TFKable
TELE-FONIKA Kable S.A.

HIGH VOLTAGE XLPE CABLES 87/150 ÷ 161(170)kV

- COPPER CONDUCTOR
- 2XS(FL)2Y acc. IEC 60840
- N2XS(FL)2Y acc. DIN VDE 0276-632
- XRUHKXS acc. ZN-BFK-021:1998

Cross-section of conductor	Diameter of conductor	Insulation		Copper screen		Outer diameter of cable	Weight of cable	Max. pulling force	Min. bending radius
		Average thick-ness	Diameter over insulation	Cross-section	Diameter over screen				
mm^2	mm			mm^2	mm		kg / km	kN	m
1 x 240 RM	$18.5^{+0.30}$	22.0	66.4	95	74.0	84.9	7690	12	1.92
1 x 300 RM	$20.5^{+0.30}$	21.0	66.4	95	74.0	84.9	8170	15	1.92
1 x 400 RM	$23.5^{+0.30}$	20.0	67.2	95	74.9	85.7	8960	20	1.94
1 x 500 RM	$26.5^{+0.40}$	19.0	68.3	95	76.0	87.0	9970	25	1.97
1 x 630 RM	$30.3^{+0.40}$	19.0	73.2	95	80.5	92.1	11670	31.5	2.09
1 x 800 RM	$34.6^{+0.50}$	19.0	77.6	95	85.3	96.9	13610	40	2.20
1 x 1000 RM	$37.6^{+0.50}$	19.0	80.6	95	88.3	100.1	15670	50	2.28
1 x 1200 RMS	$43.6^{+0.80}$	19.0	87.4	95	95.3	107.5	18200	60	2.45
1 x 1400 RMS	$46.6^{+1.0}$	19.0	91.0	95	98.9	111.5	20430	70	2.54
1 x 1600 RMS	$50.0^{+1.0}$	19.0	95.0	95	103.3	116.1	22740	80	2.65
1 x 1800 RMS	$53.3^{+1.0}$	19.0	98.3	95	106.6	119.6	24850	90	2.73
1 x 2000 RMS	$56.3^{+1.2}$	19.0	101.5	95	109.8	123.0	27020	100	2.82

ELECTRICAL PARAMETERS

RM – round multiwire conductor

RMS – round multiwire segmented conductor (Milliken construction)

/1 – trefoil formation

/2 – phase distance at flat formation = 2 x cable diameter

/3 – phase distance at flat formation = 70 mm + cable diameter

/4 – SPB – Single Point Bonding; CB – Cross-bonding; Both-ends – Both-ends Bonding

Cross-section of conductor	Conductor resistance		Copper screen resistance		Field strengthat conductor screen / insulation	Max. short circuit current		Capacitance	Inductance o o o /1 o o o /2 o o o /3	Ampacity	
										In ground	In air
										SPB, CB /4	o o o / o o o
										Both-ends /4	o o o / o o o
	DC20 °C	AC90 °C	DC20 °C	AC80 °C		Conductor	Copper screen				
mm²	Ω / km				kV / mm	kA / 1 sec		µF / km	mH / km	A	
1 x 240 RM	0.0754	0.0971	0.215	0.266	7.18 / 2.31	34.32	19.29	0.11	0.490.680.66	570 / 540 505 / 519	745 / 645 659 / 628
1 x 300 RM	0.0601	0.078	0.215	0.266	7.13 / 2.51	42.9	19.29	0.12	0.470.650.64	640 / 610 535 / 580	845 / 746 719 / 719
1 x 400 RM	0.047	0.0617	0.215	0.266	7.05 / 2.77	57.2	19.29	0.14	0.440.630.61	720 / 690 595 / 650	961 / 861 814 / 824
1 x 500 RM	0.0366	0.049	0.215	0.266	7.03 / 3.03	71.5	19.29	0.15	0.420.610.59	825 / 785 650 / 730	1113 / 992 903 / 940
1 x 630 RM	0.0283	0.0391	0.215	0.266	6.70 / 3.15	90.09	19.29	0.17	0.410.590.57	940 / 890 705 / 810	1297 / 1139 998 / 1061
1 x 800 RM	0.0221	0.0321	0.215	0.266	6.47 / 3.23	114.4	19.29	0.18	0.390.580.55	1055 / 995 755 / 885	1486 / 1297 1092 / 1187
1 x 1000 RM	0.0176	0.027	0.215	0.266	6.34 / 3.29	143	19.29	0.19	0.380.570.53	1165 / 1095 800 / 950	1670 / 1449 1181 / 1307
1 x 1200 RMS	0.0151	0.0205	0.215	0.266	6.1 / 3.39	171.6	19.29	0.22	0.370.550.51	1345 / 1280 860 / 1055	1974 / 1733 1302 / 1496
1 x 1400 RMS	0.0129	0.0178	0.215	0.266	6.0 / 3.44	200.2	19.29	0.23	0.360.550.51	1455 / 1385 890 / 1110	2168 / 1890 1365 / 1601
1 x 1600 RMS	0.0113	0.016	0.215	0.266	5.9 / 3.49	228.8	19.29	0.24	0.360.540.50	1550 / 1470 920 / 1155	2347 / 2037 1423 / 1696
1 x 1800 RMS	0.0101	0.0146	0.215	0.266	5.82 / 3.53	257.4	19.29	0.25	0.350.530.49	1627 / 1537 938 / 1187	2485 / 2145 1460 / 1762
1 x 2000 RMS	0.009	0.0134	0.215	0.266	5.76 / 3.56	286	19.29	0.27	0.340.530.48	1705 / 1605 955 / 1220	2625 / 2252 1496 / 1827

HIGH VOLTAGE XLPE CABLES 87/150 ÷ 161(170)kV

ALUMINIUM CONDUCTOR

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- NA2XS(FL)2Y acc. DIN VDE 0276-632
- XRUHAKXS acc. ZN-BFK-021:1998

Cross-section of conductor	Diameter of conductor	Insulation		Copper screen		Outer diameter of cable	Weight of cable	Max. pulling force	Min. bending radius
		Average thick-ness	Diameter over insulation	Cross-section	Diameter over screen				
mm²	mm			mm²	mm		kg / km	kN	m
1 x 240 RM	17.8 $^{+0.10}$	22.0	65.5	95	73.2	84.0	6150	7.2	1.90
1 x 300 RM	20.0 $^{+0.30}$	21.0	65.9	95	73.6	84.4	6290	9.0	1.91
1 x 400 RM	22.9 $^{+0.30}$	20.0	66.6	95	74.3	85.1	6500	12.0	1.93
1 x 500 RM	25.7 $^{+0.40}$	19.0	67.5	95	75.2	86.0	6800	15.0	1.95
1 x 630 RM	29.3 $^{+0.50}$	19.0	72.3	95	80.0	91.2	7640	18.9	2.07
1 x 800 RM	33.0 $^{+0.50}$	19.0	76.0	95	83.7	95.1	8400	24.0	2.16
1 x 1000 RM	38.0 $^{+0.50}$	19.0	81.0	95	88.7	100.5	9470	30.0	2.29
1 x 1200 RM	41.0 $^{+0.60}$	19.0	84.1	95	92.0	104.0	10370	36.0	2.37
1 x 1200 RMS	43.6 $^{+0.80}$	19.0	87.4	95	95.3	107.5	10800	36.0	2.45
1 x 1400 RMS	46.6 $^{+1.0}$	19.0	91.0	95	98.9	111.5	11760	42.0	2.54
1 x 1600 RMS	50.0 $^{+1.0}$	19.0	95.0	95	103.3	116.1	12820	48.0	2.65
1 x 1800 RMS	53.3 $^{+1.0}$	19.0	98.3	95	106.7	119.6	13710	54.0	2.73
1 x 2000 RMS	55.4 $^{+1.2}$	19.0	100.6	95	108.9	122.1	14410	60.0	2.79

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Cross-section of conductor	Conductor resistance		Copper screen resistance		Field strengthat conductor screen / insulation	Max. short circuit current		Capacitance	Inductance o⁰o /1 o o o /2 o o o /3	Ampacity	
										In ground	In air
										SPB, CB /4	o o o / o⁰o
										Both-ends /4	o o o / o⁰o
mm²	Ω / km				kV / mm	kA / 1 sec		µF / km	mH / km	A	
	DC20 °C	AC90 °C	DC20 °C	AC80 °C		Conductor	Copper screen				
1 x 240 RM	0.125	0.1606	0.215	0.266	7.31 / 2.29	22.68	19.29	0.11	0.500.680.67	445 / 420	583 / 504
										416 / 416	541 / 499
1 x 300 RM	0.100	0.1288	0.215	0.266	7.19 / 2.50	28.35	19.29	0.12	0.470.660.64	495 / 475	656 / 578
										445 / 460	593 / 567
1 x 400 RM	0.0778	0.1008	0.215	0.266	7.11 / 2.75	37.8	19.29	0.13	0.450.630.61	565 / 540	751 / 672
										500 / 525	672 / 656
1 x 500 RM	0.0605	0.0791	0.215	0.266	7.09 / 3.01	47.25	19.29	0.15	0.430.610.59	645 / 620	877 / 782
										555 / 595	761 / 756
1 x 630 RM	0.0469	0.0620	0.215	0.266	6.75 / 3.13	59.54	19.29	0.17	0.410.600.57	740 / 710	1024 / 908
										610 / 670	861 / 872
1 x 800 RM	0.0367	0.0496	0.215	0.266	6.55 / 3.20	75.6	19.29	0.18	0.400.580.55	845 / 805	1187 / 1045
										665 / 745	956 / 987
1 x 1000 RM	0.0291	0.0405	0.215	0.266	6.32 / 3.29	94.5	19.29	0.20	0.380.570.53	950 / 900	1360 / 1192
										720 / 820	1055 / 1108
1 x 1200 RM	0.0247	0.0355	0.215	0.266	6.21 / 3.34	113.4	19.29	0.21	0.370.560.52	1025 / 970	1491 / 1297
										755 / 870	1124 / 1197
1 x 1200 RMS	0.0247	0.0324	0.215	0.266	6.10 / 3.39	113.4	19.29	0.22	0.370.550.51	1025 / 970	1491 / 1297
										755 / 870	1124 / 1197
1 x 1400 RMS	0.0212	0.0281	0.215	0.266	6.0 / 3.44	132.3	19.29	0.23	0.360.550.51	1100 / 1040	1622 / 1402
										785 / 915	1181 / 1281
1 x 1600 RMS	0.0186	0.0248	0.215	0.266	5.90 / 3.49	151.2	19.29	0.24	0.360.540.50	1165 / 1095	1733 / 1491
										815 / 955	1229 / 1349
1 x 1800 RMS	0.0165	0.0224	0.215	0.266	5.82 / 3.53	170.1	19.29	0.25	0.350.530.49	1220 / 1145	1832 / 1570
										835 / 985	1271 / 1407
1 x 2000 RMS	0.0149	0.0204	0.215	0.266	5.78 / 3.55	189.0	19.29	0.26	0.340.530.48	1275 / 1190	1932 / 1649
										855 / 1015	1313 / 1465