



CABLE DESIGN:	XLPE insulated single core cables with stranded copper conductors
RATED VOLTAGE:	12/20/24 kV
STANDARD:	DIN VDE 0276-620 / HD 620 S2: PART 10 C
CONDUCTOR CROSS-SECTIONAL:	35 – 1000sqmm
OPERATING CONDUCTOR TEMPERATURE	
maximum permissible temperature:	+90 °C
SHORT CIRCUIT CONDUCTOR TEMPERATURE	
initial :	+90 °C
final:	+250 °C
SHORT CIRCUIT METALLIC SCREEN TEMPERATURE	
initial :	+80 °C
final:	+350 °C
LOWEST TEMPERATURE OF CABLE INSTALLATION:	-20 °C
IMPULS VOLTAGE:	125 kV
TEST VOLTAGE:	42 kV

CONDUCTOR

Stranded, circular and compacted copper comply with EN 60228 class 2.

CONDUCTOR SCREEN

Extruded layer of semi-conducting crosslinkable compound applied under simultaneous triple extrusion process over conductor.

INSULATION

Extruded layer of XLPE applied over conductor screen under triple extrusion process.

INSULATION SCREEN

Extruded layer of semi-conducting crosslinkable compound applied by triple extrusion process over the insulation.

METALLIC SCREEN

Copper wires with copper binder tape.

OVERSHEATH

Extruded layer of PVC applied over the core.

DIMENSIONAL DATA

Nominal cross section	Conductor diameter	Insulation		Metallic screen Cu		Diameter over complete cable	Weight of complete cable	Maksimum cable pulling force	Minimum bending radius
		Thickness	Diameter over insulation	Cross section	Diameter over metallic screen				
mm ²	mm	mm		mm ²	mm	mm	kg / km	kN	m
1x35RM	7.0 ^{+0.15}	5.5	19.2	16	23.1	27.9	1000	1.75	0.42
1x50RM	8.25 ^{+0.20}	5.5	20.5	16	24.4	29.1	1140	2.5	0.44
1x70RM	9.6 ^{+0.20}	5.5	22.0	16	25.9	30.7	1380	3.5	0.46
1x95RM	11.5 ^{+0.20}	5.5	23.7	16	27.6	32.4	1660	4.75	0.49
1x120RM	12.9 ^{+0.25}	5.5	25.1	16	29.0	33.8	1920	6	0.51
1x150RM	14.5 ^{+0.30}	5.5	26.7	16	30.6	35.4	2210	7.5	0.53
1x185RM	16.0 ^{+0.30}	5.5	28.2	16	31.6	36.4	2570	9.25	0.55
1x240RM	18.5 ^{+0.30}	5.5	30.7	16	34.1	38.9	3140	12	0.58
1x150RM	14.5 ^{+0.30}	5.5	26.7	25	30.6	35.4	2290	7.5	0.53
1x185RM	16.0 ^{+0.30}	5.5	28.2	25	32.1	36.9	2650	9.25	0.55
1x240RM	18.5 ^{+0.30}	5.5	30.7	25	34.6	39.4	3220	12	0.59
1x300RM	20.5 ^{+0.30}	5.5	32.7	25	36.6	41.4	3850	15	0.62
1x400RM	23.5 ^{+0.30}	5.5	35.7	35	39.6	44.4	4800	20	0.67
1x500RM	26.5 ^{+0.40}	5.5	39.2	35	43.3	48.1	5920	25	0.72
1x630RM	30.3 ^{+0.40}	5.5	43.2	35	47.3	52.5	7320	31.5	0.79
1x800RM	34.6 ^{+0.50}	5.5	47.9	35	52.0	57.4	9030	40	0.86
1x1000RM	38.2 ^{+0.40}	5.5	51.5	35	55.6	61.4	10990	50	0.92

CURRENT CARRYING CAPACITY ^{/1}

Cross section		mm ²	35	50	70	95	120	150	185	240	300	400	500	630	800	1000
GROUND	FLAT	A	213	250	303	360	407	445	498	568	633	685	760	820	870	925
	TREFOIL		189	222	271	323	367	409	461	532	599	671	754	830	910	995
AIR	FLAT		235	282	351	426	491	549	625	731	830	923	1045	1170	1300	1410
	TREFOIL		200	239	297	361	416	470	538	634	724	829	953	1090	1230	1350

^{/1} – STANDARD SERVICE CONDITIONS:

BE (BOTH-ENDS BONDING)

GROUND Temperature at laying depth = 20 °C Laying depth = 0.7 m Thermal resistivity of soil = 1.0 K · m / W Load factor = 0.7

AIR Temperature = 30 °C Load factor = 1.0

TREFOIL formation – spacing between centers of adjacent phases = diameter of cable

FLAT formation in ground – spacing between centers of adjacent phases = diameter of cable + 70 mm

FLAT formation in air – spacing between centers of adjacent phases = 2 * diameter of cable

ELECTRICAL DATA

Conductor and metallic screen cross section	Conductor resistance		Metallic screen resistance		Short circuit currents	Electric field stress on: conductor / screen / insulation	Zero resistance R_0	Zero reactance X_0	Capacity C	Capacitive reactance X_C	Charging current I_C	Inductance L $\Omega_0 / 2$ $\Omega_0 / 3$ $\Omega_0 / 4$	Inductive reactance X_L $\Omega_0 / 2$ $\Omega_0 / 3$ $\Omega_0 / 4$	Impedance $\Omega_0 / 2$ $\Omega_0 / 3$ $\Omega_0 / 4$
	DC 20 °C	AC 90 °C	DC 20 °C	AC 80 °C	Conductor / metallic screen									
mm ²	Ω/km				kA/sec.	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	5.0 / 3.7	3.43 / 1.43	2.05	0.092	0.15	21.8	0.55	0.46 0.76 0.65	0.146 0.240 0.204	0.684 0.710 0.699
1x50RMC/16	0.387	0.494	1.12	1.38	7.2 / 3.7	3.27 / 1.48	1.88	0.086	0.16	19.8	0.61	0.44 0.73 0.63	0.138 0.230 0.197	0.513 0.545 0.531
1x70RMC/16	0.268	0.342	1.12	1.38	10.0 / 3.7	3.14 / 1.53	1.72	0.077	0.18	18.0	0.67	0.42 0.70 0.60	0.132 0.221 0.190	0.367 0.407 0.391
1x95RMC/16	0.193	0.247	1.12	1.38	13.6 / 3.7	3.00 / 1.58	1.63	0.070	0.20	15.9	0.75	0.40 0.67 0.58	0.124 0.211 0.182	0.276 0.325 0.307
1x120RMC/16	0.153	0.196	1.12	1.38	17.2 / 3.7	2.92 / 1.62	1.58	0.066	0.22	14.7	0.82	0.38 0.65 0.57	0.120 0.205 0.178	0.229 0.283 0.264
1x150RMC/16	0.124	0.159	1.12	1.38	21.5 / 3.7	2.85 / 1.65	1.54	0.062	0.23	13.5	0.89	0.37 0.63 0.55	0.115 0.198 0.173	0.196 0.254 0.235
1x185RMC/16	0.0991	0.128	1.12	1.38	26.5 / 3.7	2.79 / 1.68	1.51	0.058	0.25	12.6	0.95	0.35 0.61 0.54	0.111 0.193 0.169	0.169 0.231 0.212
1x240RMC/16	0.0754	0.0978	1.12	1.38	34.3 / 3.7	2.71 / 1.72	1.48	0.054	0.28	11.3	1.06	0.34 0.59 0.52	0.106 0.185 0.164	0.144 0.209 0.191
1x150RMC/25	0.124	0.159	0.72	0.88	21.5 / 5.3	2.85 / 1.65	1.04	0.062	0.23	13.5	0.89	0.37 0.63 0.55	0.115 0.198 0.173	0.196 0.254 0.235
1x185RMC/25	0.0991	0.128	0.72	0.88	26.5 / 5.3	2.79 / 1.68	1.01	0.059	0.25	12.6	0.95	0.36 0.61 0.54	0.112 0.193 0.170	0.170 0.231 0.212
1x240RMC/25	0.0754	0.0978	0.72	0.88	34.3 / 5.3	2.71 / 1.72	0.98	0.054	0.28	11.3	1.06	0.34 0.59 0.52	0.107 0.185 0.165	0.145 0.210 0.192
1x300RMC/25	0.0601	0.0788	0.72	0.88	42.9 / 5.3	2.66 / 1.75	0.96	0.051	0.30	10.4	1.15	0.33 0.57 0.51	0.103 0.180 0.161	0.130 0.197 0.180
1x400RMC/35	0.0470	0.0628	0.51	0.63	57.2 / 7.1	2.60 / 1.79	0.69	0.047	0.34	9.4	1.28	0.32 0.55 0.50	0.099 0.173 0.157	0.117 0.184 0.169
1x500RMC/35	0.0366	0.0504	0.51	0.63	71.5 / 7.1	2.53 / 1.80	0.68	0.046	0.38	8.5	1.42	0.31 0.53 0.49	0.097 0.168 0.155	0.109 0.175 0.163
1x630RMC/35	0.0283	0.0409	0.51	0.63	90.1 / 7.1	2.48 / 1.83	0.67	0.043	0.42	7.5	1.59	0.30 0.51 0.48	0.094 0.162 0.152	0.102 0.167 0.157
1x800RMC/35	0.0221	0.0341	0.51	0.63	114.4 / 7.1	2.44 / 1.86	0.67	0.041	0.48	6.7	1.79	0.29 0.50 0.47	0.091 0.156 0.149	0.097 0.159 0.153
1x1000RMC/35	0.0176	0.0294	0.51	0.63	143.0 / 7.1	2.41 / 1.88	0.66	0.039	0.52	6.2	1.95	0.28 0.48 0.47	0.089 0.151 0.147	0.094 0.154 0.150