

HIGH VOLTAGE XLPE CABLES 76/132 ÷ 138(145)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 thickness	Diameter over insulation	Cross-section	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm	kg / km	kN	m	
1 x 240 RM	18.5 + 0.30	18.0	58.2	95	65.9	76.1	6710	12	1.72
1 x 300 RM	20.5 + 0.30	17.5	59.2	95	66.9	77.1	7290	15	1.74
1 x 400 RM	23.5 + 0.30	17.0	61.2	95	68.9	79.3	8230	20	1.79
1 x 500 RM	26.5 + 0.40	17.0	64.3	95	72.0	82.6	9450	25	1.87
1 x 630 RM	30.3 + 0.40	17.0	69.2	95	76.5	87.9	11140	31.5	1.99
1 x 800 RM	34.6 + 0.50	17.0	73.6	95	80.9	92.5	13030	40	2.10
1 x 1000 RM	37.6 + 0.50	17.0	76.6	95	83.9	95.7	15070	50	2.18
1 x 1200 RMS	43.6 + 0.80	17.0	83.4	95	91.3	103.3	17580	60	2.35
1 x 1400 RMS	46.6 + 1.0	17.0	87.0	95	94.9	107.1	19760	70	2.44
1 x 1600 RMS	50.0 + 1.0	17.0	91.0	95	99.3	111.9	22060	80	2.55
1 x 1800 RMS	53.3 + 1.0	17.0	94.3	95	102.6	115.4	24150	90	2.63
1 x 2000 RMS	56.3 + 1.2	17.0	97.5	95	105.8	118.8	26300	100	2.71

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 strength at conductor screen / insulation	Max. short circuit current		Capacitance	Inductance mH/km ¹ mH/km ² mH/km ³	Ampacity			
	DC20 °C	AC90 °C	DC20 °C	AC80 °C		Conductor	Copper screen			µF / km	mH / km	In ground	In air
												SPB, CB ⁴	Both-ends ⁴
												Both-ends ⁴	Both-ends ⁴
mm ²	Ω / km				kV / mm	kA / 1 sec		µF / km	mH / km	A			
1 x 240 RM	0.0754	0.0972	0.215	0.266	7.1 / 2.61	34.32	19.29	0.13	0.470.650.64	570 / 540	745 / 645		
										505 / 519	659 / 628		
1 x 300 RM	0.0601	0.078	0.215	0.266	7.0 / 2.77	42.9	19.29	0.14	0.450.640.63	640 / 610	845 / 746		
										535 / 580	719 / 719		
1 x 400 RM	0.047	0.0617	0.215	0.266	6.85 / 2.95	57.2	19.29	0.15	0.430.610.60	720 / 690	961 / 861		
										595 / 650	814 / 824		
1 x 500 RM	0.0366	0.0491	0.215	0.266	6.61 / 3.03	71.5	19.29	0.16	0.410.600.58	825 / 785	1113 / 992		
										650 / 730	903 / 940		
1 x 630 RM	0.0283	0.0392	0.215	0.266	6.32 / 3.14	90.09	19.29	0.18	0.400.580.56	940 / 890	1297 / 1139		
										705 / 810	998 / 1061		
1 x 800 RM	0.0221	0.0322	0.215	0.266	6.12 / 3.23	114.4	19.29	0.20	0.380.570.54	1055 / 995	1486 / 1297		
										755 / 885	1092 / 1187		
1 x 1000 RM	0.0176	0.0271	0.215	0.266	6.0 / 3.28	143	19.29	0.21	0.370.560.53	1165 / 1095	1670 / 1449		
										800 / 950	1181 / 1307		
1 x 1200 RMS	0.0151	0.0205	0.215	0.266	5.79 / 3.37	171.6	19.29	0.24	0.360.540.51	1345 / 1280	1974 / 1733		
										860 / 1055	1302 / 1496		
1 x 1400 RMS	0.0129	0.0178	0.215	0.266	5.7 / 3.42	200.2	19.29	0.25	0.350.540.50	1455 / 1385	2168 / 1890		
										890 / 1110	1365 / 1601		
1 x 1600 RMS	0.0113	0.016	0.215	0.266	5.61 / 3.47	228.8	19.29	0.27	0.350.530.49	1550 / 1470	2347 / 2037		
										920 / 1155	1423 / 1696		
1 x 1800 RMS	0.0101	0.0147	0.215	0.266	5.55 / 3.5	257.4	19.29	0.28	0.340.530.48	1627 / 1537	2485 / 2145		
										938 / 1187	1460 / 1762		
1 x 2000 RMS	0.009	0.0135	0.215	0.266	5.49 / 3.53	286	19.29	0.29	0.340.520.47	1705 / 1605	2625 / 2252		
										955 / 1220	1496 / 1827		

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Cross-section of conductor	Diameter of conductor	Insulation		Copper screen		Outer diameter of cable	Weight of cable	Max. pulling force	Min. bending radius
		Average thickness	Diameter over insulation	Cross-section	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm	kg / km	kN	m	
1 x 240 RM	17.8 ^{+0.10}	18.0	57.3	95	65.0	75.2	5180	7.2	1.70
1 x 300 RM	20.0 ^{+0.30}	17.5	58.7	95	66.4	76.6	5410	9.0	1.73
1 x 400 RM	22.9 ^{+0.30}	17.0	60.6	95	68.3	78.7	5780	12.0	1.78
1 x 500 RM	25.7 ^{+0.40}	17.0	63.5	95	71.2	81.8	6320	15.0	1.85
1 x 630 RM	29.3 ^{+0.50}	17.0	68.3	95	76.0	87.0	7130	18.9	1.97
1 x 800 RM	33.0 ^{+0.50}	17.0	72.0	95	79.7	90.9	7890	24.0	2.06
1 x 1000 RM	38.0 ^{+0.50}	17.0	77.0	95	84.7	96.3	8890	30.0	2.19
1 x 1200 RM	41.0 ^{+0.60}	17.0	80.1	95	88.0	99.8	9770	36.0	2.27
1 x 1200 RMS	43.6 ^{+0.80}	17.0	83.4	95	91.3	103.3	10180	36.0	2.35
1 x 1400 RMS	46.6 ^{+1.0}	17.0	87.0	95	94.9	107.1	11090	42.0	2.44
1 x 1600 RMS	50.0 ^{+1.0}	17.0	91.0	95	99.3	111.9	12140	48.0	2.55
1 x 1800 RMS	53.3 ^{+1.0}	17.0	94.3	95	102.6	115.4	13020	54.0	2.64
1 x 2000 RMS	55.4 ^{+1.2}	17.0	96.6	95	104.9	117.9	13700	60.0	2.69

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Cross-section of conductor	Conductor resistance		Copper screen resistance		Field strength that conductor screen / insulation	Max. short circuit current		Capacitance	Inductance o ^o o ¹ o o o ² o o o ³	Ampacity	
	DC20 °C	AC90 °C	DC20 °C	AC80 °C		Conductor	Copper screen			In ground	In air
mm ²	Ω / km				kV / mm	kA / 1 sec		μF / km	mH / km	A	
1 x 240 RM	0.125	0.1606	0.215	0.266	7.21 / 2.58	22.68	19.29	0.12	0.480.660.65	445 / 420 416 / 416	583 / 504 541 / 499
1 x 300 RM	0.100	0.1288	0.215	0.266	7.05 / 2.75	28.35	19.29	0.14	0.450.640.63	495 / 475 445 / 460	656 / 578 593 / 567
1 x 400 RM	0.0778	0.1008	0.215	0.266	6.90 / 2.94	37.8	19.29	0.15	0.430.620.61	565 / 540 500 / 525	751 / 672 672 / 656
1 x 500 RM	0.0605	0.0791	0.215	0.266	6.67 / 3.01	47.25	19.29	0.16	0.420.600.59	645 / 620 555 / 595	877 / 782 761 / 756
1 x 630 RM	0.0469	0.0621	0.215	0.266	6.37 / 3.12	59.54	19.29	0.18	0.400.590.57	740 / 710 610 / 670	1024 / 908 861 / 872
1 x 800 RM	0.0367	0.0497	0.215	0.266	6.19 / 3.20	75.6	19.29	0.19	0.390.570.55	845 / 805 665 / 745	1187 / 1045 956 / 987
1 x 1000 RM	0.0291	0.0406	0.215	0.266	5.99 / 3.28	94.5	19.29	0.21	0.370.560.53	950 / 900 720 / 820	1360 / 1192 1055 / 1108
1 x 1200 RM	0.0247	0.0356	0.215	0.266	5.89 / 3.33	113.4	19.29	0.22	0.360.550.52	1025 / 970 755 / 870	1491 / 1297 1124 / 1197
1 x 1200 RMS	0.0247	0.0325	0.215	0.266	5.79 / 3.37	113.4	19.29	0.24	0.360.540.51	1025 / 970 755 / 870	1491 / 1297 1124 / 1197
1 x 1400 RMS	0.0212	0.0281	0.215	0.266	5.70 / 3.42	132.3	19.29	0.25	0.350.540.50	1100 / 1040 785 / 915	1622 / 1402 1181 / 1281
1 x 1600 RMS	0.0186	0.0248	0.215	0.266	5.61 / 3.47	151.2	19.29	0.27	0.350.530.49	1165 / 1095 815 / 955	1733 / 1491 1229 / 1349
1 x 1800 RMS	0.0165	0.0224	0.215	0.266	5.55 / 3.50	170.1	19.29	0.28	0.340.520.48	1220 / 1145 835 / 985	1832 / 1570 1271 / 1407
1 x 2000 RMS	0.0149	0.0204	0.215	0.266	5.51 / 3.52	189.0	19.29	0.29	0.340.520.48	1275 / 1190 855 / 1015	1932 / 1649 1313 / 1465