA SHEET

Mining&Industrial cable

NTMCGCWOEU

3.6/6 kV to 18/30 kV medium voltage flexible single-core cable

Flexible single-core medium-voltage cable for opencast mining and mobile transformer connections.



APPLICATION

Single-core cables are used in short lengths, for example for connection of switchgear cubicles and for connection of mobile transformer substations to overhead lines. During laying and operation, protect the cable against excessive mechanical stress and apply the general conditions of DIN VDE 0298-3.

CONSTRUCTION

Component	Description
Conductor	Finely stranded tinned copper conductor, class 5, according to DIN VDE 0295 / IEC 60228
PE conductor / screen	Spinning with tinned copper wires, 16 mm ² or 25 mm ² ; 12/20 kV uses tinned copper wire screen
Insulation	EPR compound type 3GI3 according to DIN VDE 0207 Part 20
Electrical field control	Inner and outer layer of semi-conductive rubber compound
Outer sheath	Chlorinated rubber compound type 5GM3, red, according to DIN VDE 0207 Part 21

OPERATING CHARACTERISTICS

Property	Value
Standard	DIN VDE 0250-813
Max. conductor operating temperature	+90 deg C
Max. conductor short-circuit temperature	+250 deg C
Fixed ambient temperature	-40 deg C to +90 deg C
Fully flexible ambient temperature	-25 deg C to +90 deg C
Max. tensile load on conductor	15 N/mm ²
Torsional stress	+/- 25 deg/m
Bending radius	According to DIN VDE 0298 part 3
Fire performance	IEC 60332-1-2
Oil resistance	IEC 60811-404
Weather resistance	Outdoor and indoor use; resistant to ozone, UV and moisture

VOLTAGE DATA

Rated voltage U ₀ /U	Max. AC voltage	Max. DC voltage	AC test voltage
3.6/6 kV	4.2/7.2 kV	5.4/10.8 kV	11 kV
6/10 kV	6.9/12 kV	9/18 kV	17 kV
8.7/15 kV	10.4/18 kV	13.5/27 kV	24 kV
12/20 kV	13.9/24 kV	18/36 kV	29 kV
14/25 kV	17.3/30 kV	22.5/45 kV	36 kV
18/30 kV	20.8/36 kV	27/54 kV	43 kV

TECHNICAL DATA - 3.6/6 kV

Cross-section	Cond. dia. (mm)	Insulation dia. nom. (mm)	OD min. (mm)	OD max. (mm)	Bend fixed min. (mm)	Bend moving min. (mm)	Weight (kg/km)	Tensile force max. (N)
1 x 25 / 16 KON	6.4	14	20.6	22.1	133	221	820	375
1 x 35 / 16 KON	7.5	15.1	21.5	23	138	230	930	525
1 x 50 / 16 KON	9	16.6	23	24.5	147	245	1110	750
1 x 70 / 16 KON	10.8	18.4	25.1	27.4	164	274	1380	1050
1 x 95 / 16 KON	12.6	20.2	26.9	29.2	175	292	1630	1425
1 x 120 / 16 KON	14.2	21.8	28.5	30.8	185	308	1940	1800
1 x 150 / 25 KON	15.8	23.4	31.4	33.6	202	336	2410	2250
1 x 185 / 25 KON	17.4	25	33	35.2	211	352	2750	2775
1 x 240 / 25 KON	20.4	28.3	37.3	39.5	237	395	3430	3600
1 x 300 / 25 KON	22.9	30.5	39.5	41.7	250	417	4000	4500

Cross-section	Resistance 20 deg C max. (Ohm/km)	Capacitance (uF/km)	Current capacity (A)	Short-circuit current (kA)
1 x 25 / 16 KON	0.795	0.26	178	3.58
1 x 35 / 16 KON	0.565	0.29	220	5.01
1 x 50 / 16 KON	0.393	0.33	275	7.15
1 x 70 / 16 KON	0.277	0.38	340	10.01
1 x 95 / 16 KON	0.21	0.42	409	13.59
1 x 120 / 16 KON	0.164	0.46	479	17.16
1 x 150 / 25 KON	0.132	0.50	549	21.45
1 x 185 / 25 KON	0.108	0.54	627	26.46
1 x 240 / 25 KON	0.0817	0.60	734	34.32
1 x 300 / 25 KON	0.0641	0.68	843	42.90

TECHNICAL DATA - 6/10 kV

Cross-section	Cond. dia. (mm)	Insulation dia. nom. (mm)	OD min. (mm)	OD max. (mm)	Bend fixed min. (mm)	Bend moving min. (mm)	Weight (kg/km)	Tensile force max. (N)
1 x 25 / 16 KON	6.4	14.8	19	20.5	123	205	890	375
1 x 35 / 16 KON	7.5	15.9	22.3	23.8	143	238	1000	525
1 x 50 / 16 KON	9	17.4	23.8	25.3	152	253	1190	750
1 x 70 / 16 KON	10.8	19.2	25.9	28.2	169	282	1460	1050
1 x 95 / 16 KON	12.6	21	27.7	30	180	300	1710	1425
1 x 120 / 16 KON	14.2	22.6	30.3	32.6	196	326	2070	1800
1 x 150 / 25 KON	15.8	24.2	32.2	34.4	206	344	2470	2250
1 x 185 / 25 KON	17.4	25.8	33.8	36	216	360	2810	2775
1 x 240 / 25 KON	20.4	29.1	38.1	40.3	242	403	3490	3600
1 x 300 / 25 KON	22.9	31.6	40.3	42.5	255	425	4150	4500
1 x 400 / 25 KON	26.2	33	43	46	276	460	5000	6000

Cross-section	Resistance 20 deg C max. (Ohm/km)	Capacitance (uF/km)	Current capacity (A)	Short-circuit current (kA)
1 x 25 / 16 KON	0.795	0.24	178	3.58
1 x 35 / 16 KON	0.565	0.27	220	5.01
1 x 50 / 16 KON	0.393	0.30	275	7.15
1 x 70 / 16 KON	0.277	0.34	340	10.01
1 x 95 / 16 KON	0.21	0.38	409	13.59
1 x 120 / 16 KON	0.164	0.42	479	17.16
1 x 150 / 25 KON	0.132	0.46	549	21.45
1 x 185 / 25 KON	0.108	0.49	627	26.46
1 x 240 / 25 KON	0.0817	0.54	734	34.32
1 x 300 / 25 KON	0.0641	0.59	843	42.90
1 x 400 / 25 KON	0.05	0.66	1024	57.20

Current carrying capacity is nominal for single-core rubber cables laid on a surface at 30 deg C ambient temperature. Derating factors according to the applicable technical appendix.

TECHNICAL DATA - 8.7/15 kV

Cross-section	Cond. dia. (mm)	Insulation dia. nom. (mm)	OD min. (mm)	OD max. (mm)	Bend fixed min. (mm)	Bend moving min. (mm)	Weight (kg/km)	Tensile force max. (N)
1 x 25 / 16 KON	6.4	17	23.4	24.9	149	249	950	375
1 x 35 / 16 KON	7.5	18.1	24.9	27.1	163	271	1110	525
1 x 50 / 16 KON	9	19.6	26.4	28.6	172	286	1300	750
1 x 70 / 16 KON	10.8	21.4	28.1	30.4	182	304	1550	1050
1 x 95 / 16 KON	12.6	23.2	30.9	33.2	199	332	1880	1425
1 x 120 / 16 KON	14.2	24.8	32.5	34.8	209	348	2200	1800
1 x 150 / 25 KON	15.8	26.4	34.4	36.6	220	366	2610	2250
1 x 185 / 25 KON	17.4	28	37	39.2	235	392	3090	2775
1 x 240 / 25 KON	20.4	31	40	42.2	253	422	3680	3600
1 x 300 / 25 KON	22.9	33.5	42.2	44.4	266	444	4290	4500
1 x 400 / 35 KON	26.2	36.8	45.2	48.2	289	482	5290	6000

Cross-section	Resistance 20 deg C max. (Ohm/km)	Capacitance (uF/km)	Current capacity (A)	Short-circuit current (kA)
1 x 25 / 16 KON	0.795	0.20	189	3.58
1 x 35 / 16 KON	0.565	0.22	234	5.01
1 x 50 / 16 KON	0.393	0.25	292	7.15
1 x 70 / 16 KON	0.277	0.28	360	10.01
1 x 95 / 16 KON	0.21	0.31	434	13.59
1 x 120 / 16 KON	0.164	0.34	505	17.16
1 x 150 / 25 KON	0.132	0.37	582	21.45
1 x 185 / 25 KON	0.108	0.40	664	26.46
1 x 240 / 25 KON	0.0817	0.45	781	34.32
1 x 300 / 25 KON	0.0654	0.49	898	42.90
1 x 400 / 35 KON	0.0495	0.55	1074	57.20

TECHNICAL DATA - 12/20 kV

Cross-section	Cond. dia. (mm)	Insulation dia. nom. (mm)	OD min. (mm)	OD max. (mm)	Bend fixed min. (mm)	Bend moving min. (mm)	Weight (kg/km)	Tensile force max. (N)
1 x 25 / 16 KON	6.4	19	25.7	28	168	280	1150	375
1 x 35 / 16 KON	7.5	20.1	26.8	29.1	175	291	1290	525
1 x 50 / 16 KON	9	21.6	28.3	30.6	184	306	1490	750
1 x 70 / 16 KON	10.8	23.4	31.1	33.4	200	334	1750	1050
1 x 95 / 16 KON	12.6	25.2	32.9	35.2	211	352	2110	1425
1 x 120 / 16 KON	14.2	26.8	34.5	36.8	221	368	2400	1800
1 x 150 / 25 KON	15.8	28.4	37.4	39.6	238	396	2910	2250
1 x 185 / 25 KON	17.4	30	39	41.2	247	412	3270	2775
1 x 240 / 25 KON	20.4	33	42	44.2	265	442	3880	3600
1 x 300 / 25 KON	22.9	34.7	44	47	282	470	4540	4500
1 x 400 / 35 KON	26.2	39.3	49.4	52.4	314	524	5760	6000

Cross-section	Resistance 20 deg C max. (Ohm/km)	Capacitance (uF/km)	Current capacity (A)	Short-circuit current (kA)
1 x 25 / 16 KON	0.795	0.18	189	3.58
1 x 35 / 16 KON	0.565	0.19	234	5.01
1 x 50 / 16 KON	0.393	0.22	292	7.15
1 x 70 / 16 KON	0.277	0.24	360	10.01
1 x 95 / 16 KON	0.21	0.27	434	13.59
1 x 120 / 16 KON	0.164	0.29	505	17.16
1 x 150 / 25 KON	0.132	0.32	582	21.45
1 x 185 / 25 KON	0.108	0.34	664	26.46
1 x 240 / 25 KON	0.0817	0.39	781	34.32
1 x 300 / 25 KON	0.0654	0.43	898	42.90
1 x 400 / 35 KON	0.0495	0.50	1074	57.20

Current carrying capacity is nominal for single-core rubber cables laid on a surface at 30 deg C ambient temperature. Derating factors according to the applicable technical appendix.

TECHNICAL DATA - 14/25 kV

Cross-section	Cond. dia. (mm)	Insulation dia. nom. (mm)	OD min. (mm)	OD max. (mm)	Bend fixed min. (mm)	Bend moving min. (mm)	Weight (kg/km)	Tensile force max. (N)
1 x 25 / 16 KON	6.4	21.6	28.3	30.6	184	306	1250	375
1 x 35 / 16 KON	7.5	22.7	30.4	32.7	196	327	1470	525
1 x 50 / 16 KON	9	24.2	31.9	34.2	205	342	1680	750
1 x 70 / 16 KON	10.8	26	33.7	36	216	360	1950	1050
1 x 95 / 16 KON	12.6	27.8	38.1	40.4	242	404	2620	1425
1 x 120 / 16 KON	14.2	29.4	38.1	40.4	242	404	2620	1800
1 x 150 / 25 KON	15.8	31	40.5	42.7	256	427	3050	2250
1 x 185 / 25 KON	17.4	32.6	42.1	44.3	266	443	3420	2775
1 x 240 / 25 KON	20.4	35.6	45.1	47.3	284	473	4070	3600
1 x 300 / 25 KON	22.9	38.1	48.1	50.3	302	503	4920	4500

Cross-section	Resistance 20 deg C max. (Ohm/km)	Capacitance (uF/km)	Current capacity (A)	Short-circuit current (kA)
1 x 25 / 16 KON	0.795	0.16	189	3.58
1 x 35 / 16 KON	0.565	0.17	234	5.01
1 x 50 / 16 KON	0.393	0.19	292	7.15
1 x 70 / 16 KON	0.277	0.21	360	10.01
1 x 95 / 16 KON	0.21	0.23	434	13.59
1 x 120 / 16 KON	0.164	0.25	505	17.16
1 x 150 / 25 KON	0.132	0.27	582	21.45
1 x 185 / 25 KON	0.108	0.29	664	26.46
1 x 240 / 25 KON	0.0817	0.33	781	34.32
1 x 300 / 25 KON	0.0654	0.36	898	42.90

TECHNICAL DATA - 18/30 kV

Cross-section	Cond. dia. (mm)	Insulation dia. nom. (mm)	OD min. (mm)	OD max. (mm)	Bend fixed min. (mm)	Bend moving min. (mm)	Weight (kg/km)	Tensile force max. (N)
1 x 25 / 16 KON	6.4	24	32.7	35	210	350	1570	375
1 x 35 / 16 KON	7.5	25.1	32.8	35.1	211	351	1600	525
1 x 50 / 16 KON	9	26.6	34.4	36.6	220	366	1860	750
1 x 70 / 16 KON	10.8	28.4	37.1	39.4	236	394	2230	1050
1 x 95 / 16 KON	12.6	30.2	38.4	41.7	250	417	2470	1425
1 x 120 / 16 KON	14.2	31.8	40.5	42.8	257	428	2840	1800
1 x 150 / 25 KON	15.8	33.4	42.9	45.1	271	451	3280	2250
1 x 185 / 25 KON	17.4	35	44	46.2	277	462	3750	2775
1 x 240 / 25 KON	20.4	38	48	50.2	301	502	4550	3600
1 x 300 / 25 KON	22.9	40.5	50.7	53.7	322	537	5100	4500
1 x 400 / 35 KON	26.2	43.8	57	60	360	600	6100	6000

Cross-section	Resistance 20 deg C max. (Ohm/km)	Capacitance (uF/km)	Current capacity (A)	Short-circuit current (kA)
1 x 25 / 16 KON	0.795	0.14	189	3.58
1 x 35 / 16 KON	0.565	0.15	234	5.01
1 x 50 / 16 KON	0.393	0.17	292	7.15
1 x 70 / 16 KON	0.277	0.19	360	10.01
1 x 95 / 16 KON	0.21	0.21	434	13.59
1 x 120 / 16 KON	0.164	0.23	505	17.16
1 x 150 / 25 KON	0.132	0.24	582	21.45
1 x 185 / 25 KON	0.108	0.26	664	26.46
1 x 240 / 25 KON	0.0817	0.29	781	34.32
1 x 300 / 25 KON	0.0654	0.32	898	42.90
1 x 400 / 35 KON	0.0495	0.35	1074	57.20

Current carrying capacity is nominal for single-core rubber cables laid on a surface at 30 deg C ambient temperature. Derating factors according to the applicable technical appendix.

CERTIFICATIONS



TEBAOFLEX CABLE