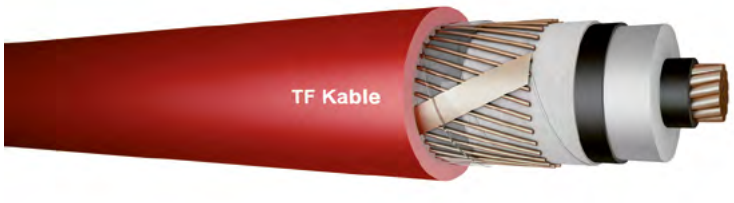
MEDIUM VOLTAGE XLPE POWER CABLES

18/30 (36) kV

COPPER CONDUCTOR - Round, stranded and compacted conductor - Class 2
N2XSY acc. to DIN VDE 0276-620 and HD 620S2:2010 part 10 section C
2XSY acc. to IEC 60502-2:2005 and BS 6622:2007
YHKXS acc. to ZN-TF-501:2002



Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D_e	Cable weight	Maximum cable pulling force	Recommended min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm²	**mm**			**mm²**	**mm**	**mm**	**kg/km**	**kN**	**m**
1x35RMC	7.0 $^{+0.15}$	8.0	24.2	16	28.1	32.9	1210	1.75	0.49
1x50RMC	8.25 $^{+0.20}$	8.0	25.5	16	29.4	34.1	1370	2.5	0.51
1x70RMC	9.6 $^{+0.20}$	8.0	26.8	25	30.7	35.5	1690	3.5	0.53
1x95RMC	11.5 $^{+0.20}$	8.0	28.7	35	32.6	37.4	2080	4.75	0.56
1x120RMC	12.9 $^{+0.25}$	8.0	30.1	50	34.0	38.8	2490	6	0.58
1x150RMC	14.5 $^{+0.30}$	8.0	31.7	50	35.6	40.4	2800	7.5	0.61
1x185RMC	16.0 $^{+0.30}$	8.0	33.2	50	37.1	41.9	3180	9.25	0.63
1x240RMC	18.5 $^{+0.30}$	8.0	35.7	50	39.6	44.4	3760	12	0.67
1x300RMC	20.5 $^{+0.30}$	8.0	37.7	50	41.6	46.4	4370	15	0.70
1x400RMC	23.5 $^{+0.30}$	8.0	40.7	50	44.6	49.6	5290	20	0.74
1x500RMC	26.5 $^{+0.40}$	8.0	44.2	50	48.3	53.5	6460	25	0.80
1x630RMC	30.3 $^{+0.40}$	8.0	48.3	50	52.4	57.7	7880	31.5	0.87
1x800RMC	34.6 $^{+0.50}$	8.0	53.0	50	57.1	62.8	9660	40	0.94
1x1000RMC	38.2 $^{+0.40}$	8.0	56.6	50	60.7	66.6	11620	50	1.00

Electrical data

RM (RMC) - Round Multiwire Conductor IC (C - compacted), Class 2
SPB - Single Point Bonded
CB - Cross Bonded
BE - Both Ends
D_e - Cable diameter

2 - Cables in trefoil formation, the distance between cables D_e
3 - Cables in flat formation (in the ground) – the distance between cables D_e + 70 mm
4 - Cables in flat formation (in the air) – the distance between cables 2 x D_e

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/ insulation	Zero resistance R_0	Zero reactance X_0	Capacitance C	Capacitive reactance X_c	Charging current I_c	Induct-ance L	Inductive reactance XI	Imped-ance
Conductor/ Metallic screen	DC 20°C	AC 90°C	DC 20°C	AC 80°C							o o o² ooo³ ooo⁴	o o o² ooo³ ooo⁴	o o o² ooo³ ooo⁴
mm²	**Ω/km**				**kV/mm**	**Ω/km**	**Ω/km**	**µF/ km**	**kΩ/ km**	**A/km**	**mH/km**	**Ω/km**	**Ω/km**
1x35RMC/16	0.524	0.668	1.12	1.38	4.07/1.34	2.05	0.101	0.12	27.6	0.65	0.50 0.77 0.68	0.156 0.243 0.215	0.686 0.711 0.702
1x50RMC/16	0.387	0.494	1.12	1.38	3.85/1.40	1.88	0.093	0.13	25.2	0.71	0.47 0.74 0.66	0.148 0.233 0.206	0.516 0.546 0.535
1x70RMC/25	0.268	0.342	0.72	0.89	3.66/1.45	1.23	0.087	0.14	23.1	0.78	0.45 0.71 0.64	0.141 0.224 0.200	0.370 0.409 0.396
1x95RMC/35	0.193	0.247	0.51	0.63	3.47/1.51	0.88	0.079	0.15	20.7	0.87	0.42 0.68 0.61	0.133 0.214 0.191	0.280 0.327 0.312
1x120RMC/50	0.153	0.196	0.36	0.44	3.35/1.55	0.64	0.075	0.17	19.2	0.94	0.41 0.66 0.59	0.128 0.208 0.187	0.234 0.285 0.270
1x150RMC/50	0.124	0.159	0.36	0.44	3.25/1.59	0.60	0.070	0.18	17.8	1.01	0.39 0.64 0.58	0.124 0.201 0.182	0.201 0.256 0.241
1x185RMC/50	0.0991	0.127	0.36	0.44	3.16/1.62	0.57	0.067	0.19	16.7	1.08	0.38 0.62 0.57	0.120 0.196 0.178	0.175 0.234 0.219
1x240RMC/50	0.0754	0.0976	0.36	0.44	3.05/1.67	0.54	0.062	0.21	15.1	1.19	0.36 0.60 0.55	0.114 0.188 0.172	0.150 0.212 0.198
1x300RMC/50	0.0601	0.0786	0.36	0.44	2.98/1.70	0.52	0.059	0.23	14.0	1.29	0.35 0.58 0.54	0.111 0.183 0.169	0.136 0.199 0.186
1x400RMC/50	0.0470	0.0625	0.36	0.44	2.90/1.74	0.50	0.054	0.25	12.6	1.42	0.34 0.56 0.52	0.106 0.176 0.164	0.123 0.187 0.176
1x500RMC/50	0.0366	0.0500	0.36	0.44	2.80/1.77	0.49	0.052	0.28	11.5	1.57	0.33 0.54 0.51	0.103 0.170 0.161	0.115 0.178 0.169

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/ insulation	Zero resistance R_0	Zero reactance X_0	Capacitance C	Capacitive reactance X_c	Charging current I_c	Induct-ance L	Inductive reactance XI	Imped-ance
Conductor/ Metallic screen	DC 20°C	AC 90°C	DC 20°C	AC 80°C							o°o²	o°o²	o°o²
											ooo³	ooo³	ooo³
											ooo⁴	ooo⁴	ooo⁴
mm²	**Ω/km**				**kV/mm**	**Ω/km**	**Ω/km**	**µF/ km**	**kΩ/ km**	**A/km**	**mH/km**	**Ω/km**	**Ω/km**
											0.32	0.100	0.108
1x630RMC/50	0.0283	0.0404	0.36	0.44	2.73/1.81	0.48	0.049	0.31	10.3	1.75	0.52	0.164	0.169
											0.50	0.158	0.163
											0.31	0.097	0.102
1x800RMC/50	0.0221	0.0336	0.36	0.44	2.67/1.85	0.48	0.046	0.35	9.2	1.97	0.50	0.158	0.162
											0.49	0.155	0.158
											0.30	0.094	0.098
1x1000RMC/50	0.0176	0.0288	0.36	0.44	2.63/1.87	0.47	0.044	0.38	8.5	2.13	0.49	0.154	0.157
											0.48	0.152	0.155

Current – carrying capacity

Nominal cross sectional area	Max short circuit capacity		GROUND				AIR			
			FLAT		TREFOIL		FLAT		TREFOIL	
	Conductor	Metallic screen	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB
mm²	**kA/sec**		**A**							
1x35RMC/16	5.0	3.7	237	239	226	226	246	247	215	216
1x50RMC/16	7.2	3.7	282	284	269	269	294	296	258	258
1x70RMC/25	10.0	5.3	342	348	329	330	361	367	318	319
1x95RMC/35	13.6	7.1	407	420	396	398	436	449	387	389
1x120RMC/50	17.2	9.8	453	480	448	453	492	518	443	447
1x150RMC/50	21.5	9.8	503	541	504	511	555	590	503	509
1x185RMC/50	26.5	9.8	559	614	569	579	626	676	572	582
1x240RMC/50	34.3	9.8	636	717	661	676	726	802	674	688
1x300RMC/50	42.9	9.8	702	814	744	765	814	919	767	786
1x400RMC/50	57.2	9.8	779	934	845	875	923	1072	885	913
1x500RMC/50	71.5	9.8	859	1066	953	995	1035	1242	1014	1053
1x630RMC/50	90.1	9.8	946	1220	1072	1129	1163	1446	1160	1215
1x800RMC/50	114.4	9.8	1029	1379	1187	1263	1283	1663	1309	1384
1x1000RMC/50	143.0	9.8	1098	1529	1289	1386	1389	1871	1442	1538

Operating Conditions

For laying in ground		For installation in air	
Depth of lay:	0,7 m.	Ambient temperature:	30°C
Ground temperature:	20°C	Protection from direct solar radiation	
Soil thermal resistivity:	1/ 2,5 K · m/W		