
**Connecting
Globally**

Clean Energy

Wind Energy Cables

tfkable.com



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Leading manufacturer of cables and wires

TFK.Group is one of the global market leaders of wires and cable systems, with numerous trading companies and production plants located in many countries, as well as service units and research and development centers.

In August 2017, the British company JDR Cable Systems – a leading manufacturer of submarine cables and provider of offshore and onshore services for the global wind energy industry joined TFK.Group.

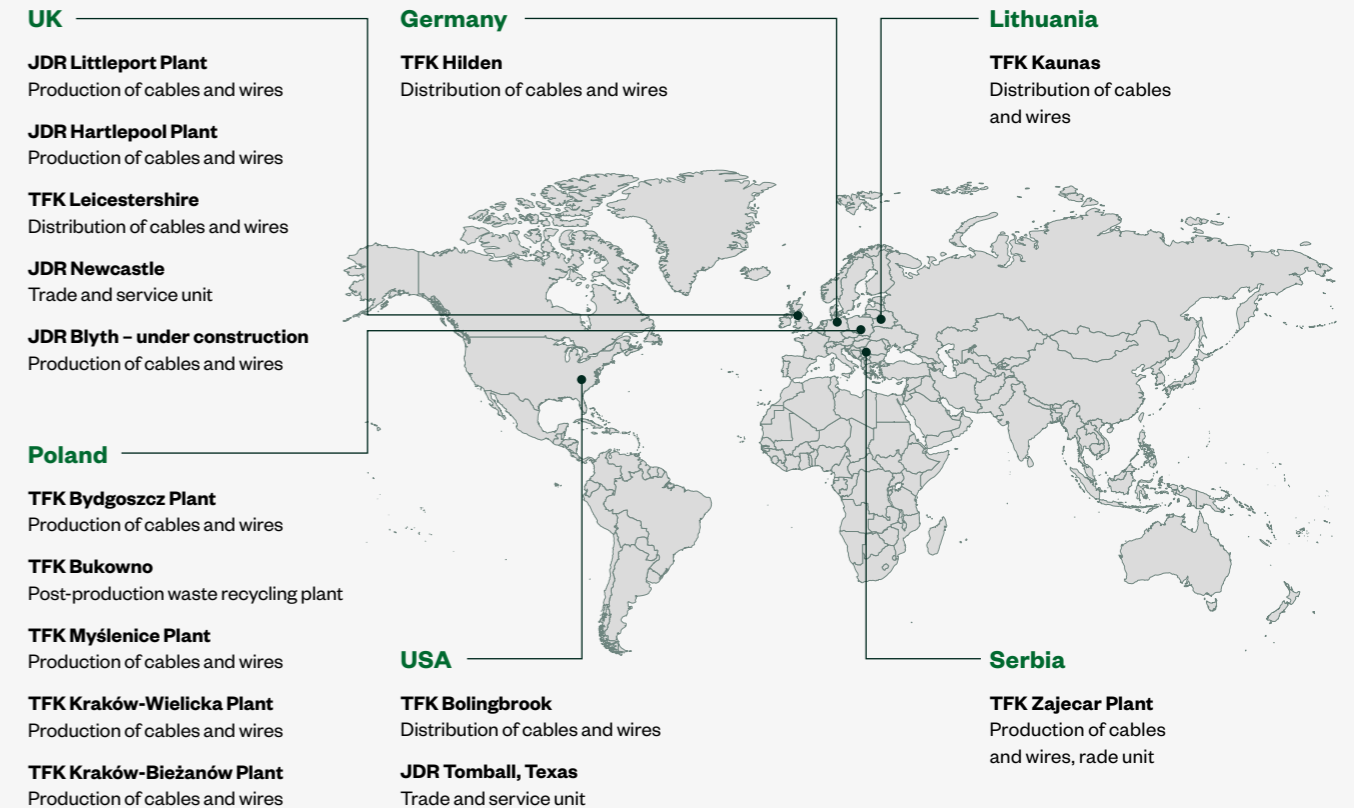
TFK.Group belongs to a small group of a few most specialized and technologically advanced suppliers of high and extra high voltage cable systems. The maintenance and control services provided by TFK.Group is dedicated to oil and gas and renewable energy extraction systems subsea and on land. In addition, the extensive infrastructure of research and development centers allows for qualification tests, routine tests, technological tests and fire tests. Our experience is confirmed not only by continuous supplies to electricity distribution network operators or as part of ongoing investment projects for conventional and wind farms, but also by positive results of production process audits carried out by the most renowned certification bodies.

JDR Cable Systems is a global leader in subsea production umbilicals, subsea power cables and Intervention Workover Control Systems for the offshore oil and gas industry. JDR operates in harsh, dynamic, subsea environments and is a pioneer in the development of cutting-edge inter-array power cables for offshore wind, wave

and tidal energy projects. Additionally, JDR supports customers in the renewable energy sector throughout project planning, mobilisation, installation, commissioning and maintenance, providing total lifecycle support.

TFK.Group produces, among others, cables for the energy sector in the following product groups:

low voltage power cables up to 1 kV, medium voltage power cables from 6/10 kV to 18/30 kV, high voltage power cables from 36 to 150 kV, extra high voltage power cables from 220 to 400 kV, cables; telecommunication copper and fiber optic cables; rubber insulated cables, including mining and crane cables; control cables for data transmission and security, as well as Inter-array cables (33 kV & 66 kV), Subsea Power Umbilicals, Steel Tube Umbilicals, rental and oil & gas services, i.e. submarine cables (including cables connecting wind towers and export cables), which are used in the construction and operation of offshore and onshore wind farms.



Experience and competence of the TELE-FONIKA Kable Group

GLOBAL RELATIONS

Kraków – Wielicka Plant, Poland

One of the biggest cable factories in Poland. It manufactures power cables and wires, including rubber insulated cables and wires applicable in the mining industry and in the offshore and onshore wind farms. As one of the few European manufacturers, the plant is a supplier for mines located in the US, Canada, South America, and Africa. Its offer also includes specialized cables for applications in the railway and shipbuilding industry.

Bydgoszcz Plant, Poland

The oldest cable and wire factory in Poland and the biggest production center of medium, high and extrahigh voltage cables in Europe. Together with the plants in Littleport and Hartlepool, it belongs to the elite group of direct suppliers of complete solutions for the offshore electricity industry.

Myślenice Plant, Poland

Production of fiber optic and telecommunication cables, computer cables and car cables.

Zajecar Plant, Serbia

Production of Al and Cu wires, low and middle voltage cables, signaling and control cables, telecommunication cables, as well as halogen-free cables and wires and car cables.

Waste Recycling Facility in Bukowno, Poland

It has the recycling capacity of approx. 10 thousand tons of cable waste per year. This allows for the recovery of fractions from individual materials with purity of over 99.5%

Littleport Plant, UK

Design and engineering services, IWOC, Subsea Production Umbilicals and Power Cables up to 100 t production. The plant has specialized research facilities.

Hartlepool Plant, Victoria Dock, UK

The biggest JDR production plant with specialized designed teams. Strategically located on the quay, next to the port on the North Sea. A plant with an area of 20,000 m², commissioned in 2009, supplying and producing Subsea Production Umbilicals, Subsea Power Cables and Inter-array Cables. Modern infrastructure of the machine park provides flexibility of the large-size cables production process.

Tomball Service Center, US

Carrying out assembly, integration and testing of umbilicals, reelers and associated packages. The facility provides technical support in projects executed mainly in the Gulf of Mexico, and carries out offshore commissioning, testing and repair works at sea.

Clean Energy

Wind energy is the most advanced and desirable technology among all renewable energy sources. Selecting the right cables that meet strict standards and quality required for trouble-free operation of wind farms is a major challenge.

TELE-FONIA Kable has over 25 years of experience in production of special cables specifically designed for wind energy sector. The current position of our company is a result of continuous research, development and modernization of the machinery, combined with the use of highest quality materials. TELE-FONIKA Kable only works with the best manufacturers of cable accessories, which ensures the highest quality of products supplied by us. Our experience in production and supply of renewable energy cables allows us to create a comprehensive range of products that can satisfy demands of the most demanding clients.

TELE-FONIKA Kable offers cables and wires of high and medium voltage, control cables, fiber optic cables (for data and information transfer), which are used in the construction and operation of offshore and onshore wind farms. Our products used for construction and operation of wind farms have proven long-term durability and guarantee safe and cost-effective operation. Cables were designed to withstand long and harsh working conditions and have proven track record of fatigue, torsion or abrasion capabilities. We work closely with our customers in providing practical efficient solutions.





Medium Voltage Cables

1

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MEDIUM VOLTAGE XLPE POWER CABLE 8.7/15 (17.5) kV

YHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XSY acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XSY acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _o	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x50RMC	8.25 ^{+0.10}	4.5	18.5	16	22.4	27.1	780	1.5	0.41
1x70RMC	9.5 ^{+0.20}	4.5	19.7	25	23.6	28.4	950	2.1	0.43
1x95RMC	11.3 ^{+0.20}	4.5	21.5	35	25.4	30.2	1160	2.85	0.45
1x120RMC	12.5 ^{+0.20}	4.5	22.7	50	26.6	31.4	1400	3.6	0.47
1x150RMC	14.2 ^{+0.20}	4.5	24.4	50	28.3	33.1	1520	4.5	0.50
1x185RMC	15.8 ^{+0.20}	4.5	26.0	50	29.9	34.7	1660	5.55	0.52
1x240RMC	17.9 ^{+0.10}	4.5	28.1	50	32.0	36.8	1870	7.2	0.55
1x300RMC	20.0 ^{+0.30}	4.5	30.2	50	34.1	38.9	2080	9	0.58
1x400RMC	22.9 ^{+0.30}	4.5	33.1	50	37.0	41.8	2390	12	0.63
1x500RMC	25.7 ^{+0.40}	4.5	36.4	50	40.5	45.3	2810	15	0.68
1x630RMC	29.3 ^{+0.50}	4.5	40.3	50	44.4	49.3	3310	18.9	0.74
1x800RMC	33.0 ^{+0.50}	4.5	44.4	50	48.5	53.6	3920	24	0.80
1x1000RMC	38.0 ^{+0.50}	4.5	49.4	50	53.5	59.0	4680	30	0.89

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_o.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_o + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_o.

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/insulation	Zero resistance R _o	Zero reactance X _o	Capacitance C	Capacitive reactance X _c	Charging current I _o	Inductance L	Inductive reactance X _L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	2.72/1.37	2.20	0.075	0.19	17.2	0.51	0.43	0.134	0.833
											0.73	0.229	0.853
											0.61	0.192	0.844
1x70RMC/25	0.443	0.568	0.72	0.89	2.63/1.40	1.45	0.070	0.20	15.7	0.56	0.41	0.128	0.582
											0.59	0.186	0.598
											0.39	0.121	0.428
1x95RMC/35	0.320	0.411	0.51	0.63	2.53/1.45	1.04	0.064	0.23	13.9	0.63	0.67	0.211	0.462
											0.57	0.179	0.448
											0.37	0.117	0.345
1x120RMC/50	0.253	0.325	0.36	0.44	2.48/1.47	0.77	0.061	0.25	12.9	0.67	0.65	0.205	0.384
											0.56	0.175	0.369
											0.36	0.112	0.288
1x150RMC/50	0.206	0.265	0.36	0.44	2.42/1.51	0.71	0.061	0.27	11.8	0.74	0.63	0.198	0.331
											0.54	0.171	0.315
											0.35	0.109	0.237
1x185RMC/50	0.164	0.211	0.36	0.44	2.37/1.53	0.65	0.054	0.29	10.9	0.80	0.61	0.193	0.286
											0.53	0.167	0.269
											0.33	0.105	0.192
1x240RMC/50	0.125	0.161	0.36	0.44	2.32/1.56	0.60	0.050	0.32	9.9	0.88	0.59	0.186	0.246
											0.52	0.163	0.229
											0.32	0.101	0.164
1x300RMC/50	0.100	0.130	0.36	0.44	2.28/1.59	0.57	0.047	0.35	9.1	0.96	0.57	0.180	0.222
											0.51	0.159	0.205
											0.31	0.097	0.141
1x400RMC/50	0.0778	0.102	0.36	0.44	2.24/1.61	0.54	0.044	0.39	8.1	1.07	0.55	0.173	0.201
											0.49	0.155	0.185
											0.30	0.095	0.124
1x500RMC/50	0.0605	0.0801	0.36	0.44	2.18/1.62	0.52	0.043	0.43	7.3	1.18	0.54	0.168	0.186
											0.49	0.153	0.173
											0.29	0.092	0.112
1x630RMC/50	0.0469	0.0634	0.36	0.44	2.14/1.65	0.51	0.040	0.49	6.5	1.33	0.52	0.162	0.174
											0.48	0.150	0.163
											0.29	0.090	0.103
1x800RMC/50	0.0367	0.0513	0.36	0.44	2.11/1.67	0.49	0.039	0.54	5.9	1.49	0.50	0.157	0.165
											0.47	0.148	0.156
											0.28	0.087	0.097
1x1000RMC/50	0.0291	0.0427	0.36	0.44	2.08/1.69	0.49	0.036	0.61	5.2	1.67	0.48	0.151	0.157
											0.46	0.145	0.151

MEDIUM VOLTAGE XLPE POWER CABLES 8.7/15 (17.5) kV

YHKXS acc. to HD 620 S3: 2023 Part 10 Section R

2XSY acc. to IEC 60502-2:2014 and BS 7870-4.10:2011

N2XSY acc. to DIN VDE 0276-620:2018

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
mm ²	kA/s	A									
1x50RMC/16	4.7	3.7	224	225	212	212	230	231	196	196	
1x70RMC/25	6.6	5.3	272	276	258	259	283	286	242	242	
1x95RMC/35	9.0	7.1	324	333	310	312	343	350	294	295	
1x120RMC/50	11.3	9.8	364	379	353	356	388	403	337	340	
1x150RMC/50	14.2	9.8	407	428	397	401	440	461	384	387	
1x185RMC/50	17.5	9.8	456	487	450	455	501	530	440	445	
1x240RMC/50	22.7	9.8	520	567	522	530	583	627	518	526	
1x300RMC/50	28.4	9.8	578	643	589	600	660	722	593	604	
1x400RMC/50	37.8	9.8	650	742	676	692	758	849	692	708	
1x500RMC/50	47.3	9.8	725	851	770	793	862	991	802	825	
1x630RMC/50	59.5	9.8	808	979	876	908	981	1161	931	963	
1x800RMC/50	75.6	9.8	889	1116	983	1028	1101	1347	1065	1110	
1x1000RMC/50	94.5	9.8	971	1262	1093	1152	1225	1558	1210	1271	

Description:

COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	4.5	17.2	16	21.1	25.9	920	1.75	0.39
1x50RMC	8.25 ^{+0.20}	4.5	18.5	16	22.4	27.1	1060	2.5	0.41
1x70RMC	9.6 ^{+0.20}	4.5	19.8	25	23.7	28.5	1370	3.5	0.43
1x95RMC	11.5 ^{+0.20}	4.5	21.7	35	25.6	30.4	1740	4.75	0.46
1x120RMC	12.9 ^{+0.25}	4.5	23.1	50	27.0	31.8	2140	6	0.48
1x150RMC	14.5 ^{+0.30}	4.5	24.7	50	28.6	33.4	2430	7.5	0.50
1x185RMC	16.0 ^{+0.30}	4.5	26.2	50	30.1	34.9	2790	9.25	0.52
1x240RMC	18.5 ^{+0.30}	4.5	28.7	50	32.6	37.4	3350	12	0.56
1x300RMC	20.5 ^{+0.30}	4.5	30.7	50	34.6	39.4	3940	15	0.59
1x400RMC	23.5 ^{+0.30}	4.5	33.7	50	37.6	42.4	4810	20	0.64
1x500RMC	26.5 ^{+0.40}	4.5	37.2	50	41.3	46.1	5920	25	0.69
1x630RMC	30.3 ^{+0.40}	4.5	41.3	50	45.4	50.3	7290	31.5	0.75
1x800RMC	34.6 ^{+0.50}	4.5	46.0	50	50.1	55.4	9010	40	0.83
1x1000RMC	38.2 ^{+0.40}	4.5	49.6	50	53.7	59.2	10930	50	0.89

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x35RMC/16	0.524	0.668	1.12	1.38	2.84/1.32	2.05	0.082	0.17	19.1	0.46	0.45	0.141	0.683
1x50RMC/16	0.387	0.494	1.12	1.38	2.72/1.37	1.88	0.075	0.19	17.2	0.51	0.76	0.238	0.710
1x70RMC/25	0.268	0.342	0.72	0.89	2.63/1.41	1.23	0.070	0.20	15.6	0.56	0.64	0.200	0.697
1x95RMC/35	0.193	0.247	0.51	0.63	2.52/1.45	0.88	0.063	0.23	13.7	0.63	0.43	0.134	0.512
1x120RMC/50	0.153	0.196	0.36	0.44	2.46/1.48	0.64	0.060	0.25	12.7	0.69	0.73	0.229	0.544
1x150RMC/50	0.124	0.159	0.36	0.44	2.41/1.51	0.60	0.056	0.27	11.6	0.75	0.61	0.192	0.530
1x185RMC/50	0.0991	0.128	0.36	0.44	2.37/1.54	0.57	0.053	0.30	10.8	0.81	0.41	0.128	0.365
1x240RMC/50	0.0754	0.0979	0.36	0.44	2.31/1.57	0.54	0.049	0.33	9.6	0.90	0.70	0.220	0.407
1x300RMC/50	0.0601	0.0789	0.36	0.44	2.27/1.59	0.52	0.047	0.36	8.9	0.98	0.59	0.186	0.389
1x400RMC/50	0.0470	0.0630	0.36	0.44	2.23/1.62	0.51	0.043	0.40	7.9	1.10	0.38	0.120	0.274
1x500RMC/50	0.0366	0.0506	0.36	0.44	2.17/1.63	0.49	0.042	0.44	7.2	1.21	0.67	0.210	0.324
1x630RMC/50	0.0283	0.0412	0.36	0.44	2.13/1.65	0.48	0.040	0.50	6.4	1.37	0.57	0.178	0.304
											0.37	0.116	0.228
											0.65	0.204	0.282
											0.55	0.174	0.262
											0.36	0.112	0.194
											0.63	0.197	0.253
											0.54	0.170	0.233
											0.34	0.108	0.167
											0.61	0.192	0.230
											0.53	0.166	0.210
											0.33	0.103	0.142
											0.59	0.184	0.209
											0.51	0.162	0.189
											0.32	0.100	0.128
											0.57	0.179	0.196
											0.50	0.158	0.177
											0.31	0.096	0.115
											0.55	0.172	0.183
											0.49	0.154	0.167
											0.30	0.094	0.107
											0.53	0.167	0.174
											0.48	0.152	0.160
											0.29	0.091	0.100
											0.51	0.160	0.166
											0.47	0.149	0.155

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x800RMC/50	0.0221	0.0344	0.36	0.44	2.1/1.67	0.48	0.038	0.57	5.6	1.55	0.28	0.089	0.095
1x1000RMC/50	0.0221	0.0344	0.36	0.44	2.1/1.67	0.48	0.038	0.57	5.6	1.55	0.47	0.147	0.151
											0.28	0.089	0.095
											0.47	0.147	0.151

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	
mm ²	kA/s	A								
1x35RMC/16	5.0	3.7	243	245	230	230	246	248	210	211
1x50RMC/16	7.2	3.7	288	291	273	273	296	298	252	253
1x70RMC/25	10.0	5.3	348	356	333	334	363	370	311	313
1x95RMC/35	13.6	7.1	413	430	400	403	438	454	380	383
1x120RMC/50	17.2	9.8	456	491	454	460	492	523	435	440
1x150RMC/50	21.5	9.8	505	554	510	518	555	598	495	502
1x185RMC/50	26.5	9.8	560	628	575	586	625	685	564	574
1x240RMC/50	34.3	9.8	634	733	667	684	725	814	665	681
1x300RMC/50	42.9	9.8	697	830	750	773	812	935	757	779
1x400RMC/50	57.2	9.8	773	953	849	882	920	1093	874	906
1x500RMC/50	71.5	9.8	850	1088	957	1002	1034	1270	1003	1047

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally Sealed 8.7/15 (17.5) kV

XUHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XS(F)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XS(F)2Y acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _o	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x50RMC	8.25 ^{+0.10}	4.5	18.5	16	22.6	28.1	720	1.5	0.42
1x70RMC	9.5 ^{+0.20}	4.5	19.7	25	23.8	29.4	890	2.1	0.44
1x95RMC	11.3 ^{+0.20}	4.5	21.5	35	25.6	31.2	1100	2.85	0.47
1x120RMC	12.5 ^{+0.20}	4.5	22.7	50	26.8	32.4	1330	3.6	0.49
1x150RMC	14.2 ^{+0.20}	4.5	24.4	50	28.5	34.1	1440	4.5	0.51
1x185RMC	15.8 ^{+0.20}	4.5	26.0	50	30.1	35.7	1580	5.55	0.54
1x240RMC	17.9 ^{+0.10}	4.5	28.1	50	32.2	37.8	1780	7.2	0.57
1x300RMC	20.0 ^{+0.30}	4.5	30.2	50	34.3	39.9	1990	9	0.60
1x400RMC	22.9 ^{+0.30}	4.5	33.1	50	37.2	42.8	2300	12	0.64
1x500RMC	25.7 ^{+0.40}	4.5	36.4	50	40.7	46.3	2710	15	0.69
1x630RMC	29.3 ^{+0.50}	4.5	40.3	50	44.6	50.3	3190	18.9	0.75
1x800RMC	33.0 ^{+0.50}	4.5	44.4	50	48.7	54.6	3780	24	0.82
1x1000RMC	38.0 ^{+0.50}	4.5	49.4	50	53.7	60.0	4510	30	0.90

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_o.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_o + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_o.

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/insulation	Zero resistance R _o	Zero reactance X _o	Capacitance C	Capacitive reactance X _c	Charging current I _o	Inductance L	Inductive reactance X _L	Impedance Z
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	2.72/1.37	2.20	0.076	0.19	17.2	0.51	0.43	0.136	0.833
											0.73	0.229	0.853
											0.62	0.194	0.845
1x70RMC/25	0.443	0.568	0.72	0.89	2.63/1.40	1.45	0.070	0.20	15.7	0.56	0.41	0.130	0.583
											0.60	0.188	0.599
											0.39	0.123	0.429
1x95RMC/35	0.320	0.411	0.51	0.63	2.53/1.45	1.04	0.064	0.23	13.9	0.63	0.67	0.212	0.462
											0.58	0.181	0.449
											0.38	0.119	0.346
1x120RMC/50	0.253	0.325	0.36	0.44	2.48/1.47	0.77	0.061	0.25	12.9	0.67	0.66	0.206	0.385
											0.56	0.177	0.370
											0.36	0.114	0.288
1x150RMC/50	0.206	0.265	0.36	0.44	2.42/1.51	0.71	0.057	0.27	11.8	0.74	0.63	0.199	0.331
											0.55	0.172	0.316
											0.35	0.110	0.238
1x185RMC/50	0.164	0.211	0.36	0.44	2.37/1.53	0.65	0.054	0.29	10.9	0.80	0.61	0.193	0.286
											0.54	0.169	0.270
											0.34	0.106	0.193
1x240RMC/50	0.125	0.161	0.36	0.44	2.32/1.56	0.60	0.050	0.32	9.9	0.88	0.59	0.187	0.247
											0.52	0.164	0.230
											0.33	0.103	0.165
1x300RMC/50	0.100	0.130	0.36	0.44	2.28/1.59	0.57	0.048	0.35	9.1	0.96	0.58	0.181	0.222
											0.51	0.161	0.206
											0.31	0.099	0.142
1x400RMC/50	0.0778	0.102	0.36	0.44	2.24/1.61	0.54	0.044	0.39	8.1	1.07	0.55	0.174	0.201
											0.50	0.157	0.187
											0.31	0.096	0.125
1x500RMC/50	0.0605	0.0800	0.36	0.44	2.18/1.62	0.52	0.043	0.43	7.3	1.18	0.54	0.169	0.187
											0.49	0.154	0.174
											0.30	0.093	0.113
1x630RMC/50	0.0469	0.0634	0.36	0.44	2.14/1.65	0.51	0.041	0.49	6.5	1.33	0.52	0.163	0.174
											0.48	0.151	0.164
											0.29	0.091	0.104
1x800RMC/50	0.0367	0.0512	0.36	0.44	2.11/1.67	0.49	0.039	0.54	5.9	1.49	0.50	0.157	0.165
											0.47	0.149	0.158
											0.28	0.088	0.098
1x1000RMC/50	0.0291	0.0426	0.36	0.44	2.08/1.69	0.48	0.036	0.61	5.2	1.67	0.48	0.151	0.157
											0.46	0.146	0.152

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally Sealed 8.7/15 (17.5) kV

XUHKXS acc. to HD 620 S3: 2023 Part 10 Section R
 2XS(F)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 N2XS(F)2Y acc. to DIN VDE 0276-620:2018

Description: COPPER CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground		For installation in air	
Depth of lay:	0,7 m	Ambient temperature:	25°C
Ground temperature:	20°C	Protection from direct solar radiation	
Soil thermal resistivity:	1,0 K · m/W		



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_0	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
Conductor/ Metallic screen	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x630RMC/50	0.0469	0.0634	0.36	0.44	2.14/1.65	0.51	0.041	0.49	6.5	1.33	0.30	0.093	0.113
											0.52	0.163	0.174
											0.48	0.151	0.164
											0.29	0.091	0.104
1x800RMC/50	0.0367	0.0512	0.36	0.44	2.11/1.67	0.49	0.039	0.54	5.9	1.49	0.50	0.157	0.165
											0.47	0.149	0.158
											0.28	0.088	0.098
1x1000RMC/50	0.0291	0.0426	0.36	0.44	2.08/1.69	0.48	0.036	0.61	5.2	1.67	0.48	0.151	0.157
											0.46	0.146	0.152

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
mm ²	kA/s	A	A	A	A	A	A	A	A	A
1x50RMC/16	4.7	3.7	224	225	212	212	230	231	196	196
1x70RMC/25	6.6	5.3	272	276	258	259	283	286	242	242
1x95RMC/35	9.0	7.1	324	333	310	312	343	350	294	295
1x120RMC/50	11.3	9.8	364	379	353	356	388	403	337	340
1x150RMC/50	14.2	9.8	407	428	397	401	440	461	384	387
1x185RMC/50	17.5	9.8	456	487	450	455	501	530	440	445
1x240RMC/50	22.7	9.8	520	567	522	530	583	627	518	526
1x300RMC/50	28.4	9.8	578	643	589	600	660	722	593	604
1x400RMC/50	37.8	9.8	650	742	676	692	758	849	692	708
1x500RMC/50	47.3	9.8	725	851	770	793	862	991	802	825
1x630RMC/50	59.5	9.8	808	979	876	908	981	1161	931	963
1x800RMC/50	75.6	9.8	889	1116	983	1028	1101	1347	1065	1110
1x1000RMC/50	94.5	9.8	971	1262	1093	1152	1225	1558	1210	1271

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D_c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm	mm	mm	mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	4.5	17.2	16	21.3	26.9	860	1.75	0.40
1x50RMC	8.25 ^{+0.20}	4.5	18.5	16	22.6	28.1	1000	2.5	0.42
1x70RMC	9.6 ^{+0.20}	4.5	19.8	25	23.9	29.5	1300	3.5	0.44
1x95RMC	11.5 ^{+0.20}	4.5	21.7	35	25.8	31.4	1670	4.75	0.47
1x120RMC	12.9 ^{+0.25}	4.5	23.1	50	27.2	32.8	2070	6	0.49
1x150RMC	14.5 ^{+0.30}	4.5	24.7	50	28.8	34.4	2350	7.5	0.52
1x185RMC	16.0 ^{+0.30}	4.5	26.2	50	30.3	35.9	2710	9.25	0.54
1x240RMC	18.5 ^{+0.30}	4.5	28.7	50	32.8	38.4	3260	12	0.58
1x300RMC	20.5 ^{+0.30}	4.5	30.7	50	34.8	40.4	3850	15	0.61
1x400RMC	23.5 ^{+0.30}	4.5	33.7	50	37.8	43.4	4720	20	0.65
1x500RMC	26.5 ^{+0.40}	4.5	37.2	50	41.5	47.1	5810	25	0.71
1x630RMC	30.3 ^{+0.40}	4.5	41.3	50	45.6	51.3	7160	31.5	0.77
1x800RMC	34.6 ^{+0.50}	4.5	46.0	50	50.3	56.4	8860	40	0.85
1x1000RMC	38.2 ^{+0.40}	4.5	49.6	50	53.9	60.2	10760	50	0.90

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x35RMC/16	0.524	0.668	1.12	1.38	2.84/1.32	2.05	0.082	0.17	19.1	0.46	0.46	0.144	0.684
1x50RMC/16	0.387	0.494	1.12	1.38	2.72/1.37	1.88	0.076	0.19	17.2	0.51	0.73	0.229	0.544
1x70RMC/25	0.268	0.342	0.72	0.89	2.63/1.41	1.23	0.070	0.20	15.6	0.56	0.70	0.221	0.407
1x95RMC/35	0.193	0.247	0.51	0.63	2.52/1.45	0.88	0.064	0.23	13.7	0.63	0.67	0.211	0.324
1x120RMC/50	0.153	0.196	0.36	0.44	2.46/1.48	0.64	0.060	0.25	12.7	0.69	0.65	0.204	0.283
1x150RMC/50	0.124	0.159	0.36	0.44	2.41/1.51	0.60	0.056	0.27	11.6	0.75	0.63	0.198	0.254
1x185RMC/50	0.0991	0.128	0.36	0.44	2.37/1.54	0.57	0.054	0.30	10.8	0.81	0.61	0.193	0.231
1x240RMC/50	0.0754	0.0978	0.36	0.44	2.31/1.57	0.54	0.050	0.33	9.6	0.90	0.59	0.185	0.209
1x300RMC/50	0.0601	0.0789	0.36	0.44	2.27/1.59	0.52	0.047	0.36	8.9	0.98	0.57	0.180	0.196
1x400RMC/50	0.0470	0.0629	0.36	0.44	2.23/1.62	0.51	0.044	0.40	7.9	1.10	0.55	0.173	0.184
1x500RMC/50	0.0366	0.0505	0.36	0.44	2.17/1.63	0.49	0.042	0.44	7.2	1.21	0.53	0.167	0.175
1x630RMC/50	0.0283	0.0410	0.36	0.44	2.13/1.65	0.48	0.040	0.50	6.4	1.37	0.51	0.161	0.166

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x800RMC/50	0.0221	0.0343	0.36	0.44	2.1/1.67	0.48	0.038	0.57	5.6	1.55	0.49	0.155	0.159
1x1000RMC/50	0.0176	0.0296	0.36	0.44	2.08/1.69	0.47	0.036	0.62	5.2	1.68	0.48	0.151	0.154

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	
mm ²	kA/s	A								
1x35RMC/16	5.0	3.7	246	248	232	233	251	252	213	213
1x50RMC/16	7.2	3.7	292	295	276	277	301	303	255	256
1x70RMC/25	10.0	5.3	353	361	337	338	370	376	316	317
1x95RMC/35	13.6	7.1	418	436	405	408	446	462	385	388
1x120RMC/50	17.2	9.8	462	497	459	465	502	533	441	446
1x150RMC/50	21.5	9.8	512	561	516	524	566	609	501	509
1x185RMC/50	26.5	9.8	568	636	581	593	638	698	571	582
1x240RMC/50	34.3	9.8	643	742	675	692	740	830	674	690
1x300RMC/50	42.9	9.8	707	840	758	782	829	953	767	790
1x400RMC/50	57.2	9.8	783	964	858	891	940	114	886	918
1x500RMC/50	71.5	9.8	861	1100	966	1011	1056	1294	1016	1061
1x630RMC/50	90.1	9.8	947	1256	1083	1144	1184	1508	1164	1224
1x800RMC/50	114.4	9.8	1027	1417	1196	1277	1309	1738	1314	1395
1x1000RMC/50	143.0	9.8	1095	1570	1295	1395	1417	1957	1446	1549

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally and Radially Sealed 8.7/15 (17.5) kV

XRUHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XS(FL)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XS(FL)2Y acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _o	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x50RMC	8.25 ^{+0.10}	4.5	18.5	16	22.5	28.6	780	1.5	0.60
1x70RMC	9.5 ^{+0.20}	4.5	19.7	25	23.8	29.8	950	2.1	0.63
1x95RMC	11.3 ^{+0.20}	4.5	21.5	35	25.6	31.6	1160	2.85	0.68
1x120RMC	12.5 ^{+0.20}	4.5	22.7	50	26.8	32.8	1400	3.6	0.71
1x150RMC	14.2 ^{+0.20}	4.5	24.4	50	28.5	34.5	1520	4.5	0.75
1x185RMC	15.8 ^{+0.20}	4.5	26.0	50	30.1	36.1	1660	5.55	0.79
1x240RMC	17.9 ^{+0.10}	4.5	28.1	50	32.2	38.2	1860	7.2	0.84
1x300RMC	20.0 ^{+0.30}	4.5	30.2	50	34.3	40.3	2080	9	0.89
1x400RMC	22.9 ^{+0.30}	4.5	33.1	50	37.2	43.2	2380	12	0.97
1x500RMC	25.7 ^{+0.40}	4.5	36.4	50	40.7	46.7	2800	15	1.05
1x630RMC	29.3 ^{+0.50}	4.5	40.3	50	44.5	50.8	3290	18.9	1.15
1x800RMC	33.0 ^{+0.50}	4.5	44.4	50	48.6	55.3	3910	24	1.25
1x1000RMC	38.0 ^{+0.50}	4.5	49.4	50	53.6	60.5	4630	30	1.38

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_o.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_o + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_o.

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/insulation	Zero resistance R _o	Zero reactance X _o	Capacitance C	Capacitive reactance X _c	Charging current I _o	Inductance L	Inductive reactance X _L	Impedance Z
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	2.72/1.37	1.63	0.078	0.19	17.2	0.51	0.44	0.137	0.833
											0.73	0.230	0.853
											0.62	0.195	0.845
1x70RMC/25	0.443	0.568	0.72	0.89	2.63/1.40	1.17	0.073	0.20	15.7	0.56	0.42	0.131	0.583
											0.60	0.189	0.599
											0.39	0.124	0.429
1x95RMC/35	0.320	0.411	0.51	0.63	2.53/1.45	0.88	0.066	0.23	13.9	0.63	0.67	0.212	0.462
											0.58	0.182	0.449
											0.38	0.120	0.346
1x120RMC/50	0.253	0.325	0.36	0.44	2.48/1.47	0.67	0.063	0.25	12.9	0.67	0.66	0.206	0.385
											0.57	0.178	0.370
											0.37	0.115	0.289
1x150RMC/50	0.206	0.265	0.36	0.44	2.42/1.51	0.61	0.059	0.27	11.8	0.74	0.63	0.199	0.331
											0.55	0.173	0.316
											0.35	0.111	0.238
1x185RMC/50	0.164	0.211	0.36	0.44	2.37/1.53	0.55	0.055	0.29	10.9	0.80	0.62	0.193	0.286
											0.54	0.169	0.270
											0.34	0.107	0.193
1x240RMC/50	0.125	0.161	0.36	0.44	2.32/1.56	0.50	0.052	0.32	9.9	0.88	0.59	0.187	0.247
											0.53	0.165	0.231
											0.33	0.103	0.166
1x300RMC/50	0.100	0.130	0.36	0.44	2.28/1.59	0.46	0.049	0.35	9.1	0.96	0.58	0.181	0.223
											0.51	0.161	0.207
											0.32	0.099	0.142
1x400RMC/50	0.0778	0.102	0.36	0.44	2.24/1.61	0.43	0.046	0.39	8.1	1.07	0.55	0.174	0.202
											0.50	0.157	0.187
											0.31	0.097	0.126
1x500RMC/50	0.0605	0.0800	0.36	0.44	2.18/1.62	0.40	0.044	0.43	7.3	1.18	0.54	0.169	0.187
											0.49	0.155	0.174
											0.30	0.094	0.113
1x630RMC/50	0.0469	0.0633	0.36	0.44	2.14/1.65	0.38	0.042	0.49	6.5	1.33	0.52	0.163	0.175
											0.48	0.152	0.165
											0.29	0.092	0.105
1x800RMC/50	0.0367	0.0511	0.36	0.44	2.11/1.67	0.36	0.040	0.54	5.9	1.49	0.50	0.158	0.166
											0.48	0.150	0.158
											0.28	0.088	0.098
1x1000RMC/50	0.0291	0.0425	0.36	0.44	2.08/1.69	0.34	0.037	0.61	5.2	1.67	0.48	0.151	0.157
											0.47	0.147	0.153

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally and Radially Sealed 8.7/15 (17.5) kV

XRUHKXS acc. to HD 620 S3: 2023 Part 10 Section R

2XS(FL)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011

N2XS(FL)2Y acc. to DIN VDE 0276-620:2018

Description: COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Current – carrying capacity

Nominal cross sectional area	Max short circuit capacity	GROUND	GROUND				AIR			
			FLAT		TREFOIL		FLAT		TREFOIL	
Conductor	Metallic screen	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB	
mm ²	kA/s	A								
1x50RMC/16	4.7	3.7	226	228	213	214	234	236	200	200
1x70RMC/25	6.6	5.3	274	279	261	262	288	292	247	247
1x95RMC/35	9.0	7.1	326	336	313	315	348	357	300	302
1x120RMC/50	11.3	9.8	365	383	355	359	394	411	343	347
1x150RMC/50	14.2	9.8	407	432	400	405	445	470	391	395
1x185RMC/50	17.5	9.8	455	491	453	460	506	541	447	454
1x240RMC/50	22.7	9.8	516	572	525	535	586	639	526	536
1x300RMC/50	28.4	9.8	571	649	592	606	660	736	601	615
1x400RMC/50	37.8	9.8	638	749	677	699	755	864	699	720
1x500RMC/50	47.3	9.8	705	859	768	798	852	1007	808	838
1x630RMC/50	59.5	9.8	778	987	871	913	960	1181	935	977
1x800RMC/50	75.6	9.8	846	1123	975	1034	1064	1368	1065	1125
1x1000RMC/50	94.5	9.8	915	1271	1078	1157	1175	1584	1206	1287

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	4.5	17.2	16	21.3	27.3	920	1.75	0.57
1x50RMC	8.25 ^{+0.20}	4.5	18.5	16	22.5	28.6	1060	2.5	0.60
1x70RMC	9.6 ^{+0.20}	4.5	19.8	25	23.9	29.9	1370	3.5	0.63
1x95RMC	11.5 ^{+0.20}	4.5	21.7	35	25.8	31.8	1740	4.75	0.68
1x120RMC	12.9 ^{+0.25}	4.5	23.1	50	27.2	33.2	2140	6	0.72
1x150RMC	14.5 ^{+0.30}	4.5	24.7	50	28.8	34.8	2420	7.5	0.76
1x185RMC	16.0 ^{+0.30}	4.5	26.2	50	30.3	36.3	2780	9.25	0.79
1x240RMC	18.5 ^{+0.30}	4.5	28.7	50	32.8	38.8	3340	12	0.86
1x300RMC	20.5 ^{+0.30}	4.5	30.7	50	34.8	40.8	3930	15	0.91
1x400RMC	23.5 ^{+0.30}	4.5	33.7	50	37.8	43.8	4800	20	0.98
1x500RMC	26.5 ^{+0.40}	4.5	37.2	50	41.5	47.5	5910	25	1.07
1x630RMC	30.3 ^{+0.40}	4.5	41.3	50	45.5	51.8	7270	31.5	1.18
1x800RMC	34.6 ^{+0.50}	4.5	46.0	50	50.2	56.9	8970	40	1.30
1x1000RMC	38.2 ^{+0.40}	4.5	49.6	50	53.8	60.7	10880	50	1.38

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x35RMC/16	0.524	0.668	1.12	1.38	2.84/1.32	1.48	0.085	0.17	19.1	0.46	0.46	0.145	0.684
1x50RMC/16	0.387	0.494	1.12	1.38	2.72/1.37	1.30	0.078	0.19	17.2	0.51	0.73	0.230	0.544
1x70RMC/25	0.268	0.342	0.72	0.89	2.63/1.41	0.94	0.072	0.20	15.6	0.56	0.70	0.221	0.407
1x95RMC/35	0.193	0.247	0.51	0.63	2.52/1.45	0.71	0.066	0.23	13.7	0.63	0.67	0.211	0.324
1x120RMC/50	0.153	0.196	0.36	0.44	2.46/1.48	0.55	0.062	0.25	12.7	0.69	0.65	0.204	0.283
1x150RMC/50	0.124	0.159	0.36	0.44	2.41/1.51	0.51	0.058	0.27	11.6	0.75	0.63	0.198	0.254
1x185RMC/50	0.0991	0.128	0.36	0.44	2.37/1.54	0.47	0.055	0.30	10.8	0.81	0.61	0.193	0.231
1x240RMC/50	0.0754	0.0978	0.36	0.44	2.31/1.57	0.43	0.051	0.33	9.6	0.90	0.59	0.185	0.209
1x300RMC/50	0.0601	0.0789	0.36	0.44	2.27/1.59	0.41	0.048	0.36	8.9	0.98	0.57	0.180	0.196
1x400RMC/50	0.0470	0.0629	0.36	0.44	2.23/1.62	0.39	0.045	0.40	7.9	1.10	0.55	0.173	0.184
1x500RMC/50	0.0366	0.0505	0.36	0.44	2.17/1.63	0.37	0.043	0.44	7.2	1.21	0.53	0.167	0.175
1x630RMC/50	0.0283	0.0410	0.36	0.44	2.13/1.65	0.35	0.041	0.50	6.4	1.37	0.51	0.161	0.166

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x800RMC/50	0.0221	0.0342	0.36	0.44	2.1/1.67	0.34	0.039	0.57	5.6	1.55	0.49	0.155	0.159
1x1000RMC/50	0.0176	0.0295	0.36	0.44	2.08/1.69	0.33	0.037	0.62	5.2	1.68	0.48	0.151	0.154

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	
mm ²	kA/s	A								
1x35RMC/16	5.0	3.7	244	247	232	233	251	253	215	215
1x50RMC/16	7.2	3.7	289	294	275	276	300	304	258	258
1x70RMC/25	10.0	5.3	350	360	336	338	368	377	318	319
1x95RMC/35	13.6	7.1	413	435	404	408	443	463	387	391
1x120RMC/50	17.2	9.8	455	496	457	465	498	534	443	449
1x150RMC/50	21.5	9.8	502	560	513	523	559	610	503	512
1x185RMC/50	26.5	9.8	555	634	577	592	627	698	572	585
1x240RMC/50	34.3	9.8	624	740	667	689	723	830	672	693
1x300RMC/50	42.9	9.8	682	838	749	779	805	952	764	793
1x400RMC/50	57.2	9.8	749	962	848	890	905	1113	880	921
1x500RMC/50	71.5	9.8	816	1097	951	1009	1008	1291	1006	1062
1x630RMC/50	90.1	9.8	887	1252	1062	1140	1117	1504	1146	1225
1x800RMC/50	114.4	9.8	951	1412	1165	1269	1220	1731	1288	1393
1x1000RMC/50	143.0	9.8	1003	1562	1257	1387	1306	1946	1411	1545

MEDIUM VOLTAGE XLPE POWER CABLES 12/20 (24) kV

YHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XSY acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XSY acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _o	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x50RMC	8.25 ^{+0.10}	5.5	20.5	16	24.4	29.1	860	1.5	0.44
1x70RMC	9.5 ^{+0.20}	5.5	21.7	25	25.6	30.4	1040	2.1	0.46
1x95RMC	11.3 ^{+0.20}	5.5	23.5	35	27.4	32.2	1260	2.85	0.48
1x120RMC	12.5 ^{+0.20}	5.5	24.7	50	28.6	33.4	1500	3.6	0.50
1x150RMC	14.2 ^{+0.20}	5.5	26.4	50	30.3	35.1	1620	4.5	0.53
1x185RMC	15.8 ^{+0.20}	5.5	28.0	50	31.9	36.7	1770	5.55	0.55
1x240RMC	17.9 ^{+0.10}	5.5	30.1	50	34.0	38.8	1980	7.2	0.58
1x300RMC	20.0 ^{+0.30}	5.5	32.2	50	36.1	40.9	2200	9	0.61
1x400RMC	22.9 ^{+0.30}	5.5	35.1	50	39.0	43.8	2510	12	0.66
1x500RMC	25.7 ^{+0.40}	5.5	38.4	50	42.5	47.3	2940	15	0.71
1x630RMC	29.3 ^{+0.50}	5.5	42.3	50	46.4	51.3	3460	18.9	0.77
1x800RMC	33.0 ^{+0.50}	5.5	46.4	50	50.5	55.8	4100	24	0.84
1x1000RMC	38.0 ^{+0.50}	5.5	51.4	50	55.5	61.0	4850	30	0.92

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_o.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_o + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_o.

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/insulation	Zero resistance R _o	Zero reactance X _o	Capacitance C	Capacitive reactance X _c	Charging current I _o	Inductance L	Inductive reactance X _l	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	3.27/1.48	2.20	0.081	0.16	19.8	0.61	0.44	0.138	0.834
											0.73	0.230	0.854
											0.63	0.197	0.845
1x70RMC/25	0.443	0.568	0.72	0.89	3.15/1.52	1.45	0.075	0.18	18.1	0.66	0.42	0.132	0.583
											0.61	0.190	0.599
											0.40	0.125	0.429
1x95RMC/35	0.320	0.411	0.51	0.63	3.01/1.58	1.04	0.069	0.20	16.1	0.74	0.68	0.212	0.462
											0.58	0.183	0.450
											0.39	0.121	0.347
1x120RMC/50	0.253	0.325	0.36	0.44	2.94/1.61	0.77	0.065	0.21	15.0	0.80	0.66	0.207	0.385
											0.57	0.179	0.371
											0.37	0.116	0.289
1x150RMC/50	0.206	0.265	0.36	0.44	2.86/1.65	0.71	0.061	0.23	13.8	0.87	0.64	0.200	0.331
											0.55	0.174	0.317
											0.36	0.112	0.239
1x185RMC/50	0.164	0.211	0.36	0.44	2.80/1.68	0.65	0.058	0.25	12.7	0.94	0.62	0.194	0.286
											0.54	0.170	0.271
											0.34	0.108	0.194
1x240RMC/50	0.125	0.161	0.36	0.44	2.73/1.71	0.60	0.054	0.27	11.6	1.04	0.60	0.187	0.247
											0.53	0.166	0.231
											0.33	0.104	0.166
1x300RMC/50	0.100	0.130	0.36	0.44	2.67/1.74	0.57	0.051	0.30	10.6	1.13	0.58	0.181	0.223
											0.52	0.162	0.208
											0.32	0.100	0.143
1x400RMC/50	0.0778	0.102	0.36	0.44	2.61/1.78	0.54	0.047	0.33	9.6	1.25	0.56	0.175	0.202
											0.50	0.158	0.188
											0.31	0.098	0.126
1x500RMC/50	0.0605	0.0799	0.36	0.44	2.54/1.79	0.52	0.046	0.37	8.7	1.38	0.54	0.169	0.187
											0.50	0.156	0.175
											0.30	0.094	0.114
1x630RMC/50	0.0469	0.0633	0.36	0.44	2.49/1.83	0.51	0.043	0.41	7.7	1.55	0.52	0.163	0.175
											0.49	0.153	0.165
											0.29	0.092	0.105
1x800RMC/50	0.0367	0.0511	0.36	0.44	2.45/1.85	0.49	0.041	0.46	7.0	1.73	0.50	0.158	0.166
											0.48	0.150	0.159
											0.28	0.089	0.099
1x1000RMC/50	0.0291	0.0425	0.36	0.44	2.41/1.88	0.48	0.038	0.51	6.2	1.94	0.48	0.152	0.157
											0.47	0.147	0.153

MEDIUM VOLTAGE XLPE POWER CABLES 12/20 (24) kV

YHKXS acc. to HD 620 S3: 2023 Part 10 Section R

2XSY acc. to IEC 60502-2:2014 and BS 7870-4.10:2011

N2XSY acc. to DIN VDE 0276-620:2018

Description: COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Parameters

Conductor - nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	5.5	19.2	16	23.1	27.9	990	1.75	0.42
1x50RMC	8.25 ^{+0.20}	5.5	20.5	16	24.4	29.1	1140	2.5	0.44
1x70RMC	9.6 ^{+0.20}	5.5	21.8	25	25.7	30.5	1450	3.5	0.46
1x95RMC	11.5 ^{+0.20}	5.5	23.7	35	27.6	32.4	1830	4.75	0.49
1x120RMC	12.9 ^{+0.25}	5.5	25.1	50	29.0	33.8	2230	6	0.51
1x150RMC	14.5 ^{+0.30}	5.5	26.7	50	30.6	35.4	2520	7.5	0.53
1x185RMC	16.0 ^{+0.30}	5.5	28.2	50	32.1	36.9	2890	9.25	0.55
1x240RMC	18.5 ^{+0.30}	5.5	30.7	50	34.6	39.4	3460	12	0.59
1x300RMC	20.5 ^{+0.30}	5.5	32.7	50	36.6	41.4	4060	15	0.62
1x400RMC	23.5 ^{+0.30}	5.5	35.7	50	39.6	44.4	4940	20	0.67
1x500RMC	26.5 ^{+0.40}	5.5	39.2	50	43.3	48.1	6050	25	0.72
1x630RMC	30.3 ^{+0.40}	5.5	43.3	50	47.4	52.5	7460	31.5	0.79
1x800RMC	34.6 ^{+0.50}	5.5	48.0	50	52.1	57.4	9170	40	0.86
1x1000RMC	38.2 ^{+0.40}	5.5	51.6	50	55.7	61.4	11130	50	0.92

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	
mm ²	kA/s	A								
1x50RMC/16	4.7	3.7	226	228	213	214	234	236	200	200
1x70RMC/25	6.6	5.3	274	279	261	262	288	292	247	247
1x95RMC/35	9.0	7.1	326	336	313	315	348	357	300	302
1x120RMC/50	11.3	9.8	365	383	355	359	394	411	343	347
1x150RMC/50	14.2	9.8	407	432	400	405	445	470	391	395
1x185RMC/50	17.5	9.8	455	491	453	460	506	541	447	454
1x240RMC/50	22.7	9.8	516	572	525	535	586	639	526	536
1x300RMC/50	28.4	9.8	571	649	592	606	660	736	601	615
1x400RMC/50	37.8	9.8	638	749	677	699	755	864	699	720
1x500RMC/50	47.3	9.8	705	859	768	798	852	1007	808	838
1x630RMC/50	59.5	9.8	778	987	871	913	960	1181	935	977
1x800RMC/50	75.6	9.8	846	1123	975	1034	1064	1368	1065	1125
1x1000RMC/50	94.5	9.8	915	1271	1078	1157	1175	1584	1206	1287

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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_0	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x35RMC/16	0.524	0.668	1.12	1.38	3.43/1.43	2.05	0.088	0.15	21.8	0.55	0.47	0.146	0.684
1x50RMC/16	0.387	0.494	1.12	1.38	3.27/1.48	1.88	0.081	0.16	19.8	0.61	0.76	0.240	0.710
1x70RMC/25	0.268	0.342	0.72	0.89	3.14/1.53	1.23	0.075	0.18	18.0	0.67	0.65	0.204	0.699
1x95RMC/35	0.193	0.247	0.51	0.63	3/1.58	0.88	0.068	0.20	15.9	0.75	0.44	0.138	0.513
1x120RMC/50	0.153	0.196	0.36	0.44	2.92/1.62	0.64	0.064	0.22	14.7	0.82	0.73	0.230	0.545
1x150RMC/50	0.124	0.159	0.36	0.44	2.85/1.65	0.60	0.060	0.23	13.5	0.89	0.63	0.197	0.531
1x185RMC/50	0.0991	0.128	0.36	0.44	2.79/1.68	0.57	0.057	0.25	12.6	0.95	0.42	0.132	0.367
1x240RMC/50	0.0754	0.0978	0.36	0.44	2.71/1.72	0.54	0.053	0.28	11.3	1.06	0.70	0.221	0.407
1x300RMC/50	0.0601	0.0788	0.36	0.44	2.66/1.75	0.52	0.050	0.30	10.4	1.15	0.60	0.190	0.391
1x400RMC/50	0.0470	0.0628	0.36	0.44	2.6/1.79	0.51	0.047	0.34	9.4	1.28	0.40	0.124	0.276
1x500RMC/50	0.0366	0.0504	0.36	0.44	2.53/1.8	0.49	0.045	0.38	8.5	1.42	0.67	0.211	0.325
1x630RMC/50	0.0283	0.0409	0.36	0.44	2.48/1.83	0.48	0.042	0.42	7.5	1.59	0.58	0.182	0.307

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_0	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x800RMC/50	0.0221	0.0341	0.36	0.44	2.44/1.86	0.48	0.040	0.48	6.7	1.79	0.29	0.091	0.097
1x1000RMC/50	0.0176	0.0294	0.36	0.44	2.41/1.88	0.47	0.038	0.52	6.2	1.95	0.47	0.149	0.153

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	
mm ²	kA/s	A								
1x35RMC/16	5.0	3.7	241	243	229	229	246	248	212	212
1x50RMC/16	7.2	3.7	286	289	272	272	295	298	254	255
1x70RMC/25	10.0	5.3	346	354	332	333	363	369	314	315
1x95RMC/35	13.6	7.1	411	427	399	401	438	452	382	385
1x120RMC/50	17.2	9.8	455	487	452	458	493	522	438	443
1x150RMC/50	21.5	9.8	505	550	508	516	555	596	498	505
1x185RMC/50	26.5	9.8	560	623	573	584	626	682	567	577
1x240RMC/50	34.3	9.8	635	728	665	682	725	811	668	683
1x300RMC/50	42.9	9.8	699	825	748	771	813	931	760	782
1x400RMC/50	57.2	9.8	775	947	849	881	922	1088	878	909
1x500RMC/50	71.5	9.8	854	1082	957	1000	1036	1263	1007	1050
1x630RMC/50	90.1	9.8	938	1235	1071	1131	1159	1469	1152	1211
1x800RMC/50	114.4	9.8	1020	1395	1187	1265	1282	1693	1300	1379
1x1000RMC/50	143.0	9.8	1086	1545	1285	1384	1382	1902	1430	1530

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally Sealed 12/20 (24) kV

XUHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XS(F)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XS(F)2Y acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _o	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x50RMC	8,25 ^{+0.10}	5.5	20.5	16	24.4	29.1	860	1.5	0.44
1x70RMC	9,5 ^{+0.20}	5.5	21.7	25	25.6	30.4	1040	2.1	0.46
1x95RMC	11,3 ^{+0.20}	5.5	23.5	35	27.4	32.2	1260	2.85	0.48
1x120RMC	12,5 ^{+0.20}	5.5	24.7	50	28.6	33.4	1500	3.6	0.50
1x150RMC	14,2 ^{+0.20}	5.5	26.4	50	30.3	35.1	1620	4.5	0.53
1x185RMC	15,8 ^{+0.20}	5.5	28.0	50	31.9	36.7	1770	5.55	0.55
1x240RMC	17,9 ^{+0.10}	5.5	30.1	50	34.0	38.8	1980	7.2	0.58
1x300RMC	20,0 ^{+0.30}	5.5	32.2	50	36.1	40.9	2200	9	0.61
1x400RMC	22,9 ^{+0.30}	5.5	35.1	50	39.0	43.8	2510	12	0.66
1x500RMC	25,7 ^{+0.40}	5.5	38.4	50	42.5	47.3	2940	15	0.71
1x630RMC	29,3 ^{+0.50}	5.5	42.3	50	46.4	51.3	3460	18.9	0.77
1x800RMC	33,0 ^{+0.50}	5.5	46.4	50	50.5	55.8	4100	24	0.84
1x1000RMC	38,0 ^{+0.50}	5.5	51.4	50	55.5	61.0	4850	30	0.92

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_o.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_o + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_o.

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/insulation	Zero resistance R _o	Zero reactance X _o	Capacitance C	Capacitive reactance X _c	Charging current I _o	Inductance L	Inductive reactance X _l	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	3.27/1.48	2.20	0.081	0.16	19.8	0.61	0.45	0.141	0.834
											0.73	0.231	0.854
											0.63	0.199	0.846
1x70RMC/25	0.443	0.568	0.72	0.89	3.15/1.52	1.45	0.076	0.18	18.1	0.66	0.43	0.134	0.584
											0.61	0.192	0.600
											0.40	0.127	0.430
1x95RMC/35	0.320	0.411	0.51	0.63	3.01/1.58	1.04	0.069	0.20	16.1	0.74	0.68	0.213	0.462
											0.59	0.185	0.450
											0.39	0.123	0.347
1x120RMC/50	0.253	0.325	0.36	0.44	2.94/1.61	0.77	0.066	0.21	15.0	0.80	0.66	0.207	0.385
											0.58	0.181	0.372
											0.38	0.118	0.290
1x150RMC/50	0.206	0.265	0.36	0.44	2.86/1.65	0.71	0.061	0.23	13.8	0.87	0.64	0.200	0.332
											0.56	0.176	0.318
											0.36	0.114	0.240
1x185RMC/50	0.164	0.211	0.36	0.44	2.80/1.68	0.65	0.058	0.25	12.7	0.94	0.62	0.194	0.287
											0.55	0.172	0.272
											0.35	0.109	0.195
1x240RMC/50	0.125	0.161	0.36	0.44	2.73/1.71	0.60	0.054	0.27	11.6	1.04	0.60	0.188	0.247
											0.53	0.168	0.233
											0.34	0.106	0.167
1x300RMC/50	0.100	0.129	0.36	0.44	2.67/1.74	0.57	0.051	0.30	10.6	1.13	0.58	0.182	0.223
											0.52	0.164	0.209
											0.32	0.101	0.143
1x400RMC/50	0.0778	0.101	0.36	0.44	2.61/1.78	0.54	0.048	0.33	9.6	1.25	0.56	0.175	0.202
											0.51	0.159	0.189
											0.31	0.099	0.127
1x500RMC/50	0.0605	0.0799	0.36	0.44	2.54/1.79	0.52	0.046	0.37	8.7	1.38	0.54	0.170	0.188
											0.50	0.157	0.176
											0.30	0.096	0.115
1x630RMC/50	0.0469	0.0632	0.36	0.44	2.49/1.83	0.51	0.043	0.41	7.7	1.55	0.52	0.164	0.175
											0.49	0.154	0.166
											0.30	0.093	0.106
1x800RMC/50	0.0367	0.0510	0.36	0.44	2.45/1.85	0.49	0.041	0.46	7.0	1.73	0.50	0.158	0.166
											0.48	0.151	0.160
											0.29	0.090	0.099
1x1000RMC/50	0.0291	0.0424	0.36	0.44	2.41/1.88	0.48	0.038	0.51	6.2	1.94	0.48	0.152	0.158
											0.47	0.148	0.154

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally Sealed 12/20 (24) kV

XUHKXS acc. to HD 620 S3: 2023 Part 10 Section R
2XS(F)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
N2XS(F)2Y acc. to DIN VDE 0276-620:2018

Description: COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Current – carrying capacity

Nominal cross sectional area	Max short circuit capacity	GROUND	AIR							
			FLAT		TREFOIL					
mm ²	kA/s	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB	
1x50RMC/16	4.7	3.7	225	226	213	213	233	234	200	200
1x70RMC/25	6.6	5.3	274	278	260	261	287	290	246	247
1x95RMC/35	9.0	7.1	327	334	313	314	348	355	300	301
1x120RMC/50	11.3	9.8	367	381	355	358	395	409	343	346
1x150RMC/50	14.2	9.8	410	430	400	403	448	467	391	394
1x185RMC/50	17.5	9.8	461	489	453	458	510	537	448	453
1x240RMC/50	22.7	9.8	526	570	525	533	593	635	527	534
1x300RMC/50	28.4	9.8	585	646	594	605	672	731	603	614
1x400RMC/50	37.8	9.8	658	746	681	697	773	859	704	719
1x500RMC/50	47.3	9.8	734	855	776	798	879	1002	815	837
1x630RMC/50	59.5	9.8	819	984	883	915	1002	1175	946	977
1x800RMC/50	75.6	9.8	901	1121	991	1035	1123	1362	1082	1126
1x1000RMC/50	94.5	9.8	986	1269	1103	1162	1255	1578	1231	1290

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	5.5	19.2	16	23.1	27.9	990	1.75	0.42
1x50RMC	8.25 ^{+0.20}	5.5	20.5	16	24.4	29.1	1140	2.5	0.44
1x70RMC	9.6 ^{+0.20}	5.5	21.8	25	25.7	30.5	1450	3.5	0.46
1x95RMC	11.5 ^{+0.20}	5.5	23.7	35	27.6	32.4	1830	4.75	0.49
1x120RMC	12.9 ^{+0.25}	5.5	25.1	50	29.0	33.8	2230	6	0.51
1x150RMC	14.5 ^{+0.30}	5.5	26.7	50	30.6	35.4	2520	7.5	0.53
1x185RMC	16.0 ^{+0.30}	5.5	28.2	50	32.1	36.9	2890	9.25	0.55
1x240RMC	18.5 ^{+0.30}	5.5	30.7	50	34.6	39.4	3460	12	0.59
1x300RMC	20.5 ^{+0.30}	5.5	32.7	50	36.6	41.4	4060	15	0.62
1x400RMC	23.5 ^{+0.30}	5.5	35.7	50	39.6	44.4	4940	20	0.67
1x500RMC	26.5 ^{+0.40}	5.5	39.2	50	43.3	48.1	6050	25	0.72
1x630RMC	30.3 ^{+0.40}	5.5	43.3	50	47.4	52.5	7460	31.5	0.79
1x800RMC	34.6 ^{+0.50}	5.5	48.0	50	52.1	57.4	9170	40	0.86
1x1000RMC	38.2 ^{+0.40}	5.5	51.6	50	55.7	61.4	11130	50	0.92

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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_0	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x35RMC/16	0.524	0.668	1.12	1.38	3.43/1.43	2.05	0.088	0.15	21.8	0.55	0.47	0.148	0.685
1x50RMC/16	0.387	0.494	1.12	1.38	3.27/1.48	1.88	0.081	0.16	19.8	0.61	0.76	0.240	0.710
1x70RMC/25	0.268	0.342	0.72	0.89	3.14/1.53	1.23	0.075	0.18	18.0	0.67	0.66	0.206	0.699
1x95RMC/35	0.193	0.247	0.51	0.63	3/1.58	0.88	0.069	0.20	15.9	0.75	0.45	0.141	0.513
1x120RMC/50	0.153	0.196	0.36	0.44	2.92/1.62	0.64	0.065	0.22	14.7	0.82	0.73	0.231	0.545
1x150RMC/50	0.124	0.159	0.36	0.44	2.85/1.65	0.60	0.061	0.23	13.5	0.89	0.63	0.199	0.532
1x185RMC/50	0.0991	0.128	0.36	0.44	2.79/1.68	0.57	0.058	0.25	12.6	0.95	0.43	0.134	0.367
1x240RMC/50	0.0754	0.0978	0.36	0.44	2.71/1.72	0.54	0.053	0.28	11.3	1.06	0.71	0.222	0.408
1x300RMC/50	0.0601	0.0787	0.36	0.44	2.66/1.75	0.52	0.051	0.30	10.4	1.15	0.61	0.192	0.392
1x400RMC/50	0.0470	0.0628	0.36	0.44	2.6/1.79	0.51	0.047	0.34	9.4	1.28	0.40	0.126	0.277
1x500RMC/50	0.0366	0.0503	0.36	0.44	2.53/1.8	0.49	0.045	0.38	8.5	1.42	0.59	0.184	0.308
1x630RMC/50	0.0283	0.0408	0.38	0.44	2.48/1.83	0.48	0.043	0.42	7.5	1.59	0.39	0.122	0.230
											0.57	0.180	0.266
											0.37	0.117	0.197
											0.63	0.199	0.255
											0.56	0.175	0.237
											0.36	0.113	0.171
											0.62	0.194	0.232
											0.55	0.172	0.214
											0.34	0.108	0.146
											0.59	0.186	0.210
											0.53	0.166	0.193
											0.33	0.105	0.131
											0.58	0.181	0.197
											0.52	0.163	0.181
											0.32	0.101	0.119
											0.55	0.174	0.185
											0.51	0.159	0.171
											0.31	0.098	0.110
											0.54	0.168	0.176
											0.50	0.156	0.164
											0.30	0.095	0.103
											0.52	0.162	0.167
											0.49	0.153	0.158

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_0	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x800RMC/50	0.0221	0.0340	0.36	0.44	2.44/1.86	0.48	0.040	0.48	6.7	1.79	0.29	0.092	0.098
1x1000RMC/50	0.0176	0.0293	0.36	0.44	2.41/1.88	0.47	0.038	0.52	6.2	1.95	0.48	0.152	0.155
											0.47	0.148	0.151

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	
mm ²	kA/s	A								
1x35RMC/16	5.0	3.7	244	246	231	231	250	252	215	215
1x50RMC/16	7.2	3.7	289	292	275	275	300	303	257	258
1x70RMC/25	10.0	5.3	351	358	335	337	369	375	318	319
1x95RMC/35	13.6	7.1	416	432	403	406	445	460	387	390
1x120RMC/50	17.2	9.8	461	493	457	463	502	531	443	449
1x150RMC/50	21.5	9.8	511	556	514	522	566	606	504	511
1x185RMC/50	26.5	9.8	567	631	579	590	638	694	574	584
1x240RMC/50	34.3	9.8	643	736	672	689	740	825	677	692
1x300RMC/50	42.9	9.8	708	834	756	779	829	947	770	792
1x400RMC/50	57.2	9.8	785	958	857	889	940	1107	889	920
1x500RMC/50	71.5	9.8	864	1093	965	1009	1057	1285	1020	1063
1x630RMC/50	90.1	9.8	949	1249	1082	1142	1185	1496	1168	1227
1x800RMC/50	114.4	9.8	1032	1410	1198	1277	1312	1725	1319	1398
1x1000RMC/50	143.0	9.8	1100	1561	1297	1397	1417	1941	1452	1553

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally and Radially Sealed 12/20 (24) kV

XRUHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XS(FL)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XS(FL)2Y acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor - nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _o	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x5ORMC	8.25 ^{+0.10}	5.5	20.5	16	24.4	29.1	860	1.5	0.44
1x7ORMC	9.5 ^{+0.20}	5.5	21.7	25	25.6	30.4	1040	2.1	0.46
1x95ORMC	11.3 ^{+0.20}	5.5	23.5	35	27.4	32.2	1260	2.85	0.48
1x120ORMC	12.5 ^{+0.20}	5.5	24.7	50	28.6	33.4	1500	3.6	0.50
1x150ORMC	14.2 ^{+0.20}	5.5	26.4	50	30.3	35.1	1620	4.5	0.53
1x185ORMC	15.8 ^{+0.20}	5.5	28.0	50	31.9	36.7	1770	5.55	0.55
1x240ORMC	17.9 ^{+0.10}	5.5	30.1	50	34.0	38.8	1980	7.2	0.58
1x300ORMC	20.0 ^{+0.30}	5.5	32.2	50	36.1	40.9	2200	9	0.61
1x400ORMC	22.9 ^{+0.30}	5.5	35.1	50	39.0	43.8	2510	12	0.66
1x500ORMC	25.7 ^{+0.40}	5.5	38.4	50	42.5	47.3	2940	15	0.71
1x630ORMC	29.3 ^{+0.50}	5.5	42.3	50	46.4	51.3	3460	18.9	0.77
1x800ORMC	33.0 ^{+0.50}	5.5	46.4	50	50.5	55.8	4100	24	0.84
1x1000ORMC	38.0 ^{+0.50}	5.5	51.4	50	55.5	61.0	4850	30	0.92

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_o.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_o + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_o.

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/insulation	Zero resistance R _o	Zero reactance X _o	Capacitance C	Capacitive reactance X _c	Charging current I _o	Inductance L	Inductive reactance X _l	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	3.27/1.48	1.60	0.083	0.16	19.8	0.61	0.45	0.142	0.834
											0.74	0.231	0.854
											0.64	0.200	0.846
1x70RMC/25	0.443	0.568	0.72	0.89	3.15/1.52	1.16	0.078	0.18	18.1	0.66	0.43	0.135	0.584
											0.62	0.193	0.600
											0.41	0.128	0.430
1x95RMC/35	0.320	0.411	0.51	0.63	3.01/1.58	0.86	0.071	0.20	16.1	0.74	0.68	0.213	0.463
											0.59	0.186	0.451
											0.39	0.124	0.347
1x120RMC/50	0.253	0.325	0.36	0.44	2.94/1.61	0.67	0.067	0.21	15.0	0.80	0.66	0.207	0.385
											0.58	0.182	0.372
											0.38	0.119	0.290
1x150RMC/50	0.206	0.265	0.36	0.44	2.86/1.65	0.61	0.063	0.23	13.8	0.87	0.64	0.200	0.332
											0.56	0.177	0.318
											0.36	0.115	0.240
1x185RMC/50	0.164	0.211	0.36	0.44	2.80/1.68	0.55	0.060	0.25	12.7	0.94	0.62	0.195	0.287
											0.55	0.173	0.273
											0.35	0.110	0.195
1x240RMC/50	0.125	0.161	0.36	0.44	2.73/1.71	0.49	0.056	0.27	11.6	1.04	0.60	0.188	0.248
											0.54	0.168	0.233
											0.34	0.106	0.168
1x300RMC/50	0.100	0.129	0.36	0.44	2.67/1.74	0.46	0.053	0.30	10.6	1.13	0.58	0.182	0.224
											0.52	0.164	0.209
											0.32	0.102	0.144
1x400RMC/50	0.0778	0.101	0.36	0.44	2.61/1.78	0.43	0.049	0.33	9.6	1.25	0.56	0.175	0.203
											0.51	0.160	0.190
											0.32	0.099	0.128
1x500RMC/50	0.0605	0.0799	0.36	0.44	2.54/1.79	0.40	0.047	0.37	8.7	1.38	0.54	0.170	0.188
											0.50	0.157	0.177
											0.31	0.097	0.115
1x630RMC/50	0.0469	0.0632	0.36	0.44	2.49/1.83	0.38	0.044	0.41	7.7	1.55	0.52	0.164	0.176
											0.49	0.155	0.167
											0.30	0.094	0.107
1x800RMC/50	0.0367	0.0510	0.36	0.44	2.45/1.85	0.36	0.042	0.46	7.0	1.73	0.50	0.159	0.167
											0.48	0.152	0.160
											0.29	0.091	0.100
1x1000RMC/50	0.0291	0.0423	0.36	0.44	2.41/1.88	0.34	0.039	0.51	6.2	1.94	0.48	0.152	0.158
											0.47	0.149	0.155

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally and Radially Sealed 12/20 (24) kV

XRUHKXS acc. to HD 620 S3: 2023 Part 10 Section R

2XS(FL)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011

N2XS(FL)2Y acc. to DIN VDE 0276-620:2018

Description: COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Current – carrying capacity

Nominal cross sectional area	Max short circuit capacity		GROUND				AIR				
	Conductor	Metallic screen	FLAT		TREFOIL		FLAT		TREFOIL		
			BE	SPB, CB	BE	SPB,CB	BE	SPB, CB	BE	SPB, CB	
mm ²	kA/s	A									
1x50RMC/16	4.7	3.7	224	226	212	213	233	235	201	201	
1x70RMC/25	6.6	5.3	272	277	260	261	287	291	248	249	
1x95RMC/35	9.0	7.1	324	334	312	314	347	356	301	303	
1x120RMC/50	11.3	9.8	363	380	354	357	393	409	345	348	
1x150RMC/50	14.2	9.8	405	429	398	403	444	467	392	397	
1x185RMC/50	17.5	9.8	453	488	451	458	504	538	449	455	
1x240RMC/50	22.7	9.8	515	568	523	533	585	635	527	537	
1x300RMC/50	28.4	9.8	570	644	589	603	659	731	603	616	
1x400RMC/50	37.8	9.8	637	744	675	696	753	858	701	721	
1x500RMC/50	47.3	9.8	705	853	766	795	851	1000	810	838	
1x630RMC/50	59.5	9.8	778	981	870	912	958	1171	936	977	
1x800RMC/50	75.6	9.8	848	1117	974	1032	1063	1357	1067	1125	
1x1000RMC/50	94.5	9.8	916	1264	1077	1155	1173	1570	1208	1287	

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	5.5	19.2	16	23.1	27.9	990	1.75	0.42
1x50RMC	8.25 ^{+0.20}	5.5	20.5	16	24.4	29.1	1140	2.5	0.44
1x70RMC	9.6 ^{+0.20}	5.5	21.8	25	25.7	30.5	1450	3.5	0.46
1x95RMC	11.5 ^{+0.20}	5.5	23.7	35	27.6	32.4	1830	4.75	0.49
1x120RMC	12.9 ^{+0.25}	5.5	25.1	50	29.0	33.8	2230	6	0.51
1x150RMC	14.5 ^{+0.30}	5.5	26.7	50	30.6	35.4	2520	7.5	0.53
1x185RMC	16.0 ^{+0.30}	5.5	28.2	50	32.1	36.9	2890	9.25	0.55
1x240RMC	18.5 ^{+0.30}	5.5	30.7	50	34.6	39.4	3460	12	0.59
1x300RMC	20.5 ^{+0.30}	5.5	32.7	50	36.6	41.4	4060	15	0.62
1x400RMC	23.5 ^{+0.30}	5.5	35.7	50	39.6	44.4	4940	20	0.67
1x500RMC	26.5 ^{+0.40}	5.5	39.2	50	43.3	48.1	6050	25	0.72
1x630RMC	30.3 ^{+0.40}	5.5	43.3	50	47.4	52.5	7460	31.5	0.79
1x800RMC	34.6 ^{+0.50}	5.5	48.0	50	52.1	57.4	9170	40	0.86
1x1000RMC	38.2 ^{+0.40}	5.5	51.6	50	55.7	61.4	11130	50	0.92

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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_0	Inductance L	Inductive reactance XI	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x35RMC/16	0.524	0.668	1.12	1.38	3.43/1.43	1.46	0.090	0.15	21.8	0.55	0.47	0.149	0.685
1x50RMC/16	0.387	0.494	1.12	1.38	3.27/1.48	1.27	0.083	0.16	19.8	0.61	0.77	0.240	0.710
1x70RMC/25	0.268	0.342	0.72	0.89	3.14/1.53	0.93	0.077	0.18	18.0	0.67	0.66	0.207	0.700
1x95RMC/35	0.193	0.247	0.51	0.63	3/1.58	0.70	0.070	0.20	15.9	0.75	0.45	0.142	0.514
1x120RMC/50	0.153	0.196	0.36	0.44	2.92/1.62	0.54	0.066	0.22	14.7	0.82	0.74	0.231	0.545
1x150RMC/50	0.124	0.159	0.36	0.44	2.85/1.65	0.50	0.062	0.23	13.5	0.89	0.64	0.200	0.533
1x185RMC/50	0.0991	0.128	0.36	0.44	2.79/1.68	0.47	0.059	0.25	12.6	0.95	0.43	0.135	0.368
1x240RMC/50	0.0754	0.0977	0.36	0.44	2.71/1.72	0.43	0.055	0.28	11.3	1.06	0.71	0.222	0.408
1x300RMC/50	0.0601	0.0787	0.36	0.44	2.66/1.75	0.41	0.052	0.30	10.4	1.15	0.61	0.193	0.393
1x400RMC/50	0.0470	0.0627	0.36	0.44	2.6/1.79	0.39	0.048	0.34	9.4	1.28	0.40	0.127	0.277
1x500RMC/50	0.0366	0.0503	0.36	0.44	2.53/1.8	0.37	0.046	0.38	8.5	1.42	0.67	0.212	0.325
1x630RMC/50	0.0283	0.0408	0.36	0.44	2.48/1.83	0.35	0.044	0.42	7.5	1.59	0.59	0.185	0.308

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_0	Inductance L	Inductive reactance XI	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x800RMC/50	0.0221	0.0340	0.36	0.44	2.44/1.86	0.34	0.041	0.48	6.7	1.79	0.30	0.093	0.099
1x1000RMC/50	0.0176	0.0292	0.36	0.44	2.41/1.88	0.33	0.039	0.52	6.2	1.95	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	
mm²	kA/s	A								
1x35RMC/16	5.0	3.7	242	245	231	231	250	252	216	217
1x50RMC/16	7.2	3.7	287	292	274	275	300	303	259	260
1x70RMC/25	10.0	5.3	347	357	334	336	367	376	319	321
1x95RMC/35	13.6	7.1	411	431	402	406	442	461	389	392
1x120RMC/50	17.2	9.8	453	492	455	462	497	531	445	451
1x150RMC/50	21.5	9.8	501	555	511	521	558	606	505	514
1x185RMC/50	26.5	9.8	554	629	575	589	627	694	574	587
1x240RMC/50	34.3	9.8	624	735	666	687	722	824	675	695
1x300RMC/50	42.9	9.8	682	832	747	776	805	946	767	794
1x400RMC/50	57.2	9.8	750	955	846	887	906	1105	883	922
1x500RMC/50	71.5	9.8	818	1089	949	1006	1008	1281	1008	1064
1x630RMC/50	90.1	9.8	889	1244	1060	1138	1117	1491	1150	1227
1x800RMC/50	114.4	9.8	954	1403	1167	1271	1220	1716	1291	1395
1x1000RMC/50	143.0	9.8	1006	1554	1257	1387	1305	1931	1415	1548

MEDIUM VOLTAGE XLPE POWER CABLES 18/30 (36) kV

YHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XSY acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XSY acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor - nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x5ORMC	8.25 ^{+0.10}	8.0	25.5	16	29.4	34.1	1080	1.5	0.51
1x7ORMC	9.5 ^{+0.20}	8.0	26.7	25	30.6	35.4	1270	2.1	0.53
1x95ORMC	11.3 ^{+0.20}	8.0	28.5	35	32.4	37.2	1500	2.85	0.56
1x120ORMC	12.5 ^{+0.20}	8.0	29.7	50	33.6	38.4	1750	3.6	0.58
1x150ORMC	14.2 ^{+0.20}	8.0	31.4	50	35.3	40.1	1890	4.5	0.60
1x185ORMC	15.8 ^{+0.20}	8.0	33.0	50	36.9	41.7	2050	5.55	0.63
1x240ORMC	17.9 ^{+0.10}	8.0	35.1	50	39.0	43.8	2280	7.2	0.66
1x300ORMC	20.0 ^{+0.30}	8.0	37.2	50	41.1	45.9	2510	9	0.69
1x400ORMC	22.9 ^{+0.30}	8.0	40.1	50	44.0	48.8	2850	12	0.73
1x500ORMC	25.7 ^{+0.40}	8.0	43.4	50	47.5	52.7	3350	15	0.79
1x630ORMC	29.3 ^{+0.50}	8.0	47.3	50	51.4	56.7	3890	18.9	0.85
1x800ORMC	33.0 ^{+0.50}	8.0	51.4	50	55.5	61.0	4550	24	0.92
1x1000ORMC	38.0 ^{+0.50}	8.0	56.4	50	60.5	66.4	5370	30	1.00

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_c.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_c + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_c.

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 ₀	Inductance L	Inductive reactance X _L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	3.85/1.40	2.20	0.093	0.13	25.2	0.71	0.47	0.148	0.835
											0.74	0.233	0.854
											0.66	0.206	0.847
1x70RMC/25	0.443	0.568	0.72	0.89	3.67/1.44	1.45	0.087	0.14	23.2	0.77	0.45	0.142	0.586
											0.72	0.225	0.611
											0.64	0.200	0.602
1x95RMC/35	0.320	0.411	0.51	0.63	3.48/1.50	1.04	0.080	0.15	20.9	0.86	0.43	0.134	0.432
											0.68	0.215	0.464
											0.61	0.192	0.453
1x120RMC/50	0.253	0.325	0.36	0.44	3.38/1.54	0.77	0.076	0.16	19.6	0.92	0.41	0.130	0.350
											0.67	0.210	0.386
											0.60	0.188	0.375
1x150RMC/50	0.206	0.265	0.36	0.44	3.26/1.58	0.71	0.071	0.18	18.1	1.00	0.40	0.124	0.292
											0.64	0.202	0.333
											0.58	0.183	0.321
1x185RMC/50	0.164	0.211	0.36	0.44	3.17/1.62	0.65	0.067	0.19	16.8	1.07	0.38	0.120	0.243
											0.63	0.197	0.288
											0.57	0.178	0.276
1x240RMC/50	0.125	0.161	0.36	0.44	3.08/1.66	0.60	0.063	0.21	15.4	1.17	0.37	0.115	0.198
											0.60	0.190	0.249
											0.55	0.174	0.237
1x300RMC/50	0.100	0.129	0.36	0.44	3.00/1.69	0.57	0.059	0.22	14.2	1.26	0.35	0.111	0.171
											0.59	0.184	0.225
											0.54	0.170	0.213
1x400RMC/50	0.0778	0.101	0.36	0.44	2.91/1.73	0.54	0.055	0.25	12.9	1.40	0.34	0.107	0.147
											0.56	0.177	0.204
											0.52	0.165	0.194
1x500RMC/50	0.0605	0.0797	0.36	0.44	2.82/1.76	0.52	0.053	0.27	11.7	1.53	0.33	0.104	0.131
											0.55	0.172	0.190
											0.52	0.162	0.181
1x630RMC/50	0.0469	0.0630	0.36	0.44	2.75/1.80	0.51	0.050	0.30	10.5	1.71	0.32	0.101	0.119
											0.53	0.166	0.177
											0.51	0.159	0.171
1x800RMC/50	0.0367	0.0507	0.36	0.44	2.69/1.84	0.49	0.047	0.33	9.5	1.89	0.31	0.098	0.110
											0.51	0.160	0.168
											0.50	0.156	0.164
1x1000RMC/50	0.0291	0.0420	0.36	0.44	2.63/1.87	0.48	0.044	0.37	8.5	2.12	0.30	0.094	0.103
											0.49	0.154	0.160
											0.49	0.152	0.158

MEDIUM VOLTAGE XLPE POWER CABLES 18/30 (36) kV

YHKXS acc. to HD 620 S3: 2023 Part 10 Section R

2XSY acc. to IEC 60502-2:2014 and BS 7870-4.10:2011

N2XSY acc. to DIN VDE 0276-620:2018

Description: COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Parameters

Conductor - nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	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

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	
mm ²	kA/s	A								
1x50RMC/16	4.7	3.7	219	220	208	209	229	230	200	200
1x70RMC/25	6.6	5.3	267	270	255	256	282	284	247	247
1x95RMC/35	9.0	7.1	319	325	307	308	341	347	300	301
1x120RMC/50	11.3	9.8	357	371	348	350	387	399	343	345
1x150RMC/50	14.2	9.8	402	418	392	395	438	455	390	393
1x185RMC/50	17.5	9.8	452	476	445	450	499	523	447	451
1x240RMC/50	22.7	9.8	517	555	517	524	580	618	524	531
1x300RMC/50	28.4	9.8	577	630	584	594	657	710	600	609
1x400RMC/50	37.8	9.8	650	728	670	684	756	833	699	712
1x500RMC/50	47.3	9.8	726	834	763	784	858	969	808	828
1x630RMC/50	59.5	9.8	811	961	870	900	978	1134	936	965
1x800RMC/50	75.6	9.8	895	1095	980	1022	1097	1314	1071	1112
1x1000RMC/50	94.5	9.8	980	1241	1091	1147	1222	1518	1216	1272

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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_0	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
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	0.156	0.686
1x50RMC/16	0.387	0.494	1.12	1.38	3.85/1.40	1.88	0.093	0.13	25.2	0.71	0.77	0.243	0.711
1x70RMC/25	0.268	0.342	0.72	0.89	3.66/1.45	1.23	0.087	0.14	23.1	0.78	0.68	0.215	0.702
1x95RMC/35	0.193	0.247	0.51	0.63	3.47/1.51	0.88	0.079	0.15	20.7	0.87	0.47	0.148	0.516
1x120RMC/50	0.153	0.196	0.36	0.44	3.35/1.55	0.64	0.075	0.17	19.2	0.94	0.74	0.233	0.546
1x150RMC/50	0.124	0.159	0.36	0.44	3.25/1.59	0.60	0.070	0.18	17.8	1.01	0.66	0.206	0.535
1x185RMC/50	0.0991	0.127	0.36	0.44	3.16/1.62	0.57	0.067	0.19	16.7	1.08	0.45	0.141	0.370
1x240RMC/50	0.0754	0.0976	0.36	0.44	3.05/1.67	0.54	0.062	0.21	15.1	1.19	0.71	0.224	0.409
1x300RMC/50	0.0601	0.0786	0.36	0.44	2.98/1.70	0.52	0.059	0.23	14.0	1.29	0.64	0.200	0.396
1x400RMC/50	0.0470	0.0625	0.36	0.44	2.90/1.74	0.50	0.054	0.25	12.6	1.42	0.42	0.133	0.280
1x500RMC/50	0.0366	0.0500	0.36	0.44	2.80/1.77	0.49	0.052	0.28	11.5	1.57	0.68	0.214	0.327
1x630RMC/50	0.0283	0.0404	0.36	0.44	2.73/1.81	0.48	0.049	0.31	10.3	1.75	0.61	0.191	0.312
											0.41	0.128	0.234
											0.59	0.187	0.270
											0.39	0.124	0.201
											0.64	0.201	0.256
											0.58	0.182	0.241
											0.38	0.120	0.175
											0.62	0.196	0.234
											0.57	0.178	0.219
											0.36	0.114	0.150
											0.60	0.188	0.212
											0.55	0.172	0.198
											0.35	0.111	0.136
											0.58	0.183	0.199
											0.54	0.169	0.186
											0.34	0.106	0.123
											0.56	0.176	0.187
											0.52	0.164	0.176
											0.33	0.103	0.115
											0.54	0.170	0.178
											0.51	0.161	0.169
											0.32	0.100	0.108
											0.52	0.164	0.169
											0.50	0.158	0.163

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_0	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
1x800RMC/50	0.0221	0.0336	0.36	0.44	2.67/1.85	0.48	0.046	0.35	9.2	1.97	0.31	0.097	0.102
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	0.155	0.158
											0.30	0.094	0.098
											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			
		BE	SPB, CB	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB		
mm ²	kA/s	Conductor	Metallic screen	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	

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally Sealed 18/30 (36) kV

XUHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XS(F)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XS(F)2Y acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor - nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _o	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x5ORMC	8.25 ^{+0.10}	8.0	25.5	16	29.6	35.1	1000	1.5	0.53
1x7ORMC	9.5 ^{+0.20}	8.0	26.7	25	30.8	36.4	1190	2.1	0.55
1x95ORMC	11.3 ^{+0.20}	8.0	28.5	35	32.6	38.2	1410	2.85	0.57
1x120ORMC	12.5 ^{+0.20}	8.0	29.7	50	33.8	39.4	1660	3.6	0.59
1x150ORMC	14.2 ^{+0.20}	8.0	31.4	50	35.5	41.1	1800	4.5	0.62
1x185ORMC	15.8 ^{+0.20}	8.0	33.0	50	37.1	42.7	1960	5.55	0.64
1x240ORMC	17.9 ^{+0.30}	8.0	35.1	50	39.2	44.8	2180	7.2	0.67
1x300ORMC	20.0 ^{+0.30}	8.0	37.2	50	41.3	46.9	2410	9	0.70
1x400ORMC	22.9 ^{+0.30}	8.0	40.1	50	44.2	49.8	2740	12	0.75
1x500ORMC	25.7 ^{+0.40}	8.0	43.4	50	47.7	53.7	3210	15	0.81
1x630ORMC	29.3 ^{+0.50}	8.0	47.3	50	51.6	57.7	3740	18.9	0.87
1x800ORMC	33.0 ^{+0.50}	8.0	51.4	50	55.7	62.0	4380	24	0.93
1x1000ORMC	38.0 ^{+0.50}	8.0	56.4	50	60.7	67.4	5160	30	1.01

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_o.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_o + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_o.

Nominal cross sectional area	Conductor resistance		Metallic screen resistance		Electrical field stress at conductor/insulation	Zero resistance R _o	Zero reactance X _o	Capacitance C	Capacitive reactance X _c	Charging current I _o	Inductance L	Inductive reactance X _L	Impedance Z
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	3.85/1.40	2.20	0.094	0.13	25.2	0.71	0.48	0.150	0.836
											0.74	0.234	0.855
											0.66	0.208	0.848
1x70RMC/25	0.443	0.568	0.72	0.89	3.67/1.44	1.45	0.087	0.14	23.2	0.77	0.46	0.144	0.586
											0.72	0.226	0.611
											0.64	0.202	0.603
1x95RMC/35	0.320	0.411	0.51	0.63	3.48/1.50	1.04	0.080	0.15	20.9	0.86	0.43	0.136	0.432
											0.69	0.216	0.464
											0.62	0.194	0.454
1x120RMC/50	0.253	0.325	0.36	0.44	3.38/1.54	0.77	0.076	0.16	19.6	0.92	0.42	0.131	0.350
											0.67	0.210	0.387
											0.60	0.189	0.376
1x150RMC/50	0.206	0.265	0.36	0.44	3.26/1.58	0.71	0.071	0.18	18.1	1.00	0.40	0.126	0.293
											0.65	0.203	0.334
											0.59	0.184	0.322
1x185RMC/50	0.164	0.211	0.36	0.44	3.17/1.62	0.65	0.067	0.19	16.8	1.07	0.39	0.122	0.243
											0.63	0.197	0.289
											0.57	0.180	0.277
1x240RMC/50	0.125	0.161	0.36	0.44	3.08/1.66	0.60	0.063	0.21	15.4	1.17	0.37	0.117	0.199
											0.61	0.191	0.250
											0.56	0.175	0.238
1x300RMC/50	0.100	0.129	0.36	0.44	3.00/1.69	0.57	0.060	0.22	14.2	1.26	0.36	0.113	0.172
											0.59	0.185	0.226
											0.54	0.171	0.214
1x400RMC/50	0.0778	0.101	0.36	0.44	2.91/1.73	0.54	0.055	0.25	12.9	1.40	0.34	0.108	0.148
											0.57	0.178	0.205
											0.53	0.166	0.195
1x500RMC/50	0.0605	0.0797	0.36	0.44	2.82/1.76	0.52	0.053	0.27	11.7	1.53	0.34	0.106	0.132
											0.55	0.173	0.190
											0.52	0.164	0.182
1x630RMC/50	0.0469	0.0629	0.36	0.44	2.75/1.80	0.51	0.050	0.30	10.5	1.71	0.32	0.102	0.120
											0.53	0.166	0.178
											0.51	0.160	0.172
1x800RMC/50	0.0367	0.0506	0.36	0.44	2.69/1.84	0.49	0.047	0.33	9.5	1.89	0.31	0.099	0.111
											0.51	0.161	0.169
											0.50	0.157	0.165
1x1000RMC/50	0.0291	0.0419	0.36	0.44	2.63/1.87	0.48	0.044	0.37	8.5	2.12	0.30	0.095	0.104
											0.49	0.155	0.160
											0.49	0.153	0.159

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally Sealed 18/30 (36) kV

XUHKXS acc. to HD 620 S3: 2023 Part 10 Section R
2XS(F)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
N2XS(F)2Y acc. to DIN VDE 0276-620:2018

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
mm ²	kA/s	A									
1x50RMC/16	4.7	3.7	219	220	208	209	229	230	200	200	
1x70RMC/25	6.6	5.3	267	270	255	256	282	284	247	247	
1x95RMC/35	9.0	7.1	319	325	307	308	341	347	300	301	
1x120RMC/50	11.3	9.8	357	371	348	350	387	399	343	345	
1x150RMC/50	14.2	9.8	402	418	392	395	438	455	390	393	
1x185RMC/50	17.5	9.8	452	476	445	450	499	523	447	451	
1x240RMC/50	22.7	9.8	517	555	517	524	580	618	524	531	
1x300RMC/50	28.4	9.8	577	630	584	594	657	710	600	609	
1x400RMC/50	37.8	9.8	650	728	670	684	756	833	699	712	
1x500RMC/50	47.3	9.8	726	834	763	784	858	969	808	828	
1x630RMC/50	59.5	9.8	811	961	870	900	978	1134	936	965	
1x800RMC/50	75.6	9.8	895	1095	980	1022	1097	1314	1071	1112	
1x1000RMC/50	94.5	9.8	980	1241	1091	1147	1222	1518	1216	1272	

Description:

COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	8.0	24.2	16	28.3	33.9	1140	1.75	0.51
1x50RMC	8.25 ^{+0.20}	8.0	25.5	16	29.6	35.1	1290	2.5	0.53
1x70RMC	9.6 ^{+0.20}	8.0	26.8	25	30.9	36.5	1600	3.5	0.55
1x95RMC	11.5 ^{+0.20}	8.0	28.7	35	32.8	38.4	1990	4.75	0.58
1x120RMC	12.9 ^{+0.25}	8.0	30.1	50	34.2	39.8	2400	6	0.60
1x150RMC	14.5 ^{+0.30}	8.0	31.7	50	35.8	41.4	2710	7.5	0.62
1x185RMC	16.0 ^{+0.30}	8.0	33.2	50	37.3	42.9	3080	9.25	0.64
1x240RMC	18.5 ^{+0.30}	8.0	35.7	50	39.8	45.4	3660	12	0.68
1x300RMC	20.5 ^{+0.30}	8.0	37.7	50	41.8	47.4	4270	15	0.71
1x400RMC	23.5 ^{+0.30}	8.0	40.7	50	44.8	50.6	5170	20	0.76
1x500RMC	26.5 ^{+0.40}	8.0	44.2	50	48.5	54.5	6330	25	0.82
1x630RMC	30.3 ^{+0.40}	8.0	48.3	50	52.6	58.7	7720	31.5	0.88
1x800RMC	34.6 ^{+0.50}	8.0	53.0	50	57.3	63.8	9470	40	0.96
1x1000RMC	38.2 ^{+0.40}	8.0	56.6	50	60.9	67.6	11410	50	1.01

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/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	0.77	0.243	0.711
1x50RMC/16	0.387	0.494	1.12	1.38	3.85/1.40	1.88	0.094	0.13	25.2	0.71	0.74	0.234	0.546
1x70RMC/25	0.268	0.342	0.72	0.89	3.66/1.45	1.23	0.087	0.14	23.1	0.78	0.72	0.225	0.409
1x95RMC/35	0.193	0.247	0.51	0.63	3.47/1.51	0.88	0.079	0.15	20.7	0.87	0.68	0.215	0.327
1x120RMC/50	0.153	0.196	0.36	0.44	3.35/1.55	0.64	0.075	0.17	19.2	0.94	0.66	0.208	0.286
1x150RMC/50	0.124	0.159	0.36	0.44	3.25/1.59	0.60	0.071	0.18	17.8	1.01	0.64	0.202	0.257
1x185RMC/50	0.0991	0.127	0.36	0.44	3.16/1.62	0.57	0.067	0.19	16.7	1.08	0.63	0.197	0.234
1x240RMC/50	0.0754	0.0976	0.36	0.44	3.05/1.67	0.54	0.062	0.21	15.1	1.19	0.60	0.189	0.213
1x300RMC/50	0.0601	0.0785	0.36	0.44	2.98/1.70	0.52	0.059	0.23	14.0	1.29	0.58	0.183	0.200
1x400RMC/50	0.0470	0.0625	0.36	0.44	2.90/1.74	0.50	0.055	0.25	12.6	1.42	0.56	0.177	0.187
1x500RMC/50	0.0366	0.0500	0.36	0.44	2.80/1.77	0.49	0.052	0.28	11.5	1.57	0.54	0.171	0.178
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	0.165	0.170

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	Inductance L	Inductive reactance X_L	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x800RMC/50	0.0221	0.0335	0.36	0.44	2.67/1.85	0.48	0.046	0.35	9.2	1.97	0.51	0.159	0.162
1x1000RMC/50	0.0176	0.0287	0.36	0.44	2.63/1.87	0.47	0.044	0.38	8.5	2.13	0.49	0.154	0.157

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	
mm ²	kA/s	A								
1x35RMC/16	5.0	3.7	240	241	228	228	249	250	218	218
1x50RMC/16	7.2	3.7	284	287	271	272	298	300	261	261
1x70RMC/25	10.0	5.3	345	352	332	333	367	372	321	322
1x95RMC/35	13.6	7.1	411	425	399	402	443	456	391	394
1x120RMC/50	17.2	9.8	458	485	452	457	500	525	448	452
1x150RMC/50	21.5	9.8	509	547	509	516	564	599	509	515
1x185RMC/50	26.5	9.8	566	620	575	584	636	686	579	588
1x240RMC/50	34.3	9.8	643	724	667	682	738	813	682	695
1x300RMC/50	42.9	9.8	710	821	750	771	829	933	776	795
1x400RMC/50	57.2	9.8	788	943	853	883	940	1089	895	924
1x500RMC/50	71.5	9.8	869	1077	962	1004	1056	1262	1026	1066
1x630RMC/50	90.1	9.8	957	1232	1082	1139	1187	1470	1175	1231
1x800RMC/50	114.4	9.8	1041	1393	1198	1274	1313	1693	1327	1403
1x1000RMC/50	143.0	9.8	1111	1545	1301	1398	1423	1905	1463	1559

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally and Radially Sealed 18/30 (36) kV

XRUHAKXS acc. to HD 620 S3: 2023 Part 10 Section R
 A2XS(FL)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011
 NA2XS(FL)2Y acc. to DIN VDE 0276-620:2018



Description: ALUMINIUM CONDUCTOR - Circular, stranded and compacted conductor Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	

Parameters

Conductor - nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x50RMC	8.25 ^{+0.10}	8.0	25.5	16	29.5	35.6	1080	1.5	0.78
1x70RMC	9.5 ^{+0.20}	8.0	26.7	25	30.8	36.8	1270	2.1	0.81
1x95RMC	11.3 ^{+0.20}	8.0	28.5	35	32.6	38.6	1500	2.85	0.85
1x120RMC	12.5 ^{+0.20}	8.0	29.7	50	33.8	39.8	1750	3.6	0.88
1x150RMC	14.2 ^{+0.20}	8.0	31.4	50	35.5	41.5	1880	4.5	0.92
1x185RMC	15.8 ^{+0.20}	8.0	33.0	50	37.1	43.1	2040	5.55	0.96
1x240RMC	17.9 ^{+0.10}	8.0	35.1	50	39.2	45.2	2270	7.2	1.02
1x300RMC	20.0 ^{+0.30}	8.0	37.2	50	41.3	47.3	2500	9	1.07
1x400RMC	22.9 ^{+0.30}	8.0	40.1	50	44.2	50.4	2850	12	1.15
1x500RMC	25.7 ^{+0.40}	8.0	43.4	50	47.7	54.1	3320	15	1.24
1x630RMC	29.3 ^{+0.50}	8.0	47.3	50	51.5	58.4	3880	18.9	1.34
1x800RMC	33.0 ^{+0.50}	8.0	51.4	50	55.6	62.7	4520	24	1.44
1x1000RMC	38.0 ^{+0.50}	8.0	56.4	50	60.6	68.1	5320	30	1.57

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2
 - SPB** — Single Point Bonded
 - CB** — Cross Bonded
 - BE** — Both Ends
 - De** — Cable diameter
- 1** — Cables in trefoil formation, the distance between cables D_c.
 - 2** — Cables in flat formation (in the ground), the distance between cables D_c + 70 mm
 - 3** — Cables in flat formation (in the air), the distance between cables 2 x D_c.

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 ₀	Inductance L	Inductive reactance X _L	Impedance Z
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x50RMC/16	0.641	0.822	1.12	1.38	3.85/1.40	1.55	0.095	0.13	25.2	0.71	0.48	0.151	0.836
											0.74	0.234	0.855
											0.67	0.209	0.848
1x70RMC/25	0.443	0.568	0.72	0.89	3.67/1.44	1.12	0.089	0.14	23.2	0.77	0.46	0.144	0.586
											0.72	0.226	0.611
											0.64	0.202	0.603
1x95RMC/35	0.320	0.411	0.51	0.63	3.48/1.50	0.85	0.082	0.15	20.9	0.86	0.43	0.136	0.433
											0.69	0.216	0.464
											0.62	0.195	0.454
1x120RMC/50	0.253	0.325	0.36	0.44	3.38/1.54	0.66	0.078	0.16	19.6	0.92	0.42	0.132	0.351
											0.67	0.210	0.387
											0.61	0.190	0.376
1x150RMC/50	0.206	0.265	0.36	0.44	3.26/1.58	0.60	0.073	0.18	18.1	1.00	0.40	0.127	0.293
											0.65	0.203	0.334
											0.59	0.185	0.323
1x185RMC/50	0.164	0.211	0.36	0.44	3.17/1.62	0.54	0.069	0.19	16.8	1.07	0.39	0.122	0.244
											0.63	0.197	0.289
											0.57	0.180	0.278
1x240RMC/50	0.125	0.161	0.36	0.44	3.08/1.66	0.49	0.064	0.21	15.4	1.17	0.37	0.117	0.199
											0.61	0.191	0.250
											0.56	0.176	0.238
1x300RMC/50	0.100	0.129	0.36	0.44	3.00/1.69	0.45	0.061	0.22	14.2	1.26	0.36	0.113	0.172
											0.59	0.185	0.226
											0.55	0.171	0.215
1x400RMC/50	0.0778	0.101	0.36	0.44	2.91/1.73	0.42	0.057	0.25	12.9	1.40	0.35	0.109	0.149
											0.57	0.178	0.205
											0.53	0.167	0.195
1x500RMC/50	0.0605	0.0797	0.36	0.44	2.82/1.76	0.39	0.054	0.27	11.7	1.53	0.34	0.106	0.133
											0.55	0.173	0.190
											0.52	0.164	0.182
1x630RMC/50	0.0469	0.0629	0.36	0.44	2.75/1.80	0.36	0.051	0.30	10.5	1.71	0.33	0.103	0.120
											0.53	0.167	0.178
											0.32	0.100	0.112
1x800RMC/50	0.0367	0.0506	0.36	0.44	2.69/1.84	0.35	0.048	0.33	9.5	1.89	0.51	0.161	0.169
											0.50	0.158	0.166
											0.31	0.096	0.105
1x1000RMC/50	0.0291	0.0418	0.36	0.44	2.63/1.87	0.33	0.045	0.37	8.5	2.12	0.49	0.155	0.160
											0.49	0.154	0.160

MEDIUM VOLTAGE XLPE POWER CABLES

Longitudinally and Radially Sealed 18/30 (36) kV

XRUHKXS acc. to HD 620 S3: 2023 Part 10 Section R

2XS(FL)2Y acc. to IEC 60502-2:2014 and BS 7870-4.10:2011

N2XS(FL)2Y acc. to DIN VDE 0276-620:2018

Description: COPPER CONDUCTOR - Circular, stranded and compacted conductor
Class 2

Operating Conditions

For laying in ground

Depth of lay:	0,7 m
Ground temperature:	20°C
Soil thermal resistivity:	1,0 K · m/W

For installation in air

Ambient temperature:	25°C
Protection from direct solar radiation	



Current – carrying capacity

Nominal cross sectional area	Max short circuit capacity		GROUND				AIR			
	Conductor	Metallic screen	FLAT		TREFOIL		FLAT		TREFOIL	
mm ²	kA/s	A	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB	BE	SPB, CB
1x50RMC/16	4.7	3.7	220	222	210	210	231	233	203	203
1x70RMC/25	6.6	5.3	268	272	257	257	285	288	250	251
1x95RMC/35	9.0	7.1	319	328	308	310	344	352	304	305
1x120RMC/50	11.3	9.8	359	374	351	354	390	405	348	350
1x150RMC/50	14.2	9.8	401	422	394	399	441	462	395	399
1x185RMC/50	17.5	9.8	449	480	447	453	501	531	452	457
1x240RMC/50	22.7	9.8	512	559	518	528	581	626	530	539
1x300RMC/50	28.4	9.8	568	634	585	598	655	720	605	617
1x400RMC/50	37.8	9.8	636	732	670	689	748	844	703	722
1x500RMC/50	47.3	9.8	705	840	761	789	845	982	812	838
1x630RMC/50	59.5	9.8	779	966	864	905	953	1149	938	977
1x800RMC/50	75.6	9.8	849	1102	968	1025	1060	1331	1069	1124
1x1000RMC/50	94.5	9.8	919	1248	1075	1152	1169	1538	1209	1286

Parameters

Conductor – nominal cross sectional area	Conductor diameter	Insulation		Metallic screen		Cable diameter D _c	Cable weight	Maximum cable pulling force	Recom. min. bending radius for laying
		Thickness	Diameter over insulation	Cross sectional area	Diameter over metallic screen				
mm ²	mm			mm ²	mm	mm	kg/km	kN	m
1x35RMC	7.0 ^{+0.15}	8.0	24.2	16	28.3	34.3	1210	1.75	0.74
1x50RMC	8.25 ^{+0.20}	8.0	25.5	16	29.5	35.6	1370	2.5	0.78
1x70RMC	9.6 ^{+0.20}	8.0	26.8	25	30.9	36.9	1690	3.5	0.81
1x95RMC	11.5 ^{+0.20}	8.0	28.7	35	32.8	38.8	2080	4.75	0.86
1x120RMC	12.9 ^{+0.25}	8.0	30.1	50	34.2	40.2	2490	6	0.89
1x150RMC	14.5 ^{+0.30}	8.0	31.7	50	35.8	41.8	2790	7.5	0.93
1x185RMC	16.0 ^{+0.30}	8.0	33.2	50	37.3	43.3	3170	9.25	0.97
1x240RMC	18.5 ^{+0.30}	8.0	35.7	50	39.8	45.8	3750	12	1.03
1x300RMC	20.5 ^{+0.30}	8.0	37.7	50	41.8	47.8	4360	15	1.08
1x400RMC	23.5 ^{+0.30}	8.0	40.7	50	44.8	51.0	5270	20	1.16
1x500RMC	26.5 ^{+0.40}	8.0	44.2	50	48.5	54.9	6440	25	1.25
1x630RMC	30.3 ^{+0.40}	8.0	48.3	50	52.5	59.4	7860	31.5	1.35
1x800RMC	34.6 ^{+0.50}	8.0	53.0	50	57.2	64.5	9620	40	1.47
1x1000RMC	38.2 ^{+0.40}	8.0	56.6	50	60.8	68.3	11570	50	1.56

Electrical Data

- RM (RMC)** — Circular Stranded Compacted Conductor, Class 2 **1** — Cables in trefoil formation, the distance between cables D_0
- SPB** — Single Point Bonded **2** — Cables in flat formation (in the ground), the distance between cables $D_0 + 70$ mm
- CB** — Cross Bonded
- BE** — Both Ends **3** — Cables in flat formation (in the air), the distance between cables $2 \times D_0$
- De** — Cable diameter

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_0	Inductance L	Inductive reactance XI	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x35RMC/16	0.524	0.668	1.12	1.38	4.07/1.34	1.41	0.103	0.12	27.6	0.65	0.51	0.159	0.687
											0.78	0.244	0.711
											0.69	0.217	0.703
											0.48	0.151	0.516
1x50RMC/16	0.387	0.494	1.12	1.38	3.85/1.40	1.22	0.095	0.13	25.2	0.71	0.74	0.234	0.546
											0.67	0.209	0.536
											0.46	0.144	0.371
1x70RMC/25	0.268	0.342	0.72	0.89	3.66/1.45	0.89	0.088	0.14	23.1	0.78	0.72	0.225	0.410
											0.64	0.202	0.397
											0.43	0.136	0.281
1x95RMC/35	0.193	0.247	0.51	0.63	3.47/1.51	0.68	0.081	0.15	20.7	0.87	0.68	0.215	0.327
											0.62	0.194	0.314
											0.42	0.131	0.235
1x120RMC/50	0.153	0.196	0.36	0.44	3.35/1.55	0.53	0.076	0.17	19.2	0.94	0.66	0.209	0.286
											0.60	0.189	0.272
											0.40	0.126	0.203
1x150RMC/50	0.124	0.159	0.36	0.44	3.25/1.59	0.49	0.072	0.18	17.8	1.01	0.64	0.202	0.257
											0.59	0.184	0.243
											0.39	0.122	0.176
1x185RMC/50	0.0991	0.127	0.36	0.44	3.16/1.62	0.46	0.068	0.19	16.7	1.08	0.63	0.197	0.234
											0.57	0.180	0.220
											0.37	0.116	0.152
1x240RMC/50	0.0754	0.0976	0.36	0.44	3.05/1.67	0.42	0.063	0.21	15.1	1.19	0.60	0.189	0.213
											0.55	0.174	0.200
											0.36	0.112	0.137
1x300RMC/50	0.0601	0.0785	0.36	0.44	2.98/1.70	0.40	0.060	0.23	14.0	1.29	0.58	0.184	0.200
											0.54	0.171	0.188
											0.34	0.108	0.125
1x400RMC/50	0.0470	0.0625	0.36	0.44	2.90/1.74	0.38	0.056	0.25	12.6	1.42	0.56	0.177	0.187
											0.53	0.166	0.177
											0.33	0.105	0.116
1x500RMC/50	0.0366	0.0499	0.36	0.44	2.80/1.77	0.36	0.053	0.28	11.5	1.57	0.54	0.171	0.178
											0.52	0.163	0.171
											0.32	0.102	0.109
1x630RMC/50	0.0283	0.0403	0.36	0.44	2.73/1.81	0.34	0.050	0.31	10.3	1.75	0.53	0.165	0.170
											0.51	0.160	0.165

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_0	Inductance L	Inductive reactance XI	Impedance
	DC 20°C	AC 90°C	DC 20°C	AC 80°C									
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	Ω/km	Ω/km	μF/km	Ω/km	A/km	mH/km	Ω/km	Ω/km
1x800RMC/50	0.0221	0.0334	0.36	0.44	2.67/1.85	0.33	0.047	0.35	9.2	1.97	0.31	0.098	0.104
											0.50	0.156	0.160
											0.30	0.096	0.100
1x1000RMC/50	0.0176	0.0287	0.36	0.44	2.63/1.87	0.32	0.045	0.38	8.5	2.13	0.49	0.155	0.157
											0.49	0.154	0.156

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	
mm ²	kA/s			A						
1x35RMC/16	5.0	3.7	238	241	228	228	248	250	219	219
1x50RMC/16	7.2	3.7	282	286	271	272	297	301	262	262
1x70RMC/25	10.0	5.3	342	351	331	332	364	372	323	324
1x95RMC/35	13.6	7.1	406	424	397	401	439	456	392	395
1x120RMC/50	17.2	9.8	450	483	451	457	495	525	448	454
1x150RMC/50	21.5	9.8	499	546	506	515	556	599	509	517
1x185RMC/50	26.5	9.8	552	618	571	584	625	685	578	590
1x240RMC/50	34.3	9.8	623	723	661	680	721	813	679	697
1x300RMC/50	42.9	9.8	683	820	743	770	804	932	771	797
1x400RMC/50	57.2	9.8	753	940	841	881	905	1087	887	924
1x500RMC/50	71.5	9.8	821	1073	945	999	1006	1259	1013	1066
1x630RMC/50	90.1	9.8	894	1226	1058	1134	1116	1464	1155	1229
1x800RMC/50	114.4	9.8	959	1386	1165	1267	1220	1684	1298	1398
1x1000RMC/50	143.0	9.8	1014	1534	1260	1389	1306	1894	1423	1552



HIGH-VOLTAGE Cables

2

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TYPES OF CABLES

Cable constructions are shown in the following figures:

Figure 1:
XRUHAKXS, XRUHKXS – NA2XS(FL)2Y, N2XS(FL)2Y.

Description of Figure 1

- 1 – Aluminium or copper conductor
- 2 – Semi-conductive screen extruded on the phase conductor
- 3 – XLPE insulation
- 4 – Semi-conductive screen extruded on insulation
- 5 – Wrapping of semi-conductive water swelling tape
- 6 – Metallic screen
- 7 – Wrapping of semi-conductive water swelling tape
- 8 – Longitudinally applied aluminium tape coated with PE copolymer
- 9 – HDPE / MDPE outer sheath



For unusual applications TELE-FONIKA Kable offers you the single-core cables:

Figure 2:
YHAKXS, YHKXS – NA2XSY, N2XSY – XHAKXS,
XHAKXS – NA2XS2Y, N2XS2Y, NHAKXS, NHKXS – NA2XSH,
N2XSH.

Description of Figure 2

- 1 – Aluminium or copper conductor
- 2 – Semi-conductive screen extruded on the phase conductor
- 3 – XLPE insulation
- 4 – Semi-conductive screen extruded on insulation
- 5 – Wrapping of semi-conductive tape
- 6 – Metallic screen
- 7 – Wrapping of polyester tape
- 8 – Outer sheath: PVC, HDPE / MDPE, LSF

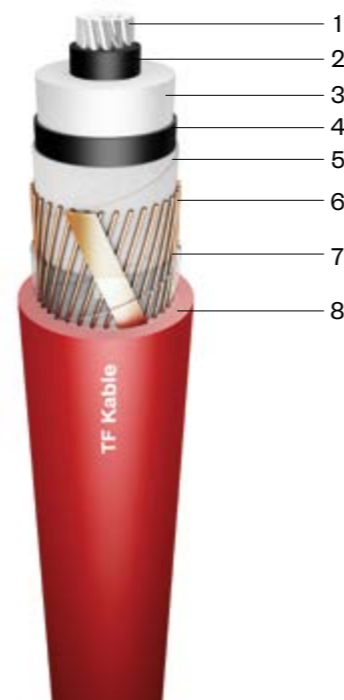
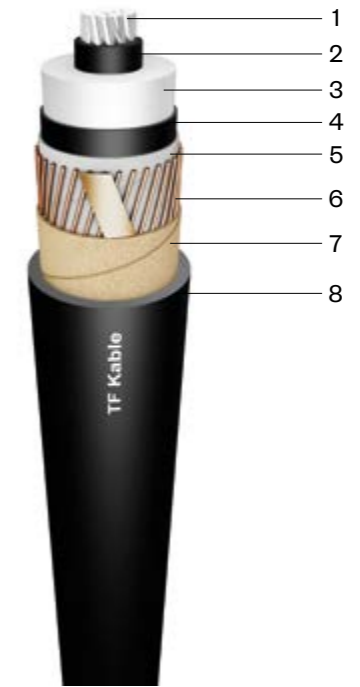


Figure 3:
XUHAKXS, XUHKXS – NA2XS(F)2Y, N2XS(F)2Y,
NUHAKXS, NUHKXS – NA2XS(F)H, N2XS(F)H.

Description of Figure 3

- 1 – Aluminium or copper conductor
- 2 – Semi-conductive screen extruded on the phase conductor
- 3 – XLPE insulation
- 4 – Semi-conductive screen extruded on insulation
- 5 – Wrapping of semi-conductive water swelling tape
- 6 – Metallic screen
- 7 – Wrapping of non-conductive water swelling tape
- 8 – Outer sheath: HDPE / MDPE, LSF



Milliken design conductors are applied for cables conductors with cross-sections > 1000 mm²



Selection of cable

High voltage cables are manufactured based on customer specifications and factory standards.

Cable structures are based on the requirements of IEC standards:

IEC 60287 – Calculation of current-carrying capacity of cables (load factor 100%)

IEC 60853 – Calculation of current-carrying capacity of cables for cyclic load or fault conditions

IEC 60949 – Calculation of maximum short circuit current for cables

IEC 61443 – Maximum short circuit temperature for cables for voltages above 30kV

IEC 60228 – Conductors of wires and cables

When selecting cable, specialized software is used to simulate the cable system operation.

The Minimal diameter of casing pipes: min. 1.5 x D (mm), where D = external diameter of cable in mm.

Calculation basis

In the soil – the temperature of 20°C, cabling depth 1.0 m, soil thermal resistivity K = 1.0 Km/W,

In the distance between phases = 2xD.

In the air – the temperature of 35°C

Installation data

Minimal temperature of the cable during whole laying process: >0°C.

Environmental temperature > -5°C (detailed information can be found in the laying guidelines).

Minimal bending radius and the maximum pulling force for conductor:

values are given in the parameter tables.

Pulling forces for outer sheath (cable grip) can be found in the laying guidelines.

The minimal inner diameter of the duct: 1.5 x D, where D = external diameter of the cable.

HIGH-VOLTAGE XLPE POWER CABLES

36/60=69(72.5) kV

XRUHKXS according to IEC 60840
 2XS(FL)2Y according to IEC 60840
 N2XS(FL)2Y according to DIN VDE 0276-632



Description: COPPER CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _e Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
120RM	12.8 ^{+0.3}	10.0	34.0	35	37.8	44.1	2670	6.0	1.10
150RM	14.25 ^{+0.3}	10.0	35.4	35	39.2	45.6	2980	7.5	1.14
185RM	15.85 ^{+0.3}	10.0	37.0	35	40.8	47.2	3370	9.25	1.18
240RM	18.5 ^{+0.3}	10.0	39.7	35	43.5	50.0	3990	12.0	1.25
300RM	20.3 ^{+0.4}	10.0	41.5	35	45.3	51.8	4610	15.0	1.30
400RM	23.5 ^{+0.4}	10.0	45.1	35	49.3	56.2	5650	20.0	1.40
500RM	26.3 ^{+0.5}	10.0	47.9	35	52.1	59.2	6780	25.0	1.48
630RM	30.0 ^{+0.5}	10.0	51.8	35	56.0	63.3	8190	31.5	1.58
800RM	34.4 ^{+0.7}	10.0	56.2	35	60.4	67.9	9940	40.0	1.70
1000RM	38.3 ^{+0.7}	10.0	60.5	35	65.1	73.0	12130	50.0	1.83
1200RMS	42.0 ^{+0.8}	10.0	66.0	50	70.6	78.9	14530	60.0	1.97
1400RMS	45.8 ^{+0.8}	10.0	69.8	50	74.4	82.9	16620	70.0	2.08
1600RMS	49.0 ^{+1.2}	10.0	73.0	50	77.6	86.3	18520	80.0	2.16
1800RMS	52.1 ^{+1.0}	10.0	76.1	50	80.7	89.8	20880	90.0	2.25
2000RMS	54.4 ^{+1.0}	10.0	78.4	50	83.0	92.1	22460	100.0	2.31
2500RMS	60.5 ^{+1.0}	10.0	85.5	50	90.5	100.2	27490	100.0	2.50
3000RMS	68.4 ^{+1.0}	10.0	93.4	50	98.4	108.7	33760	100.0	2.72

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_e
- 2** — Cables in trefoil formation, the distance between cables D_e

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
						Conductor	Metallic screen			In ground	In air
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		kA/s	kA/s			ooo ¹	ooo ²
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A
120	0.1530	0.1957	0.526	0.650	5.8 / 2.39	17.4	7.4	0.150	0.621	390 / 370	480 / 455
									0.436	370 / 365	415 / 410
150	0.1240	0.1589	0.526	0.650	5.62 / 2.44	21.8	7.4	0.160	0.606	440 / 415	545 / 515
									0.421	415 / 410	470 / 465
185	0.0991	0.1273	0.526	0.650	5.45 / 2.5	26.8	7.4	0.171	0.592	495 / 460	625 / 580
									0.407	470 / 460	540 / 530
240	0.0754	0.0975	0.526	0.650	5.22 / 2.59	34.7	7.4	0.190	0.572	575 / 520	740 / 675
									0.387	545 / 535	635 / 625
300	0.0601	0.0784	0.526	0.650	5.09 / 2.64	43.4	7.4	0.203	0.561	650 / 570	850 / 755
									0.376	615 / 600	730 / 710
400	0.0470	0.0622	0.526	0.650	4.89 / 2.72	57.8	7.4	0.228	0.548	745 / 625	985 / 855
									0.363	700 / 675	845 / 820
500	0.0366	0.0497	0.526	0.650	4.77 / 2.78	72.2	7.4	0.247	0.536	850 / 685	1145 / 955
									0.351	795 / 755	975 / 935
630	0.0283	0.0400	0.526	0.650	4.64 / 2.85	90.8	7.4	0.273	0.523	970 / 740	1330 / 1060
									0.338	895 / 845	1120 / 1070
800	0.0221	0.0332	0.526	0.650	4.52 / 2.91	115.3	7.4	0.303	0.509	1090 / 790	1535 / 1170
									0.325	1000 / 930	1275 / 1205
1000	0.0176	0.0283	0.378	0.467	4.43 / 2.97	144.0	10.6	0.332	0.502	1210 / 825	1720 / 1255
									0.318	1090 / 1005	1420 / 1325
1200 RMS	0.0151	0.0224	0.378	0.467	4.34 / 3.02	172.7	10.6	0.369	0.500	1335 / 820	1915 / 1275
									0.315	1235 / 1075	1625 / 1455
1400 RMS	0.0129	0.0200	0.378	0.467	4.28 / 3.06	201.4	10.6	0.395	0.492	1435 / 840	2090 / 1335
									0.307	1320 / 1130	1760 / 1550
1600 RMS	0.0113	0.0184	0.378	0.467	4.24 / 3.08	230.1	10.6	0.416	0.487	1520 / 860	2245 / 1390
									0.302	1385 / 1175	1880 / 1640
1800 RMS	0.0101	0.0172	0.378	0.467	4.21 / 3.1	258.8	10.6	0.437	0.482	1590 / 870	2380 / 1430
									0.298	1440 / 1205	1980 / 1715
2000 RMS	0.0090	0.0161	0.378	0.467	4.19 / 3.12	287.4	10.6	0.453	0.479	1660 / 880	2490 / 1455
									0.294	1490 / 1235	2060 / 1765
2500 RMS	0.0072	0.0143	0.378	0.467	4.13 / 3.16	359.1	10.6	0.500	0.474	1790 / 900	2720 / 1520
									0.290	1595 / 1295	2240 / 1885
3000 RMS	0.0060	0.0132	0.378	0.467	4.07 / 3.2	430.8	10.6	0.553	0.466	1930 / 920	3005 / 1590
									0.281	1695 / 1345	2440 / 2015

HIGH-VOLTAGE XLPE POWER CABLES

36/60=69(72.5) kV

XRUHAKXS according to IEC 60840
 A2XS(FL)2Y according to IEC 60840
 NA2XS(FL)2Y according to DIN VDE 0276-632



Description: ALUMINIUM CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
120RM	12.6 ^{+0.2}	10.0	33.8	35	37.6	43.9	1930	3.6	1.10
150RM	14.2 ^{+0.2}	10.0	35.4	35	39.2	45.5	2070	4.5	1.14
185RM	15.8 ^{+0.2}	10.0	37.0	35	40.8	47.1	2240	5.55	1.18
240RM	17.9 ^{+0.2}	10.0	39.1	35	42.9	49.2	2480	7.2	1.23
300RM	20.0 ^{+0.3}	10.0	41.2	35	45.0	51.5	2750	9.0	1.29
400RM	22.9 ^{+0.3}	10.0	44.5	35	48.7	55.4	3200	12.0	1.39
500RM	25.7 ^{+0.4}	10.0	47.3	35	51.5	58.4	3640	15.0	1.46
630RM	29.3 ^{+0.5}	10.0	50.9	35	55.1	62.4	4210	18.9	1.56
800RM	33.0 ^{+0.4}	10.0	54.8	35	59.0	66.5	4870	24.0	1.67
1000RM	38.0 ^{+0.5}	10.0	60.2	35	64.8	72.7	5810	30.0	1.82
1200RM	42.5 ^{+0.6}	10.0	64.7	50	69.3	77.6	6820	36.0	1.94
1200RMS	43.0 ^{+0.8}	10.0	67.0	50	71.6	79.9	7190	36.0	2.00
1400RMS	45.1 ^{+0.8}	10.0	69.1	50	73.7	82.2	7760	42.0	2.06
1600RMS	48.5 ^{+1.2}	10.0	72.5	50	77.1	85.8	8530	48.0	2.15
1800RMS	52.7 ^{+1.0}	10.0	76.7	50	81.3	90.4	9460	54.0	2.26
2000RMS	54.5 ^{+1.0}	10.0	78.5	50	83.1	92.2	10030	60.0	2.31
2500RMS	59.0 ^{+1.0}	10.0	84.0	50	89.0	98.5	11560	75.0	2.47
3000RMS	67.0 ^{+1.0}	10.0	92.0	50	97.0	107.1	14010	90.0	2.68

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		Conductor	Metallic screen			In ground	In air
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A
120	0.2530	0.3247	0.526	0.650	5.82 / 2.38	11.6	7.4	0.149	0.623	300 / 290	370 / 360
									0.438	285 / 285	320 / 320
150	0.2060	0.2645	0.526	0.650	5.62 / 2.44	14.5	7.4	0.160	0.606	340 / 325	420 / 405
									0.422	320 / 320	365 / 360
185	0.1640	0.2108	0.526	0.650	5.45 / 2.5	17.8	7.4	0.171	0.592	385 / 365	485 / 460
									0.407	365 / 360	415 / 415
240	0.1250	0.1610	0.526	0.650	5.26 / 2.57	23.1	7.4	0.186	0.576	445 / 420	570 / 540
									0.391	425 / 420	490 / 485
300	0.1000	0.1291	0.526	0.650	5.11 / 2.63	28.8	7.4	0.201	0.563	505 / 465	655 / 610
									0.378	480 / 470	565 / 555
400	0.0778	0.1010	0.526	0.650	4.92 / 2.71	38.3	7.4	0.223	0.550	580 / 525	765 / 695
									0.365	550 / 535	660 / 645
500	0.0605	0.0792	0.526	0.650	4.8 / 2.77	47.8	7.4	0.243	0.538	665 / 580	890 / 790
									0.353	625 / 610	765 / 745
630	0.0469	0.0623	0.526	0.650	4.67 / 2.83	60.2	7.4	0.267	0.525	765 / 640	1045 / 895
									0.340	715 / 690	890 / 865
800	0.0367	0.0499	0.526	0.650	4.56 / 2.89	76.4	7.4	0.294	0.514	870 / 695	1210 / 1000
									0.329	810 / 770	1025 / 985
1000	0.0291	0.0409	0.378	0.467	4.44 / 2.96	95.3	10.6	0.330	0.503	980 / 745	1395 / 1110
									0.318	905 / 850	1175 / 1115
1200	0.0247	0.0359	0.378	0.467	4.36 / 3.01	114.3	10.6	0.361	0.494	1070 / 745	1545 / 1145
									0.309	975 / 895	1290 / 1205
1200 RMS	0.0247	0.0319	0.378	0.467	4.32 / 3.03	114.3	10.6	0.376	0.497	1115 / 760	1605 / 1170
									0.313	1040 / 950	1375 / 1175
1400 RMS	0.0212	0.0275	0.378	0.467	4.29 / 3.05	133.3	10.6	0.390	0.494	1210 / 790	1755 / 1235
									0.309	1130 / 1015	1505 / 1380
1600 RMS	0.0186	0.0242	0.378	0.467	4.25 / 3.08	152.3	10.6	0.413	0.488	1300 / 815	1910 / 1290
									0.303	1210 / 1070	1635 / 1480
1800 RMS	0.0165	0.0215	0.378	0.467	4.2 / 3.11	171.2	10.6	0.441	0.481	1395 / 835	2080 / 1350
									0.297	1295 / 1130	1775 / 1590
2000 RMS	0.0149	0.0195	0.378	0.467	4.19 / 3.12	190.2	10.6	0.453	0.479	1470 / 850	2205 / 1390
									0.294	1360 / 1175	1880 / 1665
2500 RMS	0.0127	0.0168	0.378	0.467	4.14 / 3.15	237.5	10.6	0.490	0.476	1605 / 875	2425 / 1460
									0.291	1475 / 1245	2065 / 1800
3000 RMS	0.0100	0.0135	0.378	0.467	4.08 / 3.19	284.9	10.6	0.544	0.467	1855 / 910	2875 / 1565
									0.282	1690 / 1370	2425 / 2040

HIGH-VOLTAGE XLPE POWER CABLES

64/110=115(123) kV

XRUHKXS according to IEC 60840

2XS(FL)2Y according to IEC 60840

N2XS(FL)2Y according to DIN VDE 0276-632



Description: COPPER CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _e Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
150RM	14.25 ^{+0.3}	17.0	51.3	95	57.1	64.9	5060	7.5	1.63
185RM	15.85 ^{+0.3}	17.0	52.3	95	58.1	66.1	5470	9.3	1.66
240RM	18.5 ^{+0.3}	16.0	52.5	95	58.3	66.4	5900	12.0	1.66
300RM	20.3 ^{+0.4}	15.0	52.3	95	58.1	66.2	6370	15.0	1.66
400RM	23.5 ^{+0.4}	14.0	55.5	95	59.3	67.4	7180	20.0	1.69
500RM	26.3 ^{+0.5}	14.0	56.3	95	62.1	70.4	8350	25.0	1.76
630RM	30.0 ^{+0.5}	14.0	60.6	95	66.4	75.1	9900	31.5	1.88
800RM	34.4 ^{+0.7}	14.0	65.0	95	70.8	79.7	11710	40.0	2.00
1000RM	38.3 ^{+0.7}	14.0	68.9	95	74.7	84.0	13870	50.0	2.10
1200RMS	42.0 ^{+0.8}	14.0	74.0	95	79.8	89.3	16110	60.0	2.24
1400RMS	45.8 ^{+0.8}	14.0	77.8	95	83.6	93.5	18280	70.0	2.34
1600RMS	49.0 ^{+1.2}	14.0	81.0	95	86.8	96.9	20240	80.0	2.43
1800RMS	52.1 ^{+1.0}	14.0	84.1	95	89.9	100.2	22620	90.0	2.51
2000RMS	54.4 ^{+1.0}	14.0	86.4	95	92.2	102.7	24250	100.0	2.57
2500RMS	60.5 ^{+1.0}	14.5	94.5	95	100.7	111.8	29550	100.0	2.80
3000RMS	68.4 ^{+1.0}	14.5	102.4	95	108.6	120.3	35950	100.0	3.01

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_e
- 2** — Cables in trefoil formation, the distance between cables D_e

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		Conductor	Metallic screen			In ground	In air
120	0.2530	0.3247	0.526	0.650	5.82 / 2.38	11.6	7.4	0.149	0.623	300 / 290	370 / 360
									0.438	285 / 285	320 / 320
150	0.2060	0.2645	0.526	0.650	5.62 / 2.44	14.5	7.4	0.160	0.606	340 / 325	420 / 405
									0.422	320 / 320	365 / 360
185	0.1640	0.2108	0.526	0.650	5.45 / 2.5	17.8	7.4	0.171	0.592	385 / 365	485 / 460
									0.407	365 / 360	415 / 415
240	0.1250	0.1610	0.526	0.650	5.26 / 2.57	23.1	7.4	0.186	0.576	445 / 420	570 / 540
									0.391	425 / 420	490 / 485
300	0.1000	0.1291	0.526	0.650	5.11 / 2.63	28.8	7.4	0.201	0.563	505 / 465	655 / 610
									0.378	480 / 470	565 / 555
400	0.0778	0.1010	0.526	0.650	4.92 / 2.71	38.3	7.4	0.223	0.550	580 / 525	765 / 695
									0.365	550 / 535	660 / 645
500	0.0605	0.0792	0.526	0.650	4.8 / 2.77	47.8	7.4	0.243	0.538	665 / 580	890 / 790
									0.353	625 / 610	765 / 745
630	0.0469	0.0623	0.526	0.650	4.67 / 2.83	60.2	7.4	0.267	0.525	765 / 640	1045 / 895
									0.340	715 / 690	890 / 865
800	0.0367	0.0499	0.526	0.650	4.56 / 2.89	76.4	7.4	0.294	0.514	870 / 695	1210 / 1000
									0.329	810 / 770	1025 / 985
1000	0.0291	0.0409	0.378	0.467	4.44 / 2.96	95.3	10.6	0.330	0.503	980 / 745	1395 / 1110
									0.318	905 / 850	1175 / 1115
1200	0.0247	0.0359	0.378	0.467	4.36 / 3.01	114.3	10.6	0.361	0.494	1070 / 745	1545 / 1145
									0.309	975 / 895	1290 / 1205
1200 RMS	0.0247	0.0319	0.378	0.467	4.32 / 3.03	114.3	10.6	0.376	0.497	1115 / 760	1605 / 1170
									0.313	1040 / 950	1375 / 1175
1400 RMS	0.0212	0.0275	0.378	0.467	4.29 / 3.05	133.3	10.6	0.390	0.494	1210 / 790	1755 / 1235
									0.309	1130 / 1015	1505 / 1380
1600 RMS	0.0186	0.0242	0.378	0.467	4.25 / 3.08	152.3	10.6	0.413	0.488	1300 / 815	1910 / 1290
									0.303	1210 / 1070	1635 / 1480
1800 RMS	0.0165	0.0215	0.378	0.467	4.2 / 3.11	171.2	10.6	0.441	0.481	1395 / 835	2080 / 1350
									0.297	1295 / 1130	1775 / 1590
2000 RMS	0.0149	0.0195	0.378	0.467	4.19 / 3.12	190.2	10.6	0.453	0.479	1470 / 850	2205 / 1390
									0.294	1360 / 1175	1880 / 1665
2500 RMS	0.0127	0.0168	0.378	0.467	4.14 / 3.15	237.5	10.6	0.490	0.476	1605 / 875	2425 / 1460
									0.291	1475 / 1245	2065 / 1800
3000 RMS	0.0100	0.0135	0.378	0.467	4.08 / 3.19	284.9	10.6	0.544	0.467	1855 / 910	2875 / 1565
									0.282	1690 / 1370	2425 / 2040

HIGH-VOLTAGE XLPE POWER CABLES

64/110=115(123) kV

XRUHAKXS according to IEC 60840
 A2XS(FL)2Y according to IEC 60840
 NA2XS(FL)2Y according to DIN VDE 0276-632



Description: ALUMINIUM CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
150RM	14.2 ^{+0.2}	17.0	51.2	95	57.0	64.9	4150	4.5	1.63
185RM	15.8 ^{+0.2}	17.0	62.2	95	58.0	66.1	4330	5.55	1.62
240RM	17.9 ^{+0.2}	16.0	61.9	95	57.7	65.8	4390	7.2	1.65
300RM	20.0 ^{+0.3}	15.0	62.0	95	57.8	65.9	4500	9.0	1.65
400RM	22.9 ^{+0.3}	14.0	62.9	95	58.7	66.8	4740	12.0	1.67
500RM	25.7 ^{+0.4}	14.0	65.7	95	61.5	69.8	5220	15.0	1.75
630RM	29.3 ^{+0.5}	14.0	69.7	95	65.5	74.0	5880	18.9	1.85
800RM	33.0 ^{+0.4}	14.0	63.6	95	69.4	78.3	6620	24.0	1.96
1000RM	38.0 ^{+0.5}	14.0	68.6	95	74.4	83.7	7550	30.0	2.10
1200RM	42.5 ^{+0.6}	14.0	73.1	95	78.9	88.4	8440	36.0	2.21
1200RMS	43.0 ^{+0.8}	14.0	75.0	95	80.8	90.5	8810	36.0	2.27
1400RMS	45.1 ^{+0.8}	14.0	77.1	95	82.9	92.8	9410	42.0	2.32
1600RMS	48.5 ^{+1.2}	14.0	80.5	95	86.3	96.4	10230	48.0	2.42
1800RMS	52.7 ^{+1.0}	14.0	84.7	95	90.5	100.8	11190	54.0	2.52
2000RMS	54.5 ^{+1.0}	14.0	86.5	95	92.3	102.8	11820	60.0	2.57
2500RMS	59.0 ^{+1.0}	14.5	93.0	95	99.2	110.1	13600	75.0	2.76
3000RMS	67.0 ^{+1.0}	14.5	101.0	95	107.2	118.7	16170	90.0	2.97

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		Conductor	Metallic screen			In ground	In air
150	0.2060	0.2645	0.195	0.241	6.82 / 2.29	14.5	19.5	0.122	0.677	335 / 320	400 / 385
185	0.1640	0.2107	0.195	0.241	6.67 / 2.33	17.8	19.5	0.127	0.493	320 / 315	365 / 360
240	0.1250	0.1609	0.195	0.241	6.71 / 2.57	23.1	19.5	0.139	0.660	380 / 355	460 / 435
300	0.1000	0.1290	0.195	0.241	6.76 / 2.86	28.8	19.5	0.155	0.475	360 / 355	415 / 410
400	0.0778	0.1008	0.195	0.241	6.82 / 3.21	38.3	19.5	0.177	0.634	440 / 400	545 / 510
500	0.0605	0.0790	0.195	0.241	6.62 / 3.29	47.8	19.5	0.191	0.449	420 / 410	490 / 480
630	0.0469	0.0620	0.195	0.241	6.38 / 3.39	60.2	19.5	0.211	0.612	500 / 450	630 / 580
800	0.0367	0.0495	0.195	0.241	6.2 / 3.47	76.4	19.5	0.230	0.427	475 / 465	560 / 550
1000	0.0291	0.0405	0.195	0.241	6.01 / 3.56	95.3	19.5	0.254	0.588	575 / 490	735 / 655
1200	0.0247	0.0355	0.195	0.241	5.88 / 3.63	114.3	19.5	0.276	0.403	545 / 520	655 / 635
1200 RMS	0.0247	0.0319	0.195	0.241	5.83 / 3.65	114.3	19.5	0.285	0.573	660 / 535	855 / 735
1400 RMS	0.0212	0.0274	0.195	0.241	5.78 / 3.68	133.3	19.5	0.295	0.388	625 / 590	760 / 730
1600 RMS	0.0186	0.0241	0.195	0.241	5.7 / 3.72	152.3	19.5	0.312	0.559	760 / 585	1000 / 825
1800 RMS	0.0165	0.0215	0.195	0.241	5.62 / 3.77	171.2	19.5	0.332	0.374	715 / 665	885 / 840
2000 RMS	0.0149	0.0195	0.195	0.241	5.59 / 3.78	190.2	19.5	0.341	0.546	865 / 630	1155 / 920
2500 RMS	0.0127	0.0167	0.195	0.241	5.35 / 3.68	237.5	19.5	0.357	0.361	810 / 740	1015 / 955
3000 RMS	0.0100	0.0134	0.195	0.241	5.25 / 3.74	284.9	19.5	0.394	0.531	980 / 670	1335 / 1010
									0.347	905 / 815	1165 / 1075
									0.520	1065 / 695	1475 / 1080
									0.335	980 / 865	1275 / 1165
									0.522	1110 / 710	1530 / 1105
									0.337	1040 / 905	1355 / 1225
									0.518	1205 / 735	1675 / 1160
									0.333	1125 / 960	1475 / 1320
									0.511	1295 / 815	1820 / 1285
									0.326	1205 / 1065	1600 / 1465
									0.503	1390 / 775	1980 / 1270
									0.318	1285 / 1065	1735 / 1505
									0.500	1465 / 790	2100 / 1305
									0.316	1355 / 1100	1840 / 1575
									0.498	1600 / 815	2310 / 1370
									0.313	1470 / 1165	2020 / 1695
									0.488	1850 / 850	2730 / 1475
									0.303	1685 / 1265	2365 / 1905

HIGH-VOLTAGE XLPE POWER CABLES

76/132÷138(145) kV

XRUHKXS according to IEC 60840
 2XS(FL)2Y according to IEC 60840
 N2XS(FL)2Y according to DIN VDE 0276-632



Description: COPPER CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
185RM	15.85 ^{+0.3}	18.0	54.9	95	60.7	68.9	5730	9.3	1.73
240RM	18.5 ^{+0.3}	17.0	55.5	95	61.3	69.6	6220	12.0	1.74
300RM	20.3 ^{+0.4}	16.5	55.7	95	61.5	69.8	6720	15.0	1.75
400RM	23.5 ^{+0.4}	16.0	57.5	95	63.4	71.8	7610	20.0	1.80
500RM	26.3 ^{+0.5}	16.0	60.3	95	66.1	74.8	8800	25.0	1.87
630RM	30.0 ^{+0.5}	16.0	64.6	95	70.4	79.3	10350	31.5	1.99
800RM	34.4 ^{+0.7}	16.0	69.0	95	74.8	84.1	12220	40.0	2.11
1000RM	38.3 ^{+0.7}	16.0	72.9	95	78.7	88.2	14380	50.0	2.21
1200RMS	42.0 ^{+0.8}	16.0	78.0	95	83.8	93.7	16690	60.0	2.35
1400RMS	45.8 ^{+0.8}	16.0	81.8	95	87.6	97.7	18850	70.0	2.45
1600RMS	49.0 ^{+1.2}	16.0	85.0	95	90.8	101.1	20830	80.0	2.53
1800RMS	52.1 ^{+1.0}	16.0	88.1	95	93.9	104.4	23230	90.0	2.61
2000RMS	54.4 ^{+1.0}	16.0	90.4	95	96.2	106.9	24870	100.0	2.68
2500RMS	60.5 ^{+1.0}	16.0	97.5	95	103.7	115.0	30070	100.0	2.88
3000RMS	68.4 ^{+1.0}	16.0	105.4	95	111.6	123.5	36510	100.0	3.09

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity					
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		Conductor	Metallic screen			Conductor	Metallic screen	In ground		In air	
												ooo ¹	SPB,CB / BE	SPB,CB / BE	SPB,CB / BE
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A				
150	0.1240	0.1587	0.195	0.241	6.81 / 2.3	21.8	19.5	0.123	0.677	435 / 395	520 / 490				
									0.492	415 / 405	470 / 465				
185	0.0991	0.1272	0.195	0.241	6.66 / 2.33	26.8	19.5	0.127	0.659	490 / 435	595 / 545				
									0.474	465 / 450	540 / 525				
240	0.0754	0.0973	0.195	0.241	6.64 / 2.59	34.7	19.5	0.142	0.629	570 / 485	710 / 630				
									0.444	545 / 520	635 / 615				
300	0.0601	0.0781	0.195	0.241	6.73 / 2.87	43.4	19.5	0.156	0.610	645 / 525	815 / 705				
									0.425	615 / 580	725 / 700				
400	0.0470	0.0619	0.195	0.241	6.63 / 3.28	57.8	19.5	0.190	0.584	740 / 570	950 / 790				
									0.399	700 / 650	840 / 800				
500	0.0366	0.0493	0.195	0.241	6.58 / 3.31	72.2	19.5	0.194	0.570	845 / 615	1100 / 875				
									0.386	795 / 725	970 / 910				
630	0.0283	0.0395	0.195	0.241	6.33 / 3.41	90.8	19.5	0.215	0.557	965 / 660	1275 / 970				
									0.372	900 / 805	1120 / 1030				
800	0.0221	0.0325	0.195	0.241	6.14 / 3.49	115.3	19.5	0.237	0.542	1090 / 695	1465 / 1055				
									0.357	1005 / 880	1275 / 1155				
1000	0.0176	0.0276	0.195	0.241	6 / 3.56	144.0	19.5	0.256	0.531	1205 / 725	1650 / 1130				
									0.346	1105 / 945	1415 / 1265				
1200 RMS	0.0151	0.0222	0.195	0.241	5.85 / 3.64	172.7	19.5	0.280	0.524	1330 / 755	1830 / 1200				
									0.339	1235 / 1020	1605 / 1390				
1400 RMS	0.0129	0.0198	0.195	0.241	5.76 / 3.69	201.4	19.5	0.299	0.516	1430 / 775	2000 / 1255				
									0.331	1320 / 1065	1740 / 1485				
1600 RMS	0.0113	0.0182	0.195	0.241	5.69 / 3.73	230.1	19.5	0.314	0.510	1515 / 790	2140 / 1300				
									0.325	1390 / 1100	1855 / 1560				
1800 RMS	0.0101	0.0169	0.195	0.241	5.64 / 3.76	258.8	19.5	0.329	0.504	1590 / 805	2270 / 1340				
									0.319	1450 / 1135	1955 / 1625				
2000 RMS	0.0090	0.0159	0.195	0.241	5.6 / 3.78	287.4	19.5	0.340	0.501	1655 / 815	2375 / 1365				
									0.316	1500 / 1160	2035 / 1675				
2500 RMS	0.0072	0.0141	0.195	0.241	5.33 / 3.7	359.1	19.5	0.364	0.496	1790 / 835	2595 / 1430				
									0.311	1605 / 1205	2210 / 1780				
3000 RMS	0.0060	0.0129	0.195	0.241	5.24 / 3.75	430.8	19.5	0.400	0.486	1930 / 855	2860 / 1495				
									0.302	1710 / 1255	2410 / 1895				

HIGH-VOLTAGE XLPE POWER CABLES

76/132±138(145) kV

XRUHAKXS according to IEC 60840
 A2XS(FL)2Y according to IEC 60840
 NA2XS(FL)2Y according to DIN VDE 0276-632



Description: ALUMINIUM CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
185RM	15.8 ^{+0.2}	18.0	54.8	95	60.6	68.9	4600	5.55	1.73
240RM	17.9 ^{+0.2}	17.0	54.9	95	60.7	69.0	4710	7.2	1.73
300RM	20.0 ^{+0.3}	16.5	55.4	95	61.2	69.5	4850	9.0	1.74
400RM	22.9 ^{+0.3}	16.0	56.9	95	62.7	71.0	5150	12.0	1.78
500RM	25.7 ^{+0.4}	16.0	59.7	95	65.5	74.0	5650	15.0	1.85
630RM	29.3 ^{+0.5}	16.0	63.7	95	69.5	78.4	6360	18.9	1.96
800RM	33.0 ^{+0.4}	16.0	67.6	95	73.4	82.5	8000	24.0	2.07
1000RM	38.0 ^{+0.5}	16.0	72.6	95	78.4	87.9	8060	30.0	2.20
1200RM	42.5 ^{+0.6}	16.0	77.1	95	82.9	92.8	9030	36.0	2.32
1200RMS	43.0 ^{+0.8}	16.0	79.0	95	84.8	94.7	9360	36.0	2.37
1400RMS	45.1 ^{+0.8}	16.0	81.1	95	86.9	97.0	9980	42.0	2.43
1600RMS	48.5 ^{+1.2}	16.0	84.5	95	90.3	100.6	10820	48.0	2.52
1800RMS	52.7 ^{+1.0}	16.0	88.7	95	94.5	105.2	11840	54.0	2.63
2000RMS	54.5 ^{+1.0}	16.0	90.5	95	96.3	107.0	12450	60.0	2.68
2500RMS	59.0 ^{+1.0}	16.0	96.0	95	102.2	113.3	14110	75.0	2.84
3000RMS	67.0 ^{+1.0}	16.0	104.0	95	110.2	121.9	16720	90.0	3.05

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
						Conductor	Metallic screen			In ground	In air
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		kA/s	kA/s			ooo ¹	SPB,CB / BE
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A
185	0.1640	0.2107	0.195	0.241	7.56 / 2.59	17.8	19.5	0.125	0.668	380 / 355	460 / 435
									0.483	360 / 355	415 / 410
240	0.1250	0.1609	0.195	0.241	7.53 / 2.87	23.1	19.5	0.138	0.643	440 / 400	545 / 510
									0.458	420 / 410	490 / 480
300	0.1000	0.1290	0.195	0.241	7.49 / 3.03	28.8	19.5	0.147	0.623	500 / 450	630 / 580
									0.438	475 / 465	560 / 550
400	0.0778	0.1008	0.195	0.241	7.39 / 3.23	38.3	19.5	0.161	0.600	575 / 490	735 / 655
									0.415	545 / 520	655 / 635
500	0.0605	0.0790	0.195	0.241	7.15 / 3.32	47.8	19.5	0.174	0.585	660 / 535	855 / 735
									0.400	625 / 590	760 / 730
630	0.0469	0.0620	0.195	0.241	6.87 / 3.42	60.2	19.5	0.191	0.570	760 / 585	1000 / 825
									0.385	715 / 665	885 / 840
800	0.0367	0.0495	0.195	0.241	6.66 / 3.51	76.4	19.5	0.208	0.557	865 / 630	1155 / 920
									0.372	810 / 740	1015 / 955
1000	0.0291	0.0404	0.195	0.241	6.44 / 3.6	95.3	19.5	0.229	0.541	980 / 670	1335 / 1010
									0.356	905 / 815	1165 / 1075
1200	0.0247	0.0354	0.195	0.241	6.29 / 3.68	114.3	19.5	0.249	0.530	1065 / 695	1475 / 1080
									0.345	980 / 865	1275 / 1165
1200 RMS	0.0247	0.0319	0.195	0.241	6.23 / 3.71	114.3	19.5	0.257	0.531	1110 / 710	1530 / 1105
									0.347	1040 / 905	1355 / 1225
1400 RMS	0.0212	0.0274	0.195	0.241	6.17 / 3.73	133.3	19.5	0.266	0.527	1205 / 735	1675 / 1160
									0.342	1125 / 960	1475 / 1320
1600 RMS	0.0186	0.0241	0.195	0.241	6.08 / 3.78	152.3	19.5	0.280	0.519	1295 / 815	1820 / 1285
									0.335	1205 / 1065	1600 / 1465
1800 RMS	0.0165	0.0215	0.195	0.241	5.99 / 3.83	171.2	19.5	0.298	0.512	1390 / 775	1980 / 1270
									0.327	1285 / 1065	1735 / 1505
2000 RMS	0.0149	0.0195	0.195	0.241	5.95 / 3.85	190.2	19.5	0.306	0.508	1465 / 790	2100 / 1305
									0.324	1355 / 1100	1840 / 1575
2500 RMS	0.0127	0.0167	0.195	0.241	5.86 / 3.9	237.5	19.5	0.329	0.504	1600 / 815	2310 / 1370
									0.319	1470 / 1165	2020 / 1695
3000 RMS	0.0100	0.0134	0.195	0.241	5.74 / 3.97	284.9	19.5	0.363	0.493	1850 / 850	2730 / 1475
									0.308	1685 / 1265	2365 / 1905

HIGH-VOLTAGE XLPE POWER CABLES

87/150÷161(170) kV

XRUHKXS according to IEC 60840
 2XS(FL)2Y according to IEC 60840
 N2XS(FL)2Y according to DIN VDE 0276-632



Description: COPPER CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
240RM	18.5 ^{+0.3}	21.0	63.5	95	69.3	78.2	7120	12.0	1.96
300RM	20.3 ^{+0.4}	20.5	64.1	95	69.9	78.8	7670	15.0	1.97
400RM	23.5 ^{+0.4}	19.5	64.9	95	70.7	79.6	8450	20.0	1.99
500RM	26.3 ^{+0.5}	19.0	66.7	95	72.5	81.6	9560	25.0	2.04
630RM	30.0 ^{+0.5}	19.0	70.6	95	76.4	85.7	11100	31.5	2.15
800RM	34.4 ^{+0.7}	19.0	75.0	95	80.8	90.5	13020	40.0	2.27
1000RM	38.3 ^{+0.7}	19.0	78.9	95	84.7	94.6	15210	50.0	2.37
1200RMS	42.0 ^{+0.8}	19.0	84.0	95	89.8	100.1	17570	60.0	2.51
1400RMS	45.8 ^{+0.8}	19.0	87.8	95	93.6	104.1	19780	70.0	2.61
1600RMS	49.0 ^{+1.2}	19.0	91.0	95	96.8	107.5	21780	80.0	2.69
1800RMS	52.1 ^{+1.0}	19.0	94.1	95	99.9	110.8	24210	90.0	2.77
2000RMS	54.4 ^{+1.0}	18.0	94.4	95	100.2	111.3	25560	100.0	2.79
2500RMS	60.5 ^{+1.0}	18.0	101.5	95	107.7	119.2	30780	100.0	2.98
3000RMS	68.4 ^{+1.0}	18.0	109.4	95	115.6	127.5	37230	100.0	3.19

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		Conductor	Metallic screen			In ground	In air
240	0,0754	0,0972	0,195	0,241	7,47 / 2,53	34,7	19,5	0,123	0,662	570 / 485	710 / 630
300	0,0601	0,0780	0,195	0,241	7,38 / 2,66	43,4	19,5	0,131	0,477	545 / 520	635 / 615
400	0,0470	0,0618	0,195	0,241	7,31 / 2,92	57,8	19,5	0,145	0,645	645 / 525	815 / 705
500	0,0366	0,0491	0,195	0,241	7,19 / 3,09	72,2	19,5	0,158	0,460	615 / 580	725 / 700
630	0,0283	0,0392	0,195	0,241	6,91 / 3,19	90,8	19,5	0,173	0,617	740 / 570	950 / 790
800	0,0221	0,0321	0,195	0,241	6,66 / 3,28	115,3	19,5	0,189	0,433	700 / 650	840 / 800
1000	0,0176	0,0272	0,195	0,241	6,47 / 3,36	144,0	19,5	0,203	0,600	845 / 615	1100 / 875
1200 RMS	0,0151	0,0221	0,195	0,241	6,28 / 3,44	172,7	19,5	0,221	0,415	795 / 725	970 / 910
1400 RMS	0,0129	0,0197	0,195	0,241	6,16 / 3,49	201,4	19,5	0,235	0,583	965 / 660	1275 / 970
1600 RMS	0,0113	0,0180	0,195	0,241	6,07 / 3,54	230,1	19,5	0,247	0,399	900 / 805	1120 / 1030
1800 RMS	0,0101	0,0168	0,195	0,241	6 / 3,58	258,8	19,5	0,258	0,567	1090 / 695	1465 / 1055
2000 RMS	0,0090	0,0157	0,195	0,241	6,2 / 3,84	287,4	19,5	0,278	0,382	1005 / 880	1275 / 1155
2500 RMS	0,0072	0,0139	0,195	0,241	6,06 / 3,91	359,1	19,5	0,304	0,554	1205 / 725	1650 / 1130
3000 RMS	0,0060	0,0128	0,195	0,241	5,94 / 3,99	430,8	19,5	0,334	0,369	1105 / 945	1415 / 1265

HIGH-VOLTAGE XLPE POWER CABLES

87/150÷161(170) kV

XRUHAKXS according to IEC 60840
 A2XS(FL)2Y according to IEC 60840
 NA2XS(FL)2Y according to DIN VDE 0276-632



Description: ALUMINIUM CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
240RM	17.9 ^{+0.2}	21.0	62.9	95	68.7	77.6	5600	7.2	1.94
300RM	20.0 ^{+0.3}	20.5	63.8	95	69.6	78.5	5800	9.0	1.97
400RM	22.9 ^{+0.3}	19.5	64.3	95	70.1	79.0	6000	12.0	1.98
500RM	25.7 ^{+0.4}	19.0	66.1	95	71.9	81.0	6420	15.0	2.03
630RM	29.3 ^{+0.5}	19.0	69.7	95	75.5	84.8	7090	18.9	2.13
800RM	33.0 ^{+0.4}	19.0	73.6	95	79.4	88.9	7880	24.0	2.23
1000RM	38.0 ^{+0.5}	19.0	78.6	95	84.4	94.3	8890	30.0	2.36
1200RM	42.5 ^{+0.6}	19.0	83.1	95	88.9	99.2	9900	36.0	2.48
1200RMS	43.0 ^{+0.8}	19.0	85.0	95	90.8	101.1	10260	36.0	2.53
1400RMS	45.1 ^{+0.8}	19.0	87.2	95	92.9	103.4	10890	42.0	2.59
1600RMS	48.5 ^{+1.2}	19.0	90.5	95	96.3	107.0	11760	48.0	2.68
1800RMS	52.7 ^{+1.0}	19.0	94.7	95	100.5	111.6	12830	54.0	2.79
2000RMS	54.5 ^{+1.0}	18.0	94.5	95	100.3	111.4	13140	60.0	2.79
2500RMS	59.0 ^{+1.0}	18.0	100.0	95	106.2	117.7	14840	75.0	2.95
3000RMS	67.0 ^{+1.0}	18.0	108.0	95	114.2	126.1	17510	90.0	3.16

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		Conductor	Metallic screen			In ground	In air
240	0,1250	0,1609	0,195	0,241	7,56 / 2,51	23,1	19,5	0,121	0,667	440 / 400	545 / 510
									0,482	420 / 410	490 / 480
300	0,1000	0,1290	0,195	0,241	7,42 / 2,65	28,8	19,5	0,130	0,647	500 / 450	630 / 580
									0,462	475 / 465	560 / 550
400	0,0778	0,1008	0,195	0,241	7,37 / 2,9	38,3	19,5	0,143	0,621	575 / 490	735 / 655
									0,436	545 / 520	655 / 635
500	0,0605	0,0789	0,195	0,241	7,24 / 3,08	47,8	19,5	0,156	0,603	660 / 535	855 / 735
									0,418	625 / 590	760 / 730
630	0,0469	0,0619	0,195	0,241	6,97 / 3,17	60,2	19,5	0,169	0,586	760 / 585	1000 / 825
									0,401	715 / 665	885 / 840
800	0,0367	0,0494	0,195	0,241	6,73 / 3,26	76,4	19,5	0,184	0,572	865 / 630	1155 / 920
									0,387	810 / 740	1015 / 955
1000	0,0291	0,0403	0,195	0,241	6,49 / 3,35	95,3	19,5	0,202	0,555	980 / 670	1335 / 1010
									0,370	905 / 815	1165 / 1075
1200	0,0247	0,0352	0,195	0,241	6,31 / 3,43	114,3	19,5	0,218	0,543	1065 / 695	1475 / 1080
									0,358	980 / 865	1275 / 1165
1200 RMS	0,0247	0,0319	0,195	0,241	6,25 / 3,45	114,3	19,5	0,225	0,544	1110 / 710	1530 / 1105
									0,360	1040 / 905	1355 / 1225
1400 RMS	0,0212	0,0274	0,195	0,241	6,18 / 3,49	133,3	19,5	0,233	0,539	1205 / 735	1675 / 1160
									0,355	1125 / 960	1475 / 1320
1600 RMS	0,0186	0,0241	0,195	0,241	6,09 / 3,53	152,3	19,5	0,245	0,532	1295 / 815	1820 / 1285
									0,347	1205 / 1065	1600 / 1465
1800 RMS	0,0165	0,0215	0,195	0,241	5,98 / 3,58	171,2	19,5	0,260	0,524	1390 / 775	1980 / 1270
									0,339	1285 / 1065	1735 / 1505
2000 RMS	0,0149	0,0195	0,195	0,241	6,2 / 3,84	190,2	19,5	0,278	0,516	1465 / 790	2100 / 1305
									0,332	1355 / 1100	1840 / 1575
2500 RMS	0,0127	0,0167	0,195	0,241	6,09 / 3,9	237,5	19,5	0,299	0,512	1600 / 815	2310 / 1370
									0,327	1470 / 1165	2020 / 1695
3000 RMS	0,0100	0,0134	0,195	0,241	5,96 / 3,97	284,9	19,5	0,329	0,500	1850 / 850	2730 / 1475
									0,315	1685 / 1265	2365 / 1905

HIGH-VOLTAGE XLPE POWER CABLES

127/220=230(245) kV

XRUHKXS according to IEC 62067
2XS(FL)2Y according to IEC 62067



Description: COPPER CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
400RM	23.5 ^{+0.4}	24.0	74.7	150	81.3	90.9	10310	20.0	2.28
500RM	26.3 ^{+0.5}	23.0	75.3	150	81.9	91.5	11250	25.0	2.29
630RM	30.0 ^{+0.5}	22.0	77.2	150	83.8	93.6	12590	31.5	2.34
800RM	34.4 ^{+0.7}	22.0	81.0	150	87.6	97.6	14430	40.0	2.44
1000RM	38.3 ^{+0.7}	21.0	82.9	150	89.5	99.7	16370	50.0	2.50
1200RMS	42.0 ^{+0.8}	21.0	88.0	150	94.6	105.2	18780	60.0	2.63
1400RMS	45.8 ^{+0.8}	21.0	91.8	150	98.4	109.2	21020	70.0	2.73
1600RMS	49.0 ^{+1.2}	21.0	95.0	150	101.6	112.6	23050	80.0	2.82
1800RMS	52.1 ^{+1.0}	21.0	98.1	150	104.7	115.9	25500	90.0	2.90
2000RMS	54.4 ^{+1.0}	21.0	100.4	150	107.0	118.4	27190	100.0	2.96
2500RMS	60.5 ^{+1.0}	21.5	108.5	150	115.7	127.5	32720	100.0	3.19
3000RMS	68.4 ^{+1.0}	21.5	116.4	150	123.6	135.4	39190	100.0	3.39

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
						Conductor	Metallic screen			In ground	In air
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		kA/s	kA/s			μF/km	mH/km
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A
400	0.0470	0.0616	0.124	0.153	9.25 / 3.31	57.8	29.5	0.130	0.644	730 / 655	910 / 775
									0.459	690 / 630	825 / 780
500	0.0366	0.0489	0.124	0.153	9.18 / 3.57	72.2	29.5	0.141	0.623	835 / 605	1055 / 860
									0.438	785 / 700	950 / 885
630	0.0283	0.0391	0.124	0.153	9.07 / 3.9	90.8	29.5	0.158	0.601	950 / 645	1230 / 955
									0.416	890 / 775	1100 / 1005
800	0.0221	0.0320	0.124	0.153	8.76 / 4	115.3	29.5	0.170	0.582	1075 / 685	1415 / 1045
									0.397	995 / 845	1255 / 1120
1000	0.0176	0.0271	0.124	0.153	8.79 / 4.34	144.0	29.5	0.189	0.565	1190 / 710	1585 / 1115
									0.380	1090 / 900	1395 / 1225
1200 RMS	0.0151	0.0221	0.124	0.153	8.51 / 4.45	172.7	29.5	0.206	0.557	1310 / 735	1770 / 1180
									0.372	1215 / 960	1570 / 1330
1400 RMS	0.0129	0.0197	0.124	0.153	8.34 / 4.52	201.4	29.5	0.218	0.547	1410 / 755	1930 / 1240
									0.362	1300 / 1000	1705 / 1420
1600 RMS	0.0113	0.0180	0.124	0.153	8.21 / 4.58	230.1	29.5	0.228	0.540	1490 / 775	2070 / 1285
									0.355	1365 / 1035	1815 / 1490
1800 RMS	0.0101	0.0167	0.124	0.153	8.1 / 4.63	258.8	29.5	0.239	0.533	1565 / 785	2190 / 1325
									0.349	1425 / 1060	1915 / 1550
2000 RMS	0.0090	0.0156	0.124	0.153	8.03 / 4.67	287.4	29.5	0.246	0.529	1630 / 795	2290 / 1350
									0.344	1475 / 1080	1995 / 1595
2500 RMS	0.0072	0.0138	0.124	0.153	7.68 / 4.64	359.1	29.5	0.264	0.523	1760 / 815	2495 / 1415
									0.338	1580 / 1125	2165 / 1690
3000 RMS	0.0060	0.0127	0.124	0.153	7.5 / 4.73	430.8	29.5	0.289	0.510	1895 / 840	2750 / 1485
									0.325	1685 / 1165	2355 / 1800

HIGH-VOLTAGE XLPE POWER CABLES

127/220=230(245) kV

XRUHAKXS according to IEC 62067
A2XS(FL)2Y according to IEC 62067



Description: ALUMINIUM CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
300RM	20.5 ^{+0.30}	24	70.9	95	77.1	86.3	8550	15.0	1.73
400RM	23.5 ^{+0.30}	24	73.9	95	80.1	89.8	9690	20.0	1.79
500RM	26.5 ^{+0.40}	23	74.9	95	81.1	90.8	10680	25.0	1.82
630RM	30.3 ^{+0.40}	22	77.0	95	83.2	93.0	12050	31.5	1.86
800RM	34.6 ^{+0.50}	22	81.3	95	87.5	97.5	13980	40.0	1.96
1000RM	38.2 ^{+0.40}	22	84.9	95	91.1	101.3	16110	50.0	2.04
1200RMS	43.6 ^{+0.80}	22	91.6	95	97.8	108.7	18760	60.0	2.18
1400RMS	46.6 ^{+1.00}	22	94.6	95	100.8	111.9	20840	70.0	2.25
1600RMS	50.0 ^{+1.00}	22	98.0	95	104.2	115.5	22980	80.0	2.32
1800RMS	53.3 ^{+1.00}	22	101.3	95	107.5	119.0	25100	90.0	2.40
2000RMS	56.3 ^{+1.20}	22	104.3	95	110.5	122.2	27270	100.0	2.46
1600RMS	50.0 ^{+1.00}	19	92.0	95	97.8	108.7	11940	48.0	2.18
1800RMS	53.3 ^{+1.00}	19	95.3	95	101.1	112.2	12810	54.0	2.26
2000RMS	55.4 ^{+1.00}	19	97.4	95	103.2	114.5	13550	60.0	2.30

Electrical Data

- RM (RMC)** — Round Multiwire Conductor IC (C - compacted), Class 2
- RM (Milliken type)** — Round Multiwire Segmented Conductor
- SPB** — Single Point Bonded
- CB** — Cross Bonded
- BE** — Both Ends
- De** — Cable diameter
- 1** — Cables in flat formation, the distance between cables 2 x D_o
- 2** — Cables in trefoil formation, the distance between cables D_o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
						Conductor	Metallic screen			In ground	In air
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		kA/s	kA/s			ooo ¹	ooo ²
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A
400	0.0778	0.1007	0.124	0.153	9.33 / 3.28	38.3	29.5	0.128	0.648	570 / 480	705 / 635
									0.463	540 / 510	640 / 620
500	0.0605	0.0788	0.124	0.153	9.25 / 3.55	47.8	29.5	0.139	0.626	650 / 525	825 / 720
									0.441	615 / 570	745 / 710
630	0.0469	0.0618	0.124	0.153	9.15 / 3.87	60.2	29.5	0.155	0.604	750 / 575	965 / 810
									0.419	705 / 645	865 / 815
800	0.0367	0.0493	0.124	0.153	8.87 / 3.97	76.4	29.5	0.166	0.587	855 / 615	1115 / 900
									0.403	800 / 710	995 / 925
1000	0.0291	0.0402	0.124	0.153	8.81 / 4.33	95.3	29.5	0.188	0.566	965 / 655	1285 / 995
									0.381	895 / 780	1140 / 1040
1200	0.0247	0.0351	0.124	0.153	8.56 / 4.43	114.3	29.5	0.203	0.553	1050 / 685	1420 / 1060
									0.368	965 / 830	1255 / 1130
1200 RMS	0.0247	0.0319	0.124	0.153	8.46 / 4.47	114.3	29.5	0.209	0.554	1090 / 695	1480 / 1085
									0.369	1020 / 860	1325 / 1180
1400 RMS	0.0212	0.0274	0.124	0.153	8.37 / 4.51	133.3	29.5	0.216	0.549	1185 / 715	1615 / 1140
									0.364	1105 / 910	1445 / 1365
1600 RMS	0.0186	0.0241	0.124	0.153	8.23 / 4.57	152.3	29.5	0.227	0.541	1275 / 740	1760 / 1195
									0.356	1185 / 955	1565 / 1350
1800 RMS	0.0165	0.0215	0.124	0.153	8.08 / 4.64	171.2	29.5	0.241	0.532	1365 / 760	1910 / 1255
									0.347	1265 / 1000	1695 / 1435
2000 RMS	0.0149	0.0195	0.124	0.153	8.02 / 4.67	190.2	29.5	0.246	0.529	1440 / 770	2025 / 1290
									0.344	1330 / 1035	1795 / 1500
2500 RMS	0.0127	0.0167	0.124	0.153	7.72 / 4.62	237.5	29.5	0.259	0.525	1570 / 795	2220 / 1355
									0.340	1440 / 1085	1969 / 1605
3000 RMS	0.0100	0.0134	0.124	0.153	7.53 / 4.72	284.9	29.5	0.285	0.512	1815 / 830	2620 / 1460
									0.327	1650 / 1175	2300 / 1795

HIGH-VOLTAGE XLPE POWER CABLES 220/380=400(420) kV

XRUHKXS according to IEC 62067

2XS(FL)2Y according to IEC 62067



Description: COPPER CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
630RM	30.0 ^{+0.5}	32.0	98.2	150	105.4	116.6	16070	31.5	2.92
800RM	34.4 ^{+0.7}	31.0	100.6	150	107.8	119.2	17830	40.0	2.98
1000RM	38.3 ^{+0.7}	30.0	102.5	150	109.7	121.3	19850	50.0	3.04
1200RMS	42.0 ^{+0.8}	28.0	102.0	150	109.2	120.8	21330	60.0	3.02
1400RMS	45.8 ^{+0.8}	27.0	103.8	150	111.0	122.6	23260	70.0	3.07
1600RMS	49.0 ^{+1.2}	27.0	107.0	150	114.2	126.0	25360	80.0	3.15
1800RMS	52.1 ^{+1.0}	27.0	110.1	150	117.3	129.1	27840	90.0	3.23
2000RMS	54.4 ^{+1.0}	27.0	112.4	150	119.6	131.4	29540	100.0	3.29
2500RMS	60.5 ^{+1.0}	27.0	119.5	150	126.7	138.5	34810	100.0	3.47
3000RMS	68.4 ^{+1.0}	27.0	127.4	150	134.6	146.4	41400	100.0	3.66

Electrical Data

RM (RMC)	— Round Multiwire Conductor IC (C - compacted), Class 2	BE	— Both Ends
RM (Milliken type)	— Round Multiwire Segmented Conductor	De	— Cable diameter
SPB	— Single Point Bonded	1	— Cables in flat formation, the distance between cables 2 x D _o
CB	— Cross Bonded	2	— Cables in trefoil formation, the distance between cables D _o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance		Current-carrying capacity	
						Conductor	Metallic screen		In ground	In air		
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		kA/s	kA/s		μF/km	mH/km	A	A
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A	
630	0,0283	0,0388	0,124	0,153	12,2 / 4,25	90,8	29,5	0,126	0,645	915 / 650	1135 / 940	
800	0,0221	0,0316	0,124	0,153	11,9 / 4,57	115,3	29,5	0,139	0,460	855 / 750	1045 / 975	
1000	0,0176	0,0266	0,124	0,153	11,76 / 4,88	144,0	29,5	0,151	0,622	1030 / 685	1305 / 1035	
1200 RMS	0,0151	0,0220	0,124	0,153	12,01 / 5,42	172,7	29,5	0,167	0,437	955 / 820	1190 / 1090	
1400 RMS	0,0129	0,0196	0,124	0,153	12,03 / 5,77	201,4	29,5	0,182	0,604	1140 / 715	1465 / 1115	
1600 RMS	0,0113	0,0179	0,124	0,153	11,82 / 5,85	230,1	29,5	0,190	0,419	1050 / 880	1330 / 1195	
1800 RMS	0,0101	0,0166	0,124	0,153	11,63 / 5,93	258,8	29,5	0,198	0,585	1255 / 740	1635 / 1185	
2000 RMS	0,0090	0,0155	0,124	0,153	11,51 / 5,98	287,4	29,5	0,204	0,400	1160 / 925	1485 / 1300	
2500 RMS	0,0072	0,0137	0,124	0,153	11,17 / 6,12	359,1	29,5	0,222	0,570	1345 / 760	1785 / 1245	
3000 RMS	0,0060	0,0126	0,124	0,153	10,87 / 6,26	430,8	29,5	0,242	0,386	1235 / 965	1610 / 1380	

HIGH-VOLTAGE XLPE POWER CABLES 220/380=400(420) kV

XRUHAKXS according to IEC 62067

A2XS(FL)2Y according to IEC 62067



Description: ALUMINIUM CONDUCTOR

Parameters

Cross section of conductor*	Diameter of conductor	Insulation		Metallic screen		D _o Outer diameter of cable	Cable weight	Maximum cable pulling force	Minimal bending radius
		Nominal thickness	Diameter over insulation	Cross sectional area	Diameter over screen				
mm ²	mm	mm	mm	mm ²	mm ²	mm	kg/km	kN	m
630RM	29.3 ^{+0.5}	32.0	97.3	150	104.5	115.7	12020	18.9	2.90
800RM	33.0 ^{+0.4}	31.0	99.2	150	106.4	117.8	12650	24.0	2.95
1000RM	38.0 ^{+0.5}	30.0	102.2	150	109.4	121.0	13510	30.0	3.03
1200RM	42.5 ^{+0.6}	28.0	102.7	150	109.9	121.5	13930	36.0	3.04
1200RMS	43.0 ^{+0.8}	28.0	103.0	150	110.2	121.8	14040	36.0	3.05
1400RMS	45.1 ^{+0.8}	27.0	103.1	150	110.3	121.9	14360	42.0	3.05
1600RMS	48.5 ^{+1.2}	27.0	106.5	150	113.7	125.5	15330	48.0	3.14
1800RMS	52.7 ^{+1.0}	27.0	110.7	150	117.9	129.7	16440	54.0	3.25
2000RMS	54.5 ^{+1.0}	27.0	112.5	150	119.7	131.5	17120	60.0	3.29
2500RMS	59.0 ^{+1.0}	27.0	118.0	150	125.2	137.0	18830	75.0	3.43
3000RMS	67.0 ^{+1.0}	27.0	126.0	150	133.2	145.0	21610	90.0	3.63

Electrical Data

RM (RMC)	— Round Multiwire Conductor IC (C - compacted), Class 2	BE	— Both Ends
RM (Milliken type)	— Round Multiwire Segmented Conductor	De	— Cable diameter
SPB	— Single Point Bonded	1	— Cables in flat formation, the distance between cables 2 x D _o
CB	— Cross Bonded	2	— Cables in trefoil formation, the distance between cables D _o

Cross section of conductor	Resistance of conductor		Resistance of metallic screen		Electric field strength at the Conductor screen / insulation	Short-circuit current-carrying capacity		Capacitance	Inductance	Current-carrying capacity	
						Conductor	Metallic screen			In ground	In air
	DC 20°C	AC 90°C	DC 20°C	DC 80°C		kA/s	kA/s			ooo ¹	ooo ²
mm ²	Ω/km	Ω/km	Ω/km	Ω/km	kV/mm	kA/s	kA/s	μF/km	mH/km	A	A
630	0,0469	0,0617	0,124	0,153	12,32 / 4,22	60,2	29,5	0,124	0,648	720 / 570	890 / 785
									0,463	675 / 620	820 / 785
800	0,0367	0,0491	0,124	0,153	12,06 / 4,52	76,4	29,5	0,136	0,628	820 / 615	1030 / 880
									0,443	765 / 690	945 / 890
1000	0,0291	0,0399	0,124	0,153	11,79 / 4,87	95,3	29,5	0,151	0,605	925 / 655	1185 / 975
									0,420	855 / 755	1080 / 1005
1200	0,0247	0,0348	0,124	0,153	11,96 / 5,44	114,3	29,5	0,169	0,584	1005 / 680	1310 / 1045
									0,399	925 / 800	1190 / 1090
1200 RMS	0,0247	0,0319	0,124	0,153	11,93 / 5,44	114,3	29,5	0,170	0,582	1045 / 695	1365 / 1070
									0,397	970 / 830	1245 / 1135
1400 RMS	0,0212	0,0274	0,124	0,153	12,08 / 5,75	133,3	29,5	0,180	0,572	1135 / 715	1495 / 1130
									0,387	1050 / 875	1360 / 1220
1600 RMS	0,0186	0,0241	0,124	0,153	11,85 / 5,84	152,3	29,5	0,189	0,564	1215 / 735	1630 / 1190
									0,379	1120 / 920	1475 / 1305
1800 RMS	0,0165	0,0215	0,124	0,153	11,6 / 5,94	171,2	29,5	0,199	0,554	1300 / 750	1770 / 1245
									0,369	1195 / 955	1600 / 1390
2000 RMS	0,0149	0,0194	0,124	0,153	11,5 / 5,98	190,2	29,5	0,204	0,550	1370 / 765	1875 / 1285
									0,365	1255 / 990	1690 / 1450
2500 RMS	0,0127	0,0167	0,124	0,153	11,24 / 6,09	237,5	29,5	0,218	0,542	1490 / 780	2075 / 1350
									0,357	1355 / 1035	1860 / 1560
3000 RMS	0,0100	0,0133	0,124	0,153	10,92 / 6,24	284,9	29,5	0,238	0,528	1720 / 815	2450 / 1460
									0,343	1550 / 1115	2175 / 1750

Rubber Cables for Wind Farms

3

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H07ZZ-F WIND 450/750 V

Standards: PN-EN 50525-3-21

Description: Flexible cables, cross-linked halogen-free compound insulated and sheathed, with low smoke and corrosive gases emission

Construction

Conductors	Annealed flexible special stranded bare copper conductor class 5 to EN 60228
Separator	A suitable tape separator between the conductor and insulation
Insulation	Cross-linked halogen free thermosetting compound type EI8 in acc. to EN 50363-5
Circuit identification	Colour coding of power conductors comply to HD 308, DIN VDE 0293-308
Colour of insulation	White
Outer jacket	Cross-linked halogen free thermosetting compound type EM8 in acc. to EN 50363-6
Colour of outer jacket	Black or colours can be provided
Flame propagation	IEC 60332-1-2:2004, EN 60332-1-2:2004
Torsion resistance	92 °/m



Characteristic

Low smoke, halogen free, flame retardant jacket

UV, sunlight, ozone and oil resistant

Ink jet printed for easy identification

Application For use in wind turbines. Also, for indoor and temporary outdoors usage, particularly in the case of fire/burning when low emission of smoke and corrosive gases is required

Temperature range Maximum conductor operating temperature: +90°C
Maximum conductor temperature during short circuit: +250°C
Maximum cable surface: +80°C
Minimal installation and handling: -5°C

Standard length cable packing 1000m on drums. Other forms of packing and delivery are available on request

Parameters

Number and cross-sectional area of conductor	Maximum diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approximate overall diameter	Approximate net weight	Maximum conductor resistance at temperature 20°C
n x mm ²	mm	mm	mm	mm	kg/km	Ω/km
1x1.5	0.26	0.8	1.4	5.9	49	13.7
1x2.5	0.26	0.9	1.4	6.6	65	8.21
1x4	0.31	1.0	1.5	7.5	88	5.09

Parameters

Number and cross-sectional area of conductor	Maximum diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approximate overall diameter	Approximate net weight	Maximum conductor resistance at temperature 20°C
n x mm ²	mm	mm	mm	mm	kg/km	Ω/km
1x6	0.31	1.0	1.6	8.2	114	3.39
1x10	0.41	1.2	1.8	10.1	178	1.95
1x16	0.41	1.2	1.9	11.4	247	1.24
1x25	0.41	1.4	2.0	13.2	353	0.795
1x35	0.41	1.4	2.2	14.4	462	0.565
1x50	0.41	1.6	2.4	17.1	648	0.393
1x70	0.51	1.6	2.6	19.3	870	0.277
1x95	0.51	1.8	2.8	22.2	1135	0.210
1x120	0.51	1.8	3.0	23.7	1426	0.164
1x150	0.51	2.0	3.2	26.3	1726	0.132
1x185	0.51	2.2	3.4	29.4	2098	0.108
1x240	0.51	2.4	3.5	31.5	2652	0.0817
1x300	0.51	2.6	3.6	35.7	3290	0.0654
1x400	0.51	2.8	3.8	38.4	4199	0.0495
1x500	0.61	3.0	4.0	43.8	5353	0.0391
1x630	0.61	3.0	4.1	48.4	6829	0.0391

Current ratings for cables for ambient temperature 30°C

Installations	In open air *	Multicore cable for the application for household equipment		Multicore cable (for application other than household equipment)1 2
		Number of loaded cores		
mm ²	A	2	3	2 or 3
1	19	10	10	15
1.5	24	16	16	18
2.5	32	25	20	26
4	42	32	25	34
6	54	40	-	44
10	73	63	-	61
16	98	-	-	82
25	129	-	-	108
35	158	-	-	135
50	198	-	-	168
70	245	-	-	207
95	292	-	-	250
120	344	-	-	292
150	391	-	-	335
185	448	-	-	382



DLO TORSIONFLEX

RHH/RHW-2 2000 V

RW90/RW90-TC 1000 V

Standards: UL 44, UL 1685, IEEE-1202, CSA c22.2 No. 38 CSA C22.2 No. 230
 ASTM B-3, Based on GE Specification 104W7006

Installations	In open air *	Multicore cable for the application for household equipment		Multicore cable (for application other than household equipment)1 2
		2	3	
Number of loaded cores	1			2 or 3
mm²	A			
240	528	-	-	453
300	608	-	-	523
400	726	-	-	-
500	830	-	-	-

* Current rating acc. to HD 516 S2 and DIN VDE 0298-4. Ambient temperature: 300C. Permissible operating temperature at conductor: 70°C

Conversion factors for ambient temperature over 30°C

Ambient temperature, °C	30	35	40	45	50	55	60	65
Conversion factors	1,00	0,94	0,87	0,79	0,71	0,61	0,50	0,35

Description:

Portable Power Cables 90 oC UL C(UL)
 Industrial Grade

Construction

Nominal voltage	RHH/RHW-2 600 and 2000V, RW90 CSA 1kV
Conductors	Annealed flexible stranded bare copper ASTM B-3
Separator	White polyester tape applied longitudinally between conductor and insulation
Insulation	Ethylene-propylene rubber (HEPR), UL, CSA, ICEA, 90 oC.; min. 1000psi
Color of insulation	Black
Jacket	Heavy duty CPE thermosetting compound with improved mechanical properties, ICEA S-95-658 NEMA WC-70; min. 1400psi
Color of jacket	Black
Bending radius	Minimal 8xD
Torsion resistant	92°/m



Characteristic

UL listed RHH/RHW-2 600V and 2000V for black jacket

RW90 1kV

90°C (dry), 90°C (wet)

Ozone, sunlight, oil, grease, weather, chemical and abrasion resistant

Rated RW90-TC (Tray Cable) for sizes 1/0 and larger

MSHA, VW-1, SUN RES, FOR CT USE for sizes 1/0AWG and larger and for black jacket

Limited Smoke (LS) ST1 in accordance with (UL) 1685

CSA listed RW90, RW90-TC (for black jacket) 1kV

Application

For wind turbine as power, control Tray cables. Designed for uses requiring a flexible power cables. For portable or fixed installations. Leads for motors generators, batteries, jumper cables. Deep well Submersible Pump Cable. Other industrial applications

Standard length cable packing

1000ft on drums. Other forms of packing and delivery are available on request

NSHXAFÖ 0.6/1 to 3.6/6 kV

Standards: DIN VDE 0250 p. 606



APPROVALS

UL : E193954(CPE jacket) RHW-2 90 oC wet and dry, VW-1 Sun Res, for 1/0 and larger ST1, FT4 IEEE 120, for CT use C(UL) E193954 Type RW90 EP, 1kV FT1
CSA 1101269, LL 103932:205591, RW90 OC FT1, FT4, -40 OC, for 1/OAWG and larger, Oil Res, Tray Cable, Sun Res

Power Conductor Size	Power Conductor Stranding		Conductor Diameter		Nominal insulation thickness		Nominal jacket thickness		Overall diameter min/nom/max		Weight		Ampac. at 30°C in air
	AWG or MCM	N x mm	N x inches	Inch	mm	Inch	mm	Inch	mm	Inches	mm	LBS/1000ft	
14	19x0.373	19x0.0147	0.07	1.83	0.045	1.14	0.015	0.38	0.182/0.194/0.206	4.63/4.93/5.23	28	41	35
10	19x0.594	19x0.0234	0.11	2.9	0.045	1.14	0.030	0.76	0.257/0.269/0.281	6.53/6.83/7.13	60	90	55
6	65x0.511	65x0.0201	0.19	4.72	0.060	1.52	0.030	0.76	0.351/0.37/0.389	8.91/9.39/9.87	126	188	105
4	105x0.511	105x0.0201	0.240	6.1	0.060	1.52	0.030	0.76	0.420/0.435/0.465	10.67/11.05/11.81	192	286	140
1	224x0.511	224x0.0201	0.366	9.3	0.080	2.03	0.045	1.14	0.653/0.668/0.684	16.58/16.97/17.38	421	628	220
1/0	273x0.511	273x0.0201	0.417	10.6	0.080	2.03	0.045	1.14	0.656/0.671/0.725	16.65/17.05/18.41	466	693	260
4/0	532x0.511	224x0.0201	0.590	14.9	0.080	2.03	0.065	1.65	0.827/0.870/0.914	21.0/22.10/23.21	872	1299	405
262	646x0.511	646x0.0201	0.638	16.2	0.090	2.28	0.065	1.65	0.950/0.966/0.982	24.14/24.53/24.95	1056	1574	471
373	925x0.511	925x0.0201	0.772	19.6	0.090	2.28	0.065	1.65	1.086/1.103/1.120	27.59/28.01/28.45	1451	2162	590
444	1110x0.511	1110x0.0201	0.835	21.2	0.090	2.28	0.065	1.65	1.149/1.170/1.194	29.19/29.71/30.32	1697	2528	656
535	1332x0.511	1332x0.0201	0.929	23.6	0.090	2.28	0.065	1.65	1.244/1.272/1.30	31.59/32.31/33.02	2023	3015	731
646	1591x0.511	1591x0.0201	1.020	25.9	0.090	2.28	0.065	1.65	1.280/1.350/1.390	32.51/34.29/35.31	2340	3488	815

Description:

Single conductor halogen free flexible power cables

Construction

Conductors	Annealed flexible stranded tin coated or bare copper class 5 to IEC 60228, HD 383
Separator	If needed suitable tape separator between the conductor and insulation.
Insulation	Ethylene-propylene rubber (EPR) type 3GI3 to DIN VDE 0207 p. 20
Outer jacket	Halogen free thermosetting compound type HM3 to DIN VDE 0207 p. 24
Colour of outer jacket	Black or colours can be provided



Characteristic

Excellent flexibility

Water resistant and flame retardant

Temperature range -25°C to +90°C. For fixed installation lowest temperature is -40°C

UV, sunlight, ozone and oil resistant

Ink jet printed for easy identification

Application

Heavy-duty flexible single core power cables for mobile and fixed applications

Standard length cable packing

1000 m on drums. Other forms of packing and delivery are available on request

Parameters

Number and cross-sectional area of conductor	Nominal thickness of insulation	Nominal thickness of sheath	Approximate overall diameter	Approximate net weigh of cables	Current-carrying capacity at 30°C in air
mm ²	mm	mm	mm	kg/km	A
NSHXAFÖ 0.6/1 kV					
1x1.5	0.8	0.8	4.7	34	30
1x2.5	0.9	0.8	5.4	48	41
1x4	1.0	0.8	6.2	66	55
1x6	1.0	0.8	6.7	87	70

Number and cross-sectional area of conductor	Nominal thickness of insulation	Nominal thickness of sheath	Approximate overall diameter	Approximate net weigh of cables	Current-carrying capacity at 30°C in air
mm ²	mm	mm	mm	kg/km	A
1x10	1.2	0.8	8.1	135	98
1x16	1.2	0.8	9.2	195	132
1x25	1.4	0.8	10.8	286	176
1x35	1.4	1.0	11.8	379	218
1x50	1.6	1.0	14.3	545	276
1x70	1.6	1.0	16.1	738	347
1x95	1.8	1.0	18.6	964	416
1x120	1.8	1.0	19.7	1194	488
1x150	2.0	1.0	22	1480	566
1x185	2.2	1.2	25	1819	644
1x240	2.4	1.2	26.9	2339	775
1x300	2.6	1.2	30.9	2914	898
1x400	2.8	1.2	33.3	3761	1060
1x500	3.0	1.4	38.3	4737	1250
NSHXAFÖ 1.8/3 kV					
1x1.5	1.3	0.8	5.7	48	30
1x2.5	1.3	0.8	6.2	60	41
1x4	1.3	0.8	6.8	78	55
1x6	1.3	0.8	7.3	100	70
1x10	1.5	0.8	8.7	150	98
1x16	1.5	0.8	10.1	216	132
1x25	1.8	0.8	12.3	328	176
1x35	1.8	1.0	13.3	425	218
1x50	1.8	1.0	15.0	573	276
1x70	1.8	1.0	16.8	770	347
1x95	2.2	1.0	19.7	1019	416
1x120	2.2	1.0	20.8	1251	488
1x150	2.2	1.0	23.0	1547	566
1x185	2.4	1.2	25.7	1872	644
1x240	2.6	1.2	27.6	2398	775
1x300	2.8	1.2	31.6	2982	898
1x400	3.1	1.4	34.5	3847	1060
1x500	3.4	1.4	39.7	4853	1250
NSHXAFÖ 3.6/6 kV					
1x1.5	2.6	0.8	8.3/10.5	88	13.7
1x2.5	2.6	0.8	8.8/11.5	103	8.21
1x4	2.6	0.8	9.7/12	130	5.09
1x6	2.6	0.8	10.2/13	155	3.39
1x10	2.6	0.8	11.6/14.5	215	1.95
1x16	2.6	1.0	12.7/15.5	283	1.24

Number and cross-sectional area of conductor	Nominal thickness of insulation	Nominal thickness of sheath	Approximate overall diameter	Approximate net weigh of cables	Current-carrying capacity at 30°C in air
mm ²	mm	mm	mm	kg/km	A
1x25	2.9	1.0	14.5/17.5	393	0.795
1x35	2.9	1.0	15.2/19	489	0.565
1x50	2.9	1.0	17.2/21	651	0.393
1x70	2.9	1.0	19.0/23	856	0.277
1x95	3.2	1.0	21.7/26.5	1109	0.210
1x120	3.2	1.0	23.2/28.5	1369	0.164
1x150	3.2	1.2	25.0/30.5	1652	0.132
1x185	3.2	1.2	27.3/33	1965	0.108
1x240	3.2	1.2	29.6/34	2526	0.0817



Opto- -Telecommunication Cables for Wind Farms

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CPR
Fca

CE

RoHS
✓

OUTSIDE

UV







Z-XOTKtsdDb (glass yarn reinforcement)

Analog acc. to VDE: A-DQ(ZN)B2Y
ZN-TF-11:2001; ZN-EK-103

— Outdoor fibre optic cable with multiple optical fibres in a loose tube, duct, reinforced



Description:

Z-XOTKtsdDb – outdoor (Z), with a polyethylene sheath (X), optical fibre cable (OTK), loose tube with dry core sealing (ts), fully dielectric (d), reinforced with glass yarns (Db)

Construction

Central strength member	dielectric FRP rod with or without PE jacket
Optical fibres	singlemode (J) singlemode with non-zero dispersion (Jn) gradient multimode (G/50) gradient multimode (G/62.5)
Tube	loose tube filled with a thixotropic jelly
Filler	polyethylene
Cable core	6, 8 or 12 tubes or tubes and fillers stranded around central strength member
Sealing	dry
Reinforcement	glass yarns
Ripcord	2
Sheath	polyethylene, black

Characteristic

Performance parameters

Fully dielectric (except for cables with al moisture barrier)
Resistant to electromagnetic interferences
Protected from moisture and longitudinal water penetration
Through the use of central dielectric strength member and glass yarns reinforcement
On the core with hot melt adhesive, cables are resistant to longitudinal and transverse stresses
The outer sheath is resistant to abrasion, uv and stress corrosion cracking
The marking and the metric overprint are printed on the outer sheath
The marking can also be tailored to meet customer's requirements
The layer of glass yarns is the basic protection against rodents attack

Application

In telecommunication local, metropolitan and wide area networks in any spatial configuration
For laying in primary and secondary cable ducts.
Can be laid near high voltage cable lines

Temperature ranges

Transport and storage: -40 °C – +70 °C
Installation: -15 °C – +60 °C
Operation: -40 °C – +70 °C

Parameters

Fibre count in cable	Number of elements	Tube diameter	Cable diameter	Cable weight	Max. pulling force		Min. bending radius	
					Dynamic	Static	Dynamic	Static
n	n	mm	mm	kg/km	N		mm	
4-72	6	1.8	9.5	75	2700	1350	140	190
28-96	8	1.8	10.7	100	3000	1500	160	210
36-144	12	1.8	12.9	140	4000	2000	190	260
4-72	6	2.4	11.2	110	4000	2000	170	230
28-96	8	2.4	12.8	130	5000	2500	190	260
36-144	12	2.4	15.8	200	6000	3000	240	320

Packing length: to be agreed, standard – 4 km

Packing: wooden drums

A-DQ(ZN)B2Y (glass yarn reinforced)

DIN VDE 0888-3

— Outdoor fibre optic cable with multiple optical fibres in a central tube

Description:

A-DQ(ZN)B2Y – outdoor (A), central tube filled with thixotropic gel (D), dry cable sealing (Q), dielectric reinforcement (ZN), layer made of glass yarns (B) with a polyethylene sheath (2Y)

Construction

Optical fibres	singlemode E9/125 (G.652D) or singlemode with non zero dispersion shifted (G.655) gradient multimode 50/125 (G50) or 62.5/125 (G62.5)
Tube	central loose tube filled with a thixotropic jelly
Cable sealing	dry
Reinforcement	glass yarn
Sheath	polyethylene, black

Characteristic

Performance parameters

Fully dielectric
Resistant to electromagnetic interferences
Easy to install
The outer sheath is resistant to abrasion, uv and stress corrosion cracking
The marking and the metric overprint are printed on the outer sheath.
The marking can also be tailored to meet customer's requirements
The layer of glass yarns is the basic protection against rodents attack

Application

For quick connection between optoelectronic devices inside and outside buildings
Suitable for use in cable ducts
For laying in primary and secondary cable ducts

Temperature ranges

Transport and storage: -25 °C – +70 °C
Installation: -5 °C – +50 °C
Operation: -25 °C – +70 °C

Parameters

Fibre count in cable	Cable diameter	Cable weight	Max. pulling force		Min. bending radius	
			Dynamic	Static	Dynamic	Static
n	mm	kg/km	N		mm	
2 - 24	7.3	50	1000	500	120	160
2 - 24	7.8	55	1500	800	120	160
2 - 24	8.3	65	2000	1000	125	170
2 - 24	8.5	70	2500	1250	130	170
2 - 24	8.9	75	3000	1500	130	180

Packing length: to be agreed, standard – 2 km

Packing: wooden drums

CPR
Fca

CE

RoHS
✓

OUTSIDE

UV

MIN -15°C
MAX +60°C+70°C
-40°C

Z-(XV)OTKtsdD (PE/nylon jacket, aramid reinforcement)

Analog acc. to VDE: A-DQ(ZN)4Y2Y
ZN-EK-103

— Outdoor fibre optic cable with multiple optical fibres in a loose tube, duct, anti-rodent



Description:

Z-(XV)OTKtsdD – outdoor (Z), with a two-layer sheath: polyethylene (outer) -polyamide (inner) (XV), optical fibre cable (OTK), loose tube with dry core sealing (ts), fully dielectric (d), reinforced with aramide yarns (D)

OPTIONS:

Z-(VX)OTKtsdD – with a two-layer sheath: polyamide (outer)-polyethylene (inner) (VX)

Construction

Central strength member	dielectric FRP rod with or without PE jacket
Optical fibres	singlemode (J) singlemode with non-zero dispersion (Jn) gradient multimode (G/50) gradient multimode (G/62.5)
Tube	loose tube filled with a thixotropic jelly
Filler	polyethylene
Cable core	6, 8, 12, 18 or 24 tubes or tubes and fillers stranded around central strength member
Sealing	dry
Reinforcement	Aramid yarns
Ripcord	2
Sheath	black two layers polyethylene (outer)-polyamide (inner) sheath or orange two layers polyamide (outer)-polyethylene (inner) sheath

Characteristic

Performance parameters	Fully dielectric Resistant to electromagnetic interferences Protected from moisture and longitudinal water penetration Use of polyamide sheath protects cables from rodents Polyethylene sheath is resistant to abrasion, uv and stress corrosion cracking The marking and the metric overprint are printed on the outer sheath The marking can also be tailored to meet customer's requirements
Application	In telecommunication local, metropolitan and wide area networks in any spatial configuration For laying in primary and secondary cable ducts For installation on telegraph poles, low and medium voltage power lines or railway traction Can be laid near high voltage cable lines
Temperature ranges	Transport and storage: -40 °C – +70 °C Installation: -15 °C – +60 °C Operation: -40 °C – +70 °C

Parameters

Fibre count in cable	Number of elements	Tube diameter	Cable diameter	Cable weight	Max. pulling force		Min. bending radius	
					Dynamic	Static	Dynamic	Static
n	n	mm	mm	kg/km	N		mm	
4 – 72	6	1.8	10.2	85	2700	1350	150	200
28 – 96	8	1.8	11.4	105	3000	1500	170	230
36 – 144	12	1.8	13.7	150	4000	2000	210	270
52 – 216	18	1.8	14.1	150	4000	2000	210	280
76 – 288	24	1.8	15.8	190	4000	2000	240	320
4 – 72	6	2.4	12.2	115	4000	2000	180	240
28 – 96	8	2.4	13.8	145	5000	2500	210	280
36 – 144	12	2.4	16.8	215	6000	3000	250	340
52 – 216	18	2.4	17.3	225	6000	3000	260	340
76 – 288	24	2.4	19.5	290	6000	3000	290	390

Packing length: to be agreed, standard – 4 km

Packing: wooden drums

CPR
Fca

CE

RoHS
✓

OUTSIDE

UV



MIN -15°C
MAX +60°C+70°C
-40°C

ZKS-XXOTKtsFf (double PE jacket, corrugated steel tape armour)

Analog acc. to VDE: A-DQ2Y(SR)2Y
ZN-TF-13:2001

— Outdoor fibre optic cable with multiple optical fibres in a loose tube, armoured with corrugated steel tape, for sewage ducts



Description:

ZKS-XXOTKtsFf – outdoor cable for sewage systems (ZKS), with polyethylene outer sheath (X) and polyethylene inner sheath (X), fibre optic cable (OTK), loose tube with dry core sealing (ts), armoured with corrugated steel tape (Ff)

OPTIONS:

ZKS-XXOTKtsDFf – reinforced with aramid yarn (D) (or with glass yarns (Db))

Construction

Central strength member	dielectric FRP rod with or without PE jacket
Optical fibres	singlemode (J) singlemode with non-zero dispersion (Jn) gradient multimode (G/50) gradient multimode (G/62.5)
Tube	loose tube filled with a thixotropic jelly
Filler	polyethylene
Cable core	6, 8, 12, 18 or 24 tubes or tubes and fillers stranded around central strength member
Sealing	dry
Inner sheath	polyethylene
Armouring	corrugated steel tape
Ripcord	2
Outer sheath	polyethylene, black

Characteristic

Performance parameters

Fully dielectric core
Resistant to electromagnetic interferences
Protected from moisture and longitudinal water penetration
Through the use of corrugated steel tapes, armoured cables are resistant to transverse and longitudinal stresses and rodent attack
The outer sheath is resistant to abrasion, uv and stress corrosion cracking
The marking and the metric overprint are printed on the outer sheath.
The marking can also be tailored to meet customer's requirements

Application

In telecommunication local, metropolitan and wide area networks in any spatial configuration
For laying in sewage ducts
For burying directly in the ground in areas with higher risk of mechanical damage
For installation in primary cable ducts

Temperature ranges

Transport and storage: -40 °C – +70 °C
Installation: -15 °C – +60 °C
Operation: -40 °C – +70 °C

Parameters

Fibre count in cable	Number of elements	Tube diameter	Cable diameter	Cable weight	Max. pulling force		Min. bending radius	
					Dynamic	Static	Dynamic	Static
n	n	mm	mm	kg/km	N		mm	
4 – 72	6	1.8	12.3	140	1000	500	180	250
28 – 96	8	1.8	13.5	175	1500	750	200	270
36 – 144	12	1.8	15.8	230	2200	1100	240	320
52 – 216	18	1.8	16.2	230	1000	500	240	320
76 – 288	24	1.8	17.9	280	2500	1250	270	360
4 – 72	6	2.4	14.2	185	2700	1350	210	280
28 – 96	8	2.4	15.8	230	2700	1350	240	320
36 – 144	12	2.4	18.8	305	2700	1350	280	380
52 – 216	18	2.4	19.3	315	2700	1350	290	390
76 – 288	24	2.4	21.5	385	2700	1350	320	430

Packing length: to be agreed, standard – 4 km

Packing: wooden drums

CPR

E_{ca}

CE

RoHS

✓

INSIDE

+ OUTSIDE

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MIN -5°C

MAX +50°C

I

+70°C

-25°C

ZW-(NV)OTKtsdD (HFFR/nylon jacket, aramid reinforcement)

Analog acc. to VDE: A/I-DQ(ZN)4YH U-DQ(ZN)4YH
ZN-TF-13:2001

— Fibre optic cable with multiple optical fibres in a loose tube, reinforced, anti-rodent



Description:

ZW-(NV)OTKtsdD – outdoor/indoor (ZW), with double layer sheath, outer, halogen free flame retardant, inner, polyamide, black (NV) optical fibre cable (OTK), loose tube with dry core sealing (ts), dielectric (d), reinforced with aramide yarn (D)

OPTIONS: ZW-(NV)OTKtsdDb – reinforced with glass yarn (Db)

Construction

Central strength member	dielectric FRP rod with or without PE jacket
Optical fibres	singlemode (J) singlemode with non-zero dispersion (Jn) gradient multimode (G/50) gradient multimode (G/62.5)
Tube	central tube filled with a thixotropic jelly
Filler	polyethylene
Cable core	6, 8, 12, 18 or 24 tubes or tubes and fillers stranded around central strength member
Sealing	dry
Reinforcement	aramid yarns (or glass yarns)
Ripcord	2
Sheath	two-layer sheath: halogen free flame retardant (outer layer) – polyamide (inner layer), black

Reaction to fire

Flame propagation	ICE 60332-1-2
CPR – class reaction to fire (acc EN 50575)	Eca

Characteristic

Performance parameters

Fully dielectric
Resistant to electromagnetic interferences
Protected from moisture and longitudinal water penetration
Can be installed in the proximity to electric installation
Through the use of central dielectric strength member and aramid yarns reinforcement on the core with hot melt adhesive, cables are resistant to longitudinal and transverse stresses
Use of polyamide shell protects cables from rodents
The marking and the metric overprint are printed on the outer sheath
The marking can also be tailored to meet customer's requirements

Application

In telecommunication local, metropolitan and wide area networks in any spatial configuration
For making connection between optoelectronic devices in closed spaces
For laying on the outer walls of buildings
For laying in roads, railway tunnels or mine shafts
For horizontal and vertical suspension

Temperature ranges

Transport and storage: -40 °C – +70 °C
Installation: -15 °C – +60 °C
Operation: -40 °C – +70 °C

Parameters

Fibre count in cable	Number of elements	Tube diameter	Cable diameter	Cable weight	Max. pulling force		Min. bending radius	
					Dynamic	Static	Dynamic	Static
n	n	mm	mm	kg/km	N		mm	
4 – 72	6	1.8	10.2	100	2700	1350	150	200
28 – 96	8	1.8	11.4	125	3000	1500	170	230
36 – 144	12	1.8	13.7	175	4000	2000	210	270
52 – 216	18	1.8	14.1	180	4000	2000	210	280
76 – 288	24	1.8	15.8	220	4000	2000	240	320
4 – 72	6	2.4	12.2	140	4000	2000	180	240
28 – 96	8	2.4	13.8	175	5000	2500	210	280
36 – 144	12	2.4	16.8	250	6000	3000	250	340
52 – 216	18	2.4	17.3	260	6000	3000	260	340
76 – 288	24	2.4	19.5	325	6000	3000	290	390

Packing length: to be agreed, standard – 4 km

Packing: wooden drums

CABLE DRUMS

Sample data of wooden cable drums.

Approximate capacity wooden cable drums - amount of cable (in running metres) on sample cable drums.

Cable diameter [mm]	Type of sample cable drum						
	28	30	32	34	37	40	43
57	1060	1420	2600	2220	2890	4080	4930
58	1060	1420	2520	2150	2820	3970	4800
59	1020	1380	2270	2150	2820	3590	4800
60	1020	1380	2270	2150	2750	3490	4700
61	970	1330	2210	2090	2750	3490	4300
62	970	1330	2210	1820	2330	3400	4180
63	970	1330	2150	1760	2330	3400	4180
64	970	1290	1900	1760	2270	2950	4080
65	780	1080	1840	1700	2270	2950	4080
66	780	1030	1840	1700	2200	2870	3590
67	780	1030	1840	1700	2200	2870	3590
68	740	1030	1790	1650	2140	2790	3500
69	740	1000	1790	1410	1830	2790	3500
70	740	1000	1790	1410	1830	2790	3500
71	740	1000	1520	1360	1780	2390	3060
72	710	960	1520	1360	1780	2390	3060
73	710	960	1520	1360	1720	2320	2960
74	710	960	1470	1310	1720	2320	2960
75	710	960	1470	1310	1720	2320	2960
76	540	740	1470	1310	1660	2250	2880
77	540	740	1420	1260	1660	2250	2880
78	540	740	1220	1260	1660	1960	2570
79	540	740	1220	1050	1340	1880	2480
80	540	710	1220	1050	1340	1880	2480
81	520	710	1180	1010	1340	1880	2480
82	520	710	1180	1010	1290	1820	2390
83	520	710	1180	1010	1290	1820	2390
84	520	680	1180	1010	1290	1820	2390
85	520	680	1130	970	1290	1820	2390
86	490	680	1130	970	1250	1760	2030
87	490	680	1130	970	1250	1760	2030

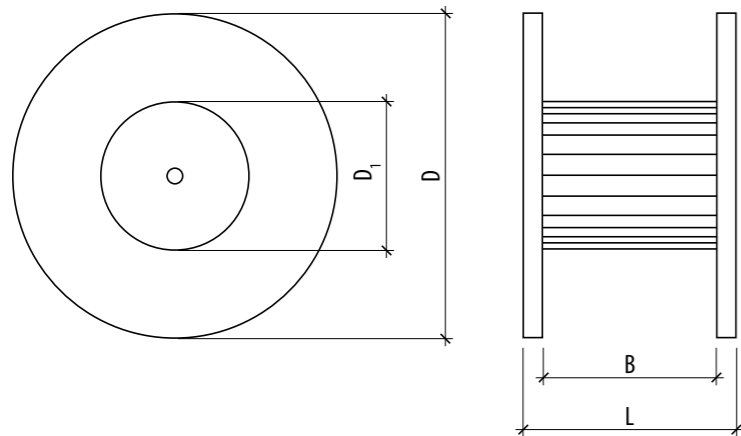
88	490	650	960	970	1250	1500	2030
89	490	650	920	920	1250	1500	2030
90	490	650		920	1200	1440	1960
91	380	500		920	1200	1440	1960
92	350	500		750	970	1440	1960
93	350	470		750	970	1440	1960
94	350	470		710	930	1380	1890
95		470		710	930	1380	1630
96		470		710	930	1380	1630
97		470		710	930	1380	1630
98		470		710	930	1380	1630
99		450		670	890	1330	1570
100		450		670	890	1330	1570
101		450		670	890	1110	1570
102		450		670	890	1110	1570
103		450		670	890	1110	1570
104		450		670	850	1060	1500
105		450		670	850	1060	1500
106				640	850	1060	1500
107				640	850	1060	1280
108				640	850	1060	1280
109				640	810	1010	1220
110				640	810	1010	1220
111				490	630	1010	1220
112				490	630	1010	1220
113				460	630	1010	1220
114				460	630	1010	1220
115				460	630	1010	1220
116					590	960	1160
117					590	770	1160
118					590	770	1160
119					590	770	1160
120					590	770	1160
121					590	780	1160
122					590	780	970
123					560	730	910
124					560	730	910
125					560	730	910
126					560	730	910
127					560	730	910
128					560	730	910
129					560	730	910
130					560	730	910
131					530	690	860

CABLE DRUMS

Sample data of wooden cable drums.

Approximate capacity wooden cable drums - amount of cable (in running metres) on sample cable drums.

Type		28	30	32	34	37	40	43
ØD	mm	2800	3000	3200	3400	3700	4000	4300
ØD1	mm	1800	2000	1700	2200	2500	2500	2500
B	mm	1400	1700	1800	1800	2100	2100	2100
L	mm	1675	1990	2095	2200	2500	2500	2500
Weight	kg	1370	1798	1814	2500	4250	4690	5170



Note: Figures used are indicative and may vary due to manufacturing tolerances, so should only be used as guidance.

Description of pictograms used in catalogue



Construction Products Regulation class



UV resistant jacket



The cable meets the requirements of the EU directive



Humidity resistant



Cable complies with requirements of RoHS directive



The cable meets the requirements of the EU directive



Outdoor cable



Self-supporting cable



Universal cable



For installation in the cable duct



Halogen-free materials, limited harmful gases emission and smoke density



Temperature of installation
MIN -5°C
MAX +60°C



Positive result for vertical flame spread test acc. to IEC 60332-1-2



Exploitation temperature
+60°C
-20°C

Clean Energy
Wind Energy Cables

EDITION II



TELE-FONIKA Kable S.A.
ul. Hipolita Cegielskiego 1
32-400 Myślenice, Poland
T: +48 52 364 3210
hvcs@tfkable.pl

tfkable.com

