



TEBAOFLEX CABLE

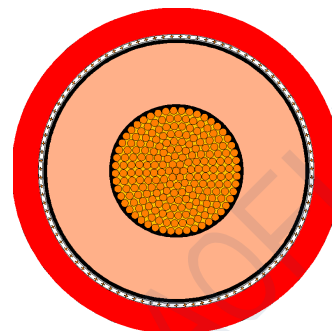
DATA SHEET

Mining&Industrial cable

(N)TMCGCWOEU

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	Spinning with tinned copper wires, 16 mm ² or 25 mm ²
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	12.2	18.8	20.3	122	203	710	375
1 x 35 / 16 KON	7.5	13.3	17.9	19.4	116	194	790	525
1 x 50 / 16 KON	9	14.8	21.2	22.7	136	227	990	750
1 x 70 / 16 KON	10.8	16.6	23	24.5	147	245	1210	1050
1 x 95 / 16 KON	12.6	18.4	25.1	27.4	164	274	1490	1425
1 x 120 / 16 KON	14.2	20	26.7	29	174	290	1750	1800
1 x 150 / 25 KON	15.8	21.6	29.1	31.3	188	313	2150	2250
1 x 185 / 25 KON	17.4	23.2	31.7	33.9	203	339	2540	2775
1 x 240 / 25 KON	20.4	26.2	34.7	36.9	221	369	3120	3600
1 x 300 / 25 KON	22.9	28.7	38.2	40.4	242	404	3780	4500
1 x 400 / 35 KON	26.2	32	39.7	42.7	256	427	4400	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	0.33	178	3.58
1 x 35 / 16 KON	0.565	0.37	220	5.01
1 x 50 / 16 KON	0.393	0.43	275	7.15
1 x 70 / 16 KON	0.277	0.49	340	10.01
1 x 95 / 16 KON	0.21	0.55	409	13.59
1 x 120 / 16 KON	0.164	0.61	479	17.16
1 x 150 / 25 KON	0.132	0.66	549	21.45
1 x 185 / 25 KON	0.108	0.72	627	26.46
1 x 240 / 25 KON	0.0817	0.82	734	34.32
1 x 300 / 25 KON	0.0641	0.91	843	42.90
1 x 400 / 35 KON	0.0486	1.03	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 - 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	12.2	19.4	20.9	125	209	720	375
1 x 35 / 16 KON	7.5	13.9	20.5	22	132	220	850	525
1 x 50 / 16 KON	9	15.4	21.8	23.3	140	233	1020	750
1 x 70 / 16 KON	10.8	17.2	23.6	25.1	151	251	1240	1050
1 x 95 / 16 KON	12.6	19	25.7	28	168	280	1520	1425
1 x 120 / 16 KON	14.2	20.6	25	27.3	164	273	1780	1800
1 x 150 / 25 KON	15.8	22.2	30.7	32.9	197	329	2250	2250
1 x 185 / 25 KON	17.4	23.79	32.3	34.5	207	345	2580	2775
1 x 240 / 25 KON	20.4	26.79	37.9	40.1	241	401	3360	3600
1 x 300 / 25 KON	22.9	29.29	38.8	41	246	410	3850	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	0.33	178	3.58
1 x 35 / 16 KON	0.565	0.34	220	5.01
1 x 50 / 16 KON	0.393	0.39	275	7.15
1 x 70 / 16 KON	0.277	0.44	340	10.01
1 x 95 / 16 KON	0.21	0.50	409	13.59
1 x 120 / 16 KON	0.164	0.55	479	17.16
1 x 150 / 25 KON	0.132	0.60	549	21.45
1 x 185 / 25 KON	0.108	0.65	627	26.46
1 x 240 / 25 KON	0.0817	0.74	734	34.32
1 x 300 / 25 KON	0.0641	0.82	843	42.90

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	14.4	21	22.5	135	225	800	375
1 x 35 / 16 KON	7.5	15.5	22	23.5	141	235	940	525
1 x 50 / 16 KON	9	17	23.4	24.9	149	249	1090	750
1 x 70 / 16 KON	10.8	18.8	25.5	27.8	167	278	1360	1050
1 x 95 / 16 KON	12.6	20.6	28.3	28.6	172	286	1550	1425
1 x 120 / 16 KON	14.2	22.2	28.9	31.2	187	312	1880	1800
1 x 150 / 25 KON	15.8	23.8	32.3	34.5	207	345	2360	2250
1 x 185 / 25 KON	17.4	25.4	33.9	36.1	217	361	2690	2775
1 x 240 / 25 KON	20.4	28.1	38.4	38.6	232	386	3330	3600
1 x 300 / 25 KON	22.9	30.9	40.4	42.6	256	426	3960	4500
1 x 400 / 35 KON	26.2	33.9	41.9	44.9	269	449	4980	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	0.25	189	3.58
1 x 35 / 16 KON	0.565	0.28	234	5.01
1 x 50 / 16 KON	0.393	0.31	292	7.15
1 x 70 / 16 KON	0.277	0.36	360	10.01
1 x 95 / 16 KON	0.21	0.40	434	13.59
1 x 120 / 16 KON	0.164	0.44	505	17.16
1 x 150 / 25 KON	0.132	0.48	582	21.45
1 x 185 / 25 KON	0.108	0.52	664	26.46
1 x 240 / 25 KON	0.0817	0.61	781	34.32
1 x 300 / 25 KON	0.0641	0.65	898	42.90
1 x 400 / 35 KON	0.0486	0.76	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 - 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	15.8	22.2	23.7	142	237	860	375
1 x 35 / 16 KON	7.5	16.3	22.3	23.8	143	238	970	525
1 x 50 / 16 KON	9	18.4	25.1	27.4	164	274	1200	750
1 x 70 / 16 KON	10.8	20.2	26.9	29.2	175	292	1440	1050
1 x 95 / 16 KON	12.6	22	28.7	31	186	310	1690	1425
1 x 120 / 16 KON	14.2	23.4	30.7	33	198	330	2020	1800
1 x 150 / 25 KON	15.8	25.2	33.7	35.9	215	359	2450	2250
1 x 185 / 25 KON	17.4	26.8	35.3	37.5	225	375	2790	2775
1 x 240 / 25 KON	20.4	29.9	38.4	40.6	244	406	3460	3600
1 x 300 / 25 KON	22.9	32.3	41.8	44	264	440	4080	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	0.22	189	3.58
1 x 35 / 16 KON	0.565	0.26	234	5.01
1 x 50 / 16 KON	0.393	0.27	292	7.15
1 x 70 / 16 KON	0.277	0.31	360	10.01
1 x 95 / 16 KON	0.21	0.35	434	13.59
1 x 120 / 16 KON	0.164	0.39	505	17.16
1 x 150 / 25 KON	0.132	0.41	582	21.45
1 x 185 / 25 KON	0.108	0.44	664	26.46
1 x 240 / 25 KON	0.0817	0.50	781	34.32
1 x 300 / 25 KON	0.0641	0.55	898	42.90

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	17.8	24.3	26.6	160	266	980	375
1 x 35 / 16 KON	7.5	18.7	25.4	27.7	166	277	1110	525
1 x 50 / 16 KON	9	20.2	26.9	29.2	175	292	1290	750
1 x 70 / 16 KON	10.8	22	28.7	31	186	310	1540	1050
1 x 95 / 16 KON	12.6	23.8	31.5	33.8	203	338	1870	1425
1 x 120 / 16 KON	14.2	25.4	33.1	35.4	212	354	2150	1800
1 x 150 / 25 KON	15.8	27	36.5	38.7	232	387	2660	2250
1 x 185 / 25 KON	17.4	28.6	38.1	40.3	242	403	3013	2775
1 x 240 / 25 KON	20.4	31.6	41.1	43.3	260	433	3620	3600
1 x 300 / 25 KON	22.9	34.1	43.6	45.8	275	458	4230	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	0.19	189	3.58
1 x 35 / 16 KON	0.565	0.21	234	5.01
1 x 50 / 16 KON	0.393	0.24	292	7.15
1 x 70 / 16 KON	0.277	0.27	360	10.01
1 x 95 / 16 KON	0.21	0.30	434	13.59
1 x 120 / 16 KON	0.164	0.33	505	17.16
1 x 150 / 25 KON	0.132	0.35	582	21.45
1 x 185 / 25 KON	0.108	0.38	664	26.46
1 x 240 / 25 KON	0.0817	0.43	781	34.32
1 x 300 / 25 KON	0.0641	0.47	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	19.2	23.6	25.9	155	259	1070	375
1 x 35 / 16 KON	7.5	20.3	27	29.3	176	293	1200	525
1 x 50 / 16 KON	9	23.6	28.5	30.8	185	308	1390	750
1 x 70 / 16 KON	10.8	21.8	30.3	32.6	196	326	1640	1050
1 x 95 / 16 KON	12.6	25.4	32.1	34.4	206	344	1910	1425
1 x 120 / 16 KON	14.2	27	34.7	37	222	370	2300	1800
1 x 150 / 25 KON	15.8	28.6	36.5	38.7	232	387	2660	2250
1 x 185 / 25 KON	17.4	30.2	39.8	42	252	420	3100	2775
1 x 240 / 25 KON	20.4	32.9	41.2	43.4	260	434	3730	3600
1 x 300 / 25 KON	22.9	35.7	45.2	47.4	284	474	4380	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	0.18	189	3.58
1 x 35 / 16 KON	0.565	0.19	234	5.01
1 x 50 / 16 KON	0.393	0.21	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	0.31	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	0.0641	0.42	898	42.90

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