TANO
CABLE

河南泰诺电缆有限公司

HENAN TANO CABLE CO.,LTD.

MV POWER CABLE to IEC 60502 STANDARD

Henan Tano Cable Co., Ltd.(Tano Cable for short), is a leading and professional manufacturer of cable and wire with more than 20 years' history and manufacturing experience, located in Zhengzhou city which is the capital of Henan province, China.

Tano Cable aims at providing integral power solution for international customers. We are working together as one company to provide products and technologies for building, maintaining and advancing the power and information infrastructures that connect the world. We mainly have the following products with strong competitiveness: All Aluminum Conductors (AAC), All Aluminum Alloy Conductors (AAAC), Aluminum Conductors Steel Reinforcement (ACSR) , Aerial Bundled Cables (ABC), building wire, welding cable, control cable, instrument cable, rubber cable, PVC insulated power cable, XLPE insulated power cable up to 500KV, customer-tailored cable and cable accessories, conforming to many different Country or international standard, such as IEC, HAR, BS, DIN, ICEA, ASTM, SABS, AS/NZS, JIS and so on.

Tano Cable pays great importance on the quality. We have strong teams and equipments for both production and inspection. Moreover, we have been awarded many certificates of ISO, CE, SONCAP, others from China and abroad. We keep improving our quality management system to meet the client's final satisfaction.

Tano Cable has provided services to the global clients who working in all areas of the energy, construction, industrial, specialty and communications market, and obtained the client's trust and compliment.

Welcome your any inquiry! Welcome your any visit! Welcome your any contact! We will take our biggest sincerity to be your long-term friend and partner.

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Single Core MV Power Cable to IEC 60502 Standard

APPLICATION

The single core MV power cables are designed for distribution of electrical power with nominal voltage Uo/U ranging from 1.8/3KV to 26/35KV and frequency 50Hz. They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

STANDARD

IEC 60502 Part 1(1.8/3KV)

IEC 60502 Part 2(3.6/6KV to 18/30KV)

CONSTRUCTION

Conductor: Plain annealed copper or aluminum complying with IEC 60228 class 1 or 2.

Conductor Screen: The conductor screen consists of an extruded layer of non metallic, semi-conducting compound firmly bonded to the insulation to exclude all air voids. The conductor screen is not necessary for both PVC and EPR/HEPR insulated 1.8/3KV and 3.6/6KV Power Cable.

Insulation: Insulation is of polyvinyl chloride (PVC) intended for 1.8/3KV and 3.6/6KV Power Cable cross-linked polyethylene compound (XLPE) or ethylene propylene rubber (EPR/HEPR).

Table 1. Insulation Thickness Of XLPE Or EPR/HEPR Insulation

Nom. Cross Section Area	Insulation Thickness at Nominal Voltage									
	1.8/3KV (Um=3.6KV)	3.6/6KV (Um=7.2KV)			6/10KV (Um=12KV)	8.7/15KV (Um=17.5KV)	12/20KV (Um=24KV)	18/30KV (Um=36KV)	21/35KV (Um=42KV)	26/35KV (Um=42KV)
mm²	mm	mm			mm	mm	mm	mm	mm	mm
	XLPE/EPR	XLPE	EPR		XLPE/EPR	XLPE/EPR	XLPE/EPR	XLPE/EPR	XLPE/EPR	XLPE/EPR
			Unscreened	Screened						
10	2	2.5	3	2.5	-	-	-	-	-	-
16	2	2.5	3	2.5	3.4	-	-	-	-	-
25	2	2.5	3	2.5	3.4	4.5	-	-	-	-
35	2	2.5	3	2.5	3.4	4.5	5.5	-	-	-
50 – 185	2	2.5	3	2.5	3.4	4.5	5.5	8	9.3	10.5
240	2	2.6	3	2.6	3.4	4.5	5.5	8	9.3	10.5
300	2	2.8	3	2.8	3.4	4.5	5.5	8	9.3	10.5
400	2	3	3	3	3.4	4.5	5.5	8	9.3	10.5
500 - 1600	2.2-2.8	3.2	3.2	3.2	3.4	4.5	5.5	8	9.3	10.5

*Insulation Thickness of PVC is 3.4mm (1- 1600mm sq) for 3.6/6KV cables.

Insulation Screen: The insulation screen consists of an extruded layer of non metallic, semi-conducting compound extruded over the insulation. The extruded semi-conducting layer shall consist of bonded or cold strippable semi-conducting compound capable of removal for jointing or terminating. As an option, a semi-conducting tape may be applied over the extruded semi-conducting layer as a bedding for the metallic layer. The minimum thickness is 0.3 mm and the maximum resistivity is 500 Ohm-m at 90°C. The screen is tightly fitted to the insulation to exclude all air voids and can be easily hand stripped on site. The insulation screen is not necessary for both PVC and EPR/HEPR insulated 1.8/3KV and 3.6/6KV Power Cable. The screen may be covered by semi-conductive water blocking swellable tape to ensure longitudinal watertightness.

Metallic Layer: The metallic layer may be applied over the individual cores or the core assembly collectively. The following types of metallic layers are provided:

1) Metallic Screen

2) Concentric Conductor

3) Metallic Sheath

4) Metallic armor

The metallic screen shall consist of either copper tapes or a concentric layer of copper wires or a combination of tapes and wires to provide an earth fault current path. The concentric conductor is applied directly either over the insulation, or over the insulation screen or over an inner covering. The metallic sheath consists of lead or lead alloy applied as a tightly fitting seamless tube. The metallic armor consists of either flat wire armor, round wire armor, and double tape armor.

Table 2. Minimum Total Cross Section Of Metallic Screen

Nom. Cross-Section Area of Cable	Min. Cross-Section of Metallic Screen	DC Resistance of the Copper Wire Screen
mm²	mm²	mm
up to 120	16	1.06
150-300	25	0.72
400-630	35	0.51
800-1000	50	0.35

Separation Sheath (for armored cable): The separation sheath comprises a layer of extruded PVC, PE or LSZH, applied under the armor .The nominal thickness is calculated by 0.02Du + 0.6mm where Du is the fictitious diameter under the sheath in mm. For Power Cable without a lead sheath, the nominal separation sheath thickness shall not be less than 1.2mm. For Power Cable where the separation sheath is applied over the lead sheath, the nominal separation sheath thickness shall not be less than 1.0mm.

Lapped Bedding (for armored lead sheathed cable): The lapped bedding consists of either impregnated/synthetic compounded paper tapes or a combination of two layers of these paper tapes followed by a few layers of compounded fabulous materials. The thickness is around 1.5mm.

Armour (for armored cable): The Armour consists of round aluminum wire amour applied helically over an extruded separation sheath.

Table 3. Round Armour Wire Diameter

Fictitious Diameter Under the Armour		Armour Wire Diameter
mm		mm
>	<	
-	10	0.8
10	15	1.25

15	25	1.6
25	35	2
35	60	2.5
60	-	3.15

Over Sheath: Overall sheath comprises a layer of extruded thermoplastic compound (PVC,PE or LSZH can be offered as an option.) or elastomeric compound (polychlorprene CSP or chlorosulfonated PE). The nominal oversheath thickness is calculated by 0.035D+1 where D is the fictitious diameter immediately under the oversheath in mm. For unarmored Power Cable and Power Cable with the oversheath not applied over the armor, metallic screen or concentric conductor, the nominal oversheath thickness shall not be less than 1.4mm. And for Power Cable with oversheath applied over the armor, metallic screen or concentric conductor, the nominal oversheath thickness shall not be less than 1.8mm.

Service Life: 30years

PHYSICAL PROPERTIES

Operating Temperature: up to 70°C (PVC insulation); up to 90°C (XLPE or EPR insulation)

Temperature Range: -5°C (PVC sheath); -20°C (PE sheath)

Short Circuit Temperature(5 seconds maximum duration): 140-160°C (PVC insulation); 250°C (XLPE or EPR insulation)

Bending Radius: 12 x OD

Table 4. Nominal/Operating/Testing Voltages

Rated Voltage Uo/U	Operating Voltage (Um)	Testing Voltage (rms)
1.8/3KV	3.6KV	6.5KV
3.6/6KV	7.2KV	12.5KV
6/10KV	12KV	21KV
8.7/15KV	17.5KV	30.5KV
12/20KV	24KV	42KV
18/30KV	36KV	63KV
21/35KV	42KV	73.5(53)*KV
26/35KV	42KV	91(65)*KV

*21/35KV and 26/35kV power frequency voltage test can be made under the following conditions: 2.5Uo x 30mins or 3.0Uo x 15mins.

Numbers in brackets refer to the test values for 3.0Uo x 1.5mins.

TECHNICAL DATA

Single Core 1.8/3KV (Um=3.6KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
10	2	0.1	16	1.8	13	240	180	1.2	1.6	1.8	18	460	400
16	2	0.1	16	1.8	13	300	200	1.2	1.6	1.8	19	530	430
25	2	0.1	16	1.8	15	410	250	1.2	1.6	1.8	20	650	500
35	2	0.1	16	1.8	16	510	300	1.2	1.6	1.8	21	780	560
50	2	0.1	16	1.8	17	640	350	1.2	1.6	1.8	22	930	640
70	2	0.1	16	1.8	19	850	440	1.2	1.6	1.8	24	1170	750
95	2	0.1	16	1.8	20	1130	540	1.2	1.6	1.8	26	1460	870
120	2	0.1	16	1.8	22	1370	630	1.2	1.6	1.8	27	1730	990
150	2	0.1	25	1.8	23	1650	730	1.2	1.6	1.8	29	2030	1110
185	2	0.1	25	1.8	25	2010	860	1.2	1.6	1.9	30	2430	1280
240	2	0.1	25	1.8	27	2570	1050	1.2	1.6	2	33	3040	1530
300	2	0.1	25	1.8	29	3160	1250	1.2	2	2.1	36	3760	1860
400	2	0.1	35	1.9	33	3980	1560	1.2	2	2.2	39	4660	2230
500	2.2	0.1	35	2.1	35.5	4910	1905	1.3	2.5	2.5	43	5930	2930
630	2.4	0.1	35	2.2	39.7	6340	2420	1.4	2.5	2.6	49	7370	3430
800	2.6	0.1	50	2.3	44.5	7890	2980	1.4	2.5	2.7	52	9070	4230
1000	2.8	0.1	50	2.5	49.4	9890	3700	1.5	2.5	2.9	56	11100	4950

Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as steted in the table, can be supplied as standard.

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												cu	AL	cu	AL
mm²	μΩ/m	μΩm	kA	pF/m	mA/m	kA	kA	μΩ/m		nH/m		μΩ/ m		μΩ/ m	
10	1830/3080	2330/3920	1.4/0.9	182	0.27	2.6	0.2	151	201	384	558	2332	3846	2332	3840
16	1150/1910	1460/2420	2.2/1.4	201	0.29	2.6	0.3	140	193	362	546	1462	2411	1478	2420
25	727/1200	927/1538	3.6/2.3	222	0.32	2.6	0.3	131	185	345	535	936	1544	952	1554
35	524/868	668/1113	5.0/3.2	251	0.35	2.6	0.4	122	178	327	524	679	1121	695	1131
50	387/641	494/822	6.8/4.4	281	0.39	2.6	0.4	116	172	313	514	511	834	527	844
70	268/443	343/568	9.8/6.3	341	0.45	2.6	0.5	110	165	300	495	364	583	386	597
95	193/320	248/410	13.3/8.5	397	0.5	2.6	0.5	104	160	287	485	272	427	300	446
120	153/253	196/325	17.2/11.0	430	0.55	2.6	0.6	104	159	283	480	225	345	257	367
150	124/206	159/266	21.2/13.5	464	0.59	4.3	0.6	100	156	280	475	193	287	229	313
185	99.1/164	128/211	26.6/17.0	513	0.65	4.3	0.7	98	154	274	465	165	237	206	267
240	75.4/125	98/161	34.9/22.3	573	0.7	4.3	0.9	94	150	267	459	140	191	185	226
300	60.1/100	80/130	43.8/28.0	652	0.72	4.3	1	91	147	260	455	128	163	174	203
400	47.0/77.8	64/102	57.3/36.6	727	0.75	5.8	1.1	90	147	253	445	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	754	0.79	5.8	1.2	89	145	248	435	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	786	0.87	5.8	1.3	86	143	245	425	97	110	151	160
800	22.1/36.7	35/55	114.4/75.0	846	0.91	8.2	1.4	85	142	243	415	92	101	147	153
1000	17.6/29.1	30/46	143.0/94.0	916	0.99	8.2	1.5	83	141	239	405	88	95	144	148

Single Core 3.6/6KV (Um=7.2KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Aluminium Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
10	2.5	0.1	16	1.8	16	320	260	1.2	1.6	1.8	22	610	550
16	2.5	0.1	16	1.8	16	390	290	1.2	1.6	1.8	22	680	580
25	2.5	0.1	16	1.8	18	500	340	1.2	1.6	1.8	23	810	660
35	2.5	0.1	16	1.8	19	610	400	1.2	1.6	1.8	24	940	730
50	2.5	0.1	16	1.8	20	750	450	1.2	1.6	1.8	26	1100	810
70	2.5	0.1	16	1.8	22	970	550	1.2	1.6	1.8	27	1350	930

95	2.5	0.1	16	1.8	23	1250	660	1.2	1.6	1.9	29	1670	1080
120	2.5	0.1	16	1.8	25	1500	760	1.2	1.6	1.9	31	1950	1200
150	2.5	0.1	25	1.8	26	1790	860	1.2	1.6	2	32	2270	1350
185	2.5	0.1	25	1.8	28	2150	1000	1.2	2	2.1	35	2770	1620
240	2.6	0.1	25	1.9	31	2770	1250	1.2	2	2.2	38	3440	1930
300	2.8	0.1	25	2	34	3400	1500	1.2	2	2.2	41	4120	2210
400	3	0.1	35	2.1	38	4280	1850	1.3	2.5	2.4	46	5250	2820
500	3.2	0.1	35	2.1	41.5	5325	2240	1.4	2.5	2.6	50	6520	3520
630	3.2	0.1	35	2.2	45.3	6745	2750	1.5	2.5	2.7	56	7960	4020
800	3.2	0.1	50	2.4	49.9	8290	3310	1.5	2.5	2.8	59	9660	4820
1000	3.2	0.1	50	2.5	54.2	10255	3990	1.6	2.5	3	63	11690	5540

Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
mm²	µΩ/m	µΩm	kA	pF/m	mA/m	kA	kA	µΩ/m		nH/m		µΩ/ m		µΩ/m	
10	1830/3080	2330/3920	1.4/0.9	202	0.26	2.6	0.4	160	214	420	610	2332	3846	2345	3840
16	1150/1910	1460/2420	2.2/1.4	232	0.29	2.6	0.4	152	205	410	600	1462	2411	1478	2421
25	727/1200	927/1538	3.6/2.3	262	0.32	2.6	0.4	142	196	400	590	936	1544	952	1554
35	524/868	668/1113	5.0/3.2	291	0.35	2.6	0.5	133	187	390	580	679	1121	695	1131
50	387/641	494/822	6.8/4.4	321	0.39	2.6	0.5	121	179	380	570	511	834	527	844
70	268/443	343/568	9.8/6.3	371	0.45	2.6	0.6	115	173	370	550	364	583	386	597
95	193/320	248/410	13.3/8.5	417	0.5	2.6	0.6	110	168	350	540	272	427	300	446
120	153/253	196/325	17.2/11.0	459	0.55	2.6	0.7	107	165	340	520	225	345	257	367
150	124/206	159/265	21.2/13.5	494	0.59	4.3	0.7	103	161	330	510	193	287	229	313
185	99.1/164	128/211	26.6/17.0	543	0.65	4.3	0.8	100	158	320	500	165	237	206	267
240	75.4/125	98/161	34.9/22.3	583	0.7	4.3	0.9	97	155	310	490	140	191	185	226
300	60.1/100	80/130	43.8/28.0	602	0.72	4.3	1	95	153	300	490	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	627	0.75	5.8	1.1	92	150	290	480	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	654	0.79	5.8	1.2	90	147	290	470	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	726	0.87	5.8	1.3	87	145	280	460	97	110	151	160
800	22.1/36.7	35/55	114.4/75.0	786	0.91	8.2	1.4	85	143	270	460	92	101	147	153
1000	17.6/29.1	30/46	143.0/94.0	856	0.99	8.2	1.5	83	141	260	450	88	95	144	148

* For capacitance & charging current values, multiply values shown by 1.2 for EPR insulated cables.

Single Core 6/10KV (Um=12KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Aluminium Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
16	3.4	0.1	16	1.8	18	450	350	1.2	1.6	1.8	24	770	670
25	3.4	0.1	16	1.8	20	560	400	1.2	1.6	1.8	25	910	750
35	3.4	0.1	16	1.8	21	680	460	1.2	1.6	1.8	26	1040	820
50	3.4	0.1	16	1.8	22	810	520	1.2	1.6	1.8	28	1190	900
70	3.4	0.1	16	1.8	24	1050	620	1.2	1.6	1.9	29	1470	1040
95	3.4	0.1	16	1.8	25	1320	730	1.2	1.6	2	31	1780	1190
120	3.4	0.1	16	1.8	27	1580	840	1.2	2	2	34	2150	1410
150	3.4	0.1	25	1.9	28	1880	960	1.2	2	2.1	35	2480	1560
185	3.4	0.1	25	1.9	30	2250	1100	1.2	2	2.1	37	2890	1730
240	3.4	0.1	25	2	33	2870	1350	1.2	2	2.2	40	3570	2050
300	3.4	0.1	25	2.1	35	3490	1580	1.2	2	2.3	42	4230	2330
400	3.4	0.1	35	2.2	39	4350	1920	1.3	2.5	2.4	47	5320	2890
500	3.4	0.1	35	2.2	39.9	5235	2240	1.4	2.5	2.5	51	6510	3530
630	3.4	0.1	35	2.3	43.7	6675	2765	1.5	2.5	2.6	56	7960	4050
800	3.4	0.1	50	2.5	48.6	8225	3330	1.5	2.5	2.7	59	9670	4850
1000	3.4	0.1	50	2.6	52.9	10210	4030	1.6	2.5	2.9	63	11710	5570

Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat spaced	
												CU	AL	CU	AL
mm²	μΩ/m	μΩm	kA	pF/m	mA/m	kA	kA	μΩ/m		nH/m		μΩ/ m		μΩ/m	
16	1150/1910	1460/2420	2.2/1.4	187	0.39	2.6	0.5	152	216	480	680	1462	2411	1478	2421

25	727/1200	927/1538	3.6/2.3	208	0.42	2.6	0.5	144	210	460	660	936	1544	952	1554
35	524/868	668/1113	5.0/3.2	229	0.46	2.6	0.6	136	200	440	640	679	1121	695	1131
50	387/641	494/822	6.8/4.4	252	0.5	2.6	0.6	131	195	420	620	511	834	527	844
70	268/443	343/568	9.8/6.3	288	0.58	2.6	0.7	122	188	390	600	364	583	386	597
95	193/320	248/410	13.3/8.5	323	0.65	2.6	0.7	122	182	390	580	272	427	300	446
120	153/253	196/325	17.2/11.0	353	0.71	2.6	0.8	116	172	370	550	225	345	257	367
150	124/206	159/265	21.2/13.5	380	0.76	4.3	0.8	110	166	350	530	193	287	229	313
185	99.1/164	128/211	26.6/17.0	416	0.83	4.3	0.9	107	166	340	530	165	237	206	267
240	75.4/125	98/161	34.9/22.3	460	0.92	4.3	0.9	104	163	330	520	140	191	185	226
300	60.1/100	80/130	43.8/28.0	506	1.01	4.3	1	100	157	320	500	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	561	1.12	5.8	1.1	94	154	300	490	113	141	164	184
500	36.6/60.5	51/81.0	72.3/46.2	619	1.24	5.8	1.2	91	151	290	480	105	124	158	171
630	28.3/46.9	42/64.0	91.2/58.3	698	1.37	5.8	1.3	91	148	290	470	97	110	151	160
800	22.1/36.7	35/55	114.4/75.0	780	1.39	8.2	1.4	88	144	280	470	92	101	147	153
1000	17.6/29.1	30/46	143.0/94.0	860	1.54	8.2	1.5	85	143	270	460	88	95	144	148

* For capacitance & charging current values, multiply values shown by 1.2 for EPR insulated cables.

Single Core 8.7/15KV (Um=17.5KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Aluminium Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
25	4.5	0.1	16	1.8	22	640	480	1.2	1.6	1.8	28	1020	860
35	4.5	0.1	16	1.8	23	760	540	1.2	1.6	1.9	29	1170	950
50	4.5	0.1	16	1.8	24	900	610	1.2	1.6	1.9	30	1340	1040
70	4.5	0.1	16	1.8	26	1140	710	1.2	1.6	2	32	1610	1190
95	4.5	0.1	16	1.8	27	1420	830	1.2	2	2.1	35	2020	1430
120	4.5	0.1	16	1.9	29	1700	950	1.2	2	2.1	36	2310	1570
150	4.5	0.1	25	1.9	31	1990	1070	1.2	2	2.2	38	2660	1740
185	4.5	0.1	25	2	32	2380	1230	1.2	2	2.2	39	3070	1920
240	4.5	0.1	25	2.1	35	3010	1490	1.2	2	2.3	42	3750	2240
300	4.5	0.1	25	2.1	37	3620	1720	1.3	2.5	2.4	46	4590	2690
400	4.5	0.1	35	2.2	41	4490	2070	1.3	2.5	2.5	49	5550	3120
500	4.5	0.1	35	2.3	43	5460	2460	1.3	2.5	2.6	52	6590	3600
630	4.5	0.1	35	2.4	48	6790	2590	1.4	2.5	2.7	57	8060	4110
800	4.5	0.1	50	2.6	52	8420	3570	1.5	2.5	2.8	61	9800	4970
1000	4.5	0.1	50	2.7	55	10330	4180	1.6	2.5	3	65	10850	5710

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat spaced	
												CU	AL	CU	AL
mm²	μΩ/m	μΩm	kA	pF/m	mA/m	kA	kA	μΩ/m		nH/m		μΩ/ m		μΩ/m	
25	727/1200	927/1538	3.6/2.3	171	0.47	2.6	0.6	150	210	480	680	936	1544	952	1554
35	524/868	668/1113	5.0/3.2	187	0.51	2.6	0.6	141	207	460	660	679	1121	695	1131
50	387/641	494/822	6.8/4.4	204	0.57	2.6	0.7	138	195	440	640	511	834	527	844
70	268/443	343/568	9.8/6.3	232	0.63	2.6	0.7	132	188	420	600	364	583	386	597
95	193/320	248/410	13.3/8.5	258	0.71	2.6	0.8	126	182	400	580	272	427	300	446
120	153/253	196/325	17.2/11.0	281	0.74	2.6	0.8	119	179	380	570	225	345	257	367
150	124/206	159/265	21.2/13.5	301	0.79	4.3	0.9	113	176	360	560	193	287	229	313
185	99.1/164	128/211	26.6/17.0	329	0.87	4.3	0.9	110	170	350	540	165	237	206	267
240	75.4/125	98/161	34.9/22.3	363	0.96	4.3	1	107	166	340	530	140	191	185	226
300	60.1/100	80/130	43.8/28.0	398	1.03	4.3	1.1	104	160	330	510	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	439	1.17	5.8	1.2	97	157	310	500	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	483	1.28	5.8	1.3	94	154	300	490	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	534	1.42	5.8	1.4	91	151	290	480	97	110	151	160
800	22.1/36.7	35/55	114.4/75.0	590	1.61	8.2	1.4	91	147	290	470	92	101	147	153
1000	17.6/29.1	30/46	143.0/94.0	640	1.75	8.2	1.5	88	144	280	460	88	95	144	148

For capacitance & charging current values, multiply valuse shown by 1.2 for ERP insulated cables.

Single Core 12/20KV (Um=24KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Aluminium Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
25	5.5	0.1	16	1.8	24	720	560	1.2	1.6	1.8	29	1200	980

35	5.5	0.1	16	1.8	25	840	620	1.2	1.6	1.9	30	1350	1070
50	5.5	0.1	16	1.8	26	990	690	1.2	2	2	33	1550	1250
70	5.5	0.1	16	1.8	28	1230	800	1.2	2	2.1	35	1840	1420
95	5.5	0.1	16	1.9	30	1530	940	1.2	2	2.1	37	2160	1570
120	5.5	0.1	16	2	31	1810	1050	1.2	2	2.2	38	2470	1730
150	5.5	0.1	25	2	33	2110	1190	1.2	2	2.2	40	2810	1890
185	5.5	0.1	25	2.1	35	2510	1360	1.2	2	2.3	42	3240	2090
240	5.5	0.1	25	2.1	38	3130	1610	1.3	2.5	2.4	45	4150	2580
300	5.5	0.1	25	2.2	40	3760	1860	1.3	2.5	2.5	48	4800	2890
400	5.5	0.1	35	2.3	43	4650	2220	1.4	2.5	2.6	52	5780	3350
500	5.5	0.1	35	2.4	46	5530	2545	1.5	2.5	2.7	55	6850	3850
630	5.5	0.1	35	2.5	50	6700	3100	1.5	2.5	2.9	60	8380	4400
800	5.5	0.1	50	2.6	55	8580	3690	1.6	2.5	3	64	10130	5270
1000	5.5	0.1	50	2.7	59	10620	4445	1.7	2.5	3.1	68	12180	6000

Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat spaced	
												Cu	AL	Cu	AL
mm²	µΩ/m	µΩm	kA	pF/m	mA/m	kA	kA	µΩ/m		nH/m		µΩ/ m		µΩ/m	
25	727/1200	927/1538	3.6/2.3	142	0.62	2.6	0.6	162	214	490	680	936	1544	952	1554
35	524/868	668/1113	5.0/3.2	162	0.65	2.6	0.7	150	207	470	660	679	1121	695	1131
50	387/641	494/822	6.8/4.4	177	0.71	2.6	0.8	141	201	450	640	511	834	527	844
70	268/443	343/568	9.8/6.3	200	0.8	2.6	0.8	135	195	430	620	364	583	386	597
95	193/320	248/410	13.3/8.5	222	0.89	2.6	0.9	129	188	410	600	272	427	300	446
120	153/253	196/325	17.2/11.0	241	0.96	2.6	0.9	122	182	390	580	225	345	257	367
150	124/206	159/265	21.2/13.5	257	1.03	4.3	1	116	176	370	560	193	287	229	313
185	99.1/164	128/211	26.6/17.0	280	1.12	4.3	1	116	173	370	550	165	237	206	267
240	75.4/125	98/161	34.9/22.3	307	1.23	4.3	1.1	110	170	350	540	140	191	185	226
300	60.1/100	80/130	43.8/28.0	336	1.34	4.3	1.2	107	166	340	530	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	370	1.48	5.8	1.3	100	160	320	510	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	406	1.62	5.8	1.4	97	154	310	490	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	449	1.8	5.8	1.5	94	151	300	480	97	110	151	160
800	22.1/36.7	35/55	114.4/75.0	490	1.85	8.2	1.6	91	151	290	480	92	101	147	153
1000	17.6/29.1	30/46	143.0/94.0	540	2.03	8.2	1.7	87	148	280	470	88	95	144	148

* For capacitance & charging current values, multiply values shown by 1.2 for EPR in sulated cables.

Single Core 18/30KV (Um=36KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Aluminium Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	8	0.1	16	2	31	1250	960	1.2	2	2.2	38	1910	1640
70	8	0.1	16	2	34	1510	1090	1.2	2	2.3	41	2240	1820
95	8	0.1	16	2.1	35	1830	1240	1.2	2	2.3	42	2570	1980
120	8	0.1	16	2.1	37	2110	1360	1.3	2.5	2.4	45	3060	2310
150	8	0.1	25	2.2	38	2420	1510	1.3	2.5	2.5	47	3430	2510
185	8	0.1	25	2.2	40	2830	1680	1.3	2.5	2.5	50	3890	2720
240	8	0.1	25	2.3	43	3500	1980	1.4	2.5	2.6	52	4630	3120
300	8	0.1	25	2.4	45	4150	2250	1.4	2.5	2.7	54	5330	3430
400	8	0.1	35	2.5	49	5070	2640	1.5	2.5	2.8	58	6360	3930
500	8	0.1	35	2.6	52	5945	2965	1.6	2.5	2.9	61	7670	4490
630	8	0.1	35	2.7	56	7445	3555	1.7	2.5	3	65	8870	5020
800	8	0.1	50	2.8	61	9060	4180	1.9	2.5	3.2	69	10790	5980
1000	8	0.1	50	2.9	65	11140	4980	2	2.5	3.3	73	12860	6730

Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat spaced	Trefoil	Flat spaced	Trefoil		Flat spaced	
												Cu	AL	Cu	AL
mm²	µΩ/m	µΩ/m	kA	pF/m	mA/m	kA	kA	µΩ/m		nH/m		µΩ/ m		µΩ/ m	
50	387/641	494/822	6.8/4.4	138	0.83	2.6	1	151	214	480	680	511	834	527	844
70	268/443	343/568	9.8/6.3	154	0.92	2.6	1	144	201	460	640	364	583	386	597

95	193/320	248/410	13.3/8.5	169	1.01	2.6	1.1	138	195	440	620	272	427	300	446
120	153/253	196/325	17.2/11.0	183	1.1	2.6	1.1	132	188	420	600	225	345	257	367
150	124/206	159/265	21.2/13.5	194	1.16	4.3	1.2	126	182	400	580	193	287	229	313
185	99.1/164	128/211	26.6/17.0	210	1.26	4.3	1.2	122	182	390	580	165	237	206	267
240	75.4/125	98/161	34.9/22.3	229	1.37	4.3	1.3	119	176	380	560	140	191	185	226
300	60.1/100	80/130	43.8/28.0	249	1.49	4.3	1.4	113	173	360	550	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	273	1.64	5.8	1.5	107	163	340	520	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	298	1.79	5.8	1.6	104	163	330	520	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	327	1.96	5.8	1.7	100	160	320	510	97	110	151	160
800	22.1/36.7	35/55	114.4/75.0	350	1.98	8.2	1.8	97	154	310	490	92	101	147	153
1000	17.6/29.1	30/46	143.0/94.0	380	2.15	8.2	1.9	94	149	300	490	88	95	144	148

* For capacitance & charging current values, multiply values shown by 1.2 for EPR insulated cables.

Single Core 21/35KV (Um=42KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Aluminium Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	9.3	0.1	16	2	35.7	1526	1239	1.2	2	2.3	43.5	2331	2116
70	9.3	0.1	16	2.1	37.6	1809	1393	1.2	2.5	2.4	46.6	2680	2325
95	9.3	0.1	16	2.2	39.4	2123	1555	1.2	2.5	2.5	48.4	2981	2482
120	9.3	0.1	16	2.2	40.8	2405	1688	1.4	2.5	2.5	49.8	3487	2867
150	9.3	0.1	25	2.2	42.3	2733	1838	1.4	2.5	2.6	51.5	3870	3055
185	9.3	0.1	25	2.3	44.7	3216	2082	1.4	2.5	2.6	53.5	4420	3370
240	9.3	0.1	25	2.4	46.9	3766	2333	1.4	2.5	2.7	55.8	4981	3676
300	9.3	0.1	25	2.4	49.3	4408	2605	1.4	2.5	2.8	58.5	5661	3971
400	9.3	0.1	35	2.5	52.3	5473	3057	1.6	2.5	2.9	61.7	6865	4550

Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat spaced	
												Cu	Al	Cu	Al
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m		nH/m		μΩ/ m		μΩ/ m	
50	387/641	494/822	6.8/4.4	130	0.89	2.6	1.1	156	220	495	700	511	834	527	844
70	268/443	343/568	9.8/6.3	144	0.98	2.6	1.1	150	204	475	650	364	583	386	597
95	193/320	248/410	13.3/8.5	159	1.06	2.6	1.2	142	198	455	630	272	427	300	446
120	153/253	196/325	17.2/11.0	171	1.18	2.6	1.2	137	191	435	610	225	345	257	367
150	124/206	159/265	21.2/13.5	180	1.26	4.3	1.3	131	185	415	590	193	287	229	313
185	99.1/164	128/211	26.6/17.0	193	1.34	4.3	1.3	125	185	400	590	165	237	206	267
240	75.4/125	98/161	34.9/22.3	210	1.45	4.3	1.4	123	179	390	570	140	191	185	226
300	60.1/100	80/130	43.8/28.0	228	1.57	4.3	1.5	116	176	370	560	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	249	1.74	5.8	1.6	110	166	350	530	113	141	164	184

* For capacitance & charging current values, multiply values shown by 1.2 for EPR insulated cables.

Single Core 26/35KV (Um=42KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Aluminium Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	10.5	0.1	16	2.1	38.3	1689	1402	1.2	2.5	2.5	46.8	2580	2395
70	10.5	0.1	16	2.2	40.2	1980	1564	1.2	2.5	2.5	48.8	2937	2611
95	10.5	0.1	16	2.2	41.8	2283	1714	1.2	2.5	2.6	50.9	3206	2737
120	10.5	0.1	16	2.3	43.4	2588	1871	1.4	2.5	2.6	51.5	3753	3177
150	10.5	0.1	25	2.3	44.9	2923	2028	1.4	2.5	2.7	53.8	4143	3371
185	10.5	0.1	25	2.4	47.3	3415	2281	1.4	2.5	2.7	55.6	4694	3693
240	10.5	0.1	25	2.5	49.5	3975	2542	1.4	2.5	2.8	57.6	5258	4005
300	10.5	0.1	25	2.5	51.9	4625	2822	1.4	2.5	2.9	60.8	5940	4301
400	10.5	0.1	35	2.6	54.9	5704	3288	1.6	2.5	3	63.6	7155	4894

Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen 1 sec	Short Circuit Rating of Copper Tape Screen 1 sec	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat spaced	
												Cu	Al	Cu	Al
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m		nH/m		μΩ/ m		μΩ/ m	
50	387/641	494/822	6.8/4.4	126	0.95	2.6	1.2	161	227	510	720	511	834	527	844
70	268/443	343/568	9.8/6.3	138	1.04	2.6	1.2	154	207	490	660	364	583	386	597
95	193/320	248/410	13.3/8.5	151	1.13	2.6	1.3	147	202	470	640	272	427	300	446
120	153/253	196/325	17.2/11.0	161	1.24	2.6	1.3	142	194	450	620	225	345	257	367
150	124/206	159/265	21.2/13.5	169	1.36	4.3	1.4	136	188	430	600	193	287	229	313
185	99.1/164	128/211	26.6/17.0	176	1.4	4.3	1.4	128	188	410	600	165	237	206	267
240	75.4/125	98/161	34.9/22.3	192	1.51	4.3	1.5	128	183	400	580	140	191	185	226
300	60.1/100	80/130	43.8/28.0	209	1.64	4.3	1.6	119	180	380	570	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	227	1.8	5.8	1.7	114	170	360	540	113	141	164	184

* For capacitance & charging current values, multiply values shown by 1.2 for EPR insulated cables.

Current Rating for Single Core 1.8/3KV(Um=3.6KV) to 26/35KV(Um=42KV) XLPE Insulation

Nom. Cross-Section Area	Buried direct in Ground				Laid in Single Way Duct				Laid in Air					
	Trefoil		Flat spaced		Trefoil		Flat Touching		Trefoil		Flat Touching		Flat spaced	
	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL
mm²	A		A		A		A		A		A		A	
10	84	59	87	62	78	55	98	56	103	75	106	77	122	88
16	109	84	113	88	103	80	104	81	125	97	128	99	150	116
25	140	108	144	112	132	102	133	103	163	127	167	130	196	153
35	166	129	172	134	157	122	159	123	198	154	203	157	238	185
50	196	152	203	157	186	144	188	146	238	184	243	189	286	222
70	239	186	246	192	227	176	229	178	296	230	303	236	356	278
95	285	221	293	229	271	210	274	213	361	280	369	287	434	338
120	323	252	332	260	308	240	311	242	417	324	426	332	500	391
150	361	281	366	288	343	267	347	271	473	368	481	376	559	440
185	406	317	410	324	387	303	391	307	543	424	550	432	637	504
240	469	367	470	373	447	351	453	356	641	502	647	511	745	593

300	526	414	524	419	504	397	510	402	735	577	739	586	846	677
400	590	470	572	466	564	451	571	457	845	673	837	676	938	769
500	650	530	672	546	604	504	661	537	935	773	938	776	1118	919
630	700	600	882	646	654	554	771	617	1045	883	1048	886	1318	1089
800	750	660	1002	756	694	594	871	717	1145	983	1148	986	1528	1279
1000	800	720	1112	856	724	644	971	807	1235	1083	1238	1086	1738	1469

Current Rating for Single Core 1.8/3KV(Um=3.6KV) to 26/35KV(Um=42KV)

EPR Insulation

Nom. Cross-Section Area	Buried direct in Ground				Laid in Single Way Duct				Laid in Air					
	Trefoil		Flat spaced		Trefoil		Flat Touching		Trefoil		Flat Touching		Flat spaced	
	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL
mm²	A		A		A		A		A		A		A	
10	81	57	83	58	74	52	94	53	94	68	97	70	110	79
16	106	82	109	84	99	77	100	78	116	90	119	92	138	107
25	136	105	140	109	128	99	129	100	153	119	156	121	181	141
35	162	126	167	130	153	118	154	120	186	144	190	147	221	171
50	192	149	198	153	181	140	183	142	224	174	229	178	266	207
70	234	182	242	188	222	172	224	174	280	218	287	223	334	259
95	280	217	289	224	266	206	269	208	343	266	352	273	409	317
120	319	247	329	256	303	235	306	238	398	309	407	317	474	368
150	357	277	369	287	341	264	344	267	454	352	465	361	540	419
185	403	314	417	325	386	300	390	303	522	406	534	417	621	484
240	467	364	484	377	449	350	454	354	619	483	634	495	736	575
300	526	411	545	426	509	397	515	401	712	556	728	570	843	659
400	597	471	618	487	580	456	588	462	825	651	843	667	977	770
500	657	531	718	567	620	509	678	542	915	751	849	767	1157	920
630	707	601	928	667	670	559	788	622	1025	862	1054	876	1357	1090
800	757	661	1048	777	710	599	888	722	1125	961	1154	977	1567	1280
1000	807	721	1158	877	740	649	988	812	1215	1061	1244	1077	1777	1470

CURRENT RATING CONDITIONS

Ground Temperature: 20°C

Ambient Temperature (air): 30°C

Depth of Soil: 0.8m

Thermal Resistance of Soil: 1.5Km/W

Three Core MV Power Cable to IEC 60502 Standard

APPLICATION

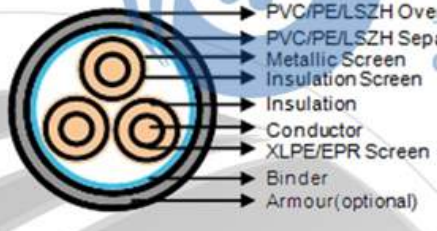
The three core MV power cables are designed for distribution of electrical power with nominal voltage Uo/U ranging from 1.8/3KV to 26/35KV and frequency 50Hz. They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

STANDARD

IEC 60502 Part 1(1.8/3KV)

IEC 60502 Part 2(3.6/6KV to 18/30KV)

CONSTRUCTION



Conductor: Plain annealed copper or aluminum complying with IEC 60228 class 1 or 2.

Conductor Screen: The conductor screen consists of an extruded layer of non metallic, semi-conducting compound applied on top of a semi-conducting tape. The conductor screen is applied under triple extrusion process over the conductor along with the insulation and the insulation screen. The extruded semi-conducting compound is firmly bonded to the insulation to exclude all air voids and can be easily hand stripped on site. The conductor screen is not necessary for both PVC and EPR/HEPR insulated 1.8/3.6KV and 3.6/6KV Power Cable.

Insulation: Insulation is of polyvinyl chloride (PVC) intended for 1.8/3.6KV and 3.6/6KV Power Cable, cross-linked polyethylene compound (XLPE) or ethylene propylene rubber (EPR/HEPR).

Table 1. Insulation Thickness of XLPE or EPR/HEPR Insulation

Nom. Cross Section Area	Insulation Thickness at Nom. Voltage									
	1.8/3KV (Um=3.6KV)	3.6/6KV (Um=7.2KV)			6/10KV (Um=12KV)	8.7/15KV (Um=17KV)	12/20KV (Um=24KV)	18/30KV (Um=36KV)	21/35KV (Um=42KV)	26/35KV (Um=42KV)
mm²	mm	mm			mm	mm	mm	mm	mm	mm
	XLPE/EPR	XLPE	EPR		XLPE/EPR	XLPE/EPR	XLPE/EPR	XLPE/EPR	XLPE/EPR	XLPE/EPR
			Unscreened	Screened						
10	2	2.5	3	2.5	-	-	-	-	-	-
16	2	2.5	3	2.5	3.4	-	-	-	-	-
25	2	2.5	3	2.5	3.4	4.5	-	-	-	-
35	2	2.5	3	2.5	3.4	4.5	5.5	-	-	-
50 – 185	2	2.5	3	2.5	3.4	4.5	5.5	8	9.3	10.5
240	2	2.6	3	2.6	3.4	4.5	5.5	8	9.3	10.5
300	2	2.8	3	2.8	3.4	4.5	5.5	8	9.3	10.5
400	2	3	3	3	3.4	4.5	5.5	8	9.3	10.5
500 - 1600	2.2-2.8	3.2	3.2	3.2	3.4	4.5	5.5	8	9.3	10.5

Insulation Screen: The insulation screen consists of an extruded layer of non metallic, semi-conducting compound extruded over the insulation of each core. The extruded semi-conducting layer shall consist of bonded or cold strippable semi-conducting compound capable of removal for jointing or terminating. As an option, a semi-conducting tape may be applied over the individual cores or core assembly as a bedding for the metallic layer. The minimum thickness is 0.3 mm and the maximum resistivity is 500 Ohm-m at 90°C. The screen is tightly fitted to the insulation to exclude all air voids and can be easily hand stripped on site. The insulation screen is not necessary for both PVC and EPR/HEPR insulated 1.8/3.6KV and 3.6/6KV Power Cable. The screen may be covered by semi-conductive water blocking swellable tape to ensure longitudinal watertightness.

Inner Covering & Fillers: For Power Cable with a collective metallic layer or Power Cable with a metallic layer over each individual cores with additional collective metallic layers, semi-conducting inner covering and fillers shall be applied over the laid up cores. The inner covering and fillers are made of non hygroscopic material like polypropylene, except if the cable is to be made longitudinally watertight. The inner covering is extruded in general but may be lapped if the interstices between the cores are filled. The approximate thickness of extruded inner coverings is given in Table 2.

Table 2 . Approximate Thickness of Extruded Inner Coverings

Ficititous Diameter over Laid Up Cores		Approx. Thickness of Extruded Inner Covering
mm		mm
>	<	
-	25	1
25	35	1.2
35	45	1.4
45	60	1.6
60	80	1.8
80	-	2

*The approximate thickness of lapped inner coverings shall be 0.4mm for fictitious diameters over the laid up cores up to and including 40mm and 0.6mm for larger diameter

Metallic Layer: The metallic layer may be applied over the individual cores or the core assembly collectively. The following types of metallic layers are provided:

1) Metallic Screen

2) Concentric Conductor

3) Metallic Sheath

4) Metallic Armour

The metallic screen shall consist of either copper tapes or a concentric layer of copper wires or a combination of tapes and wires. The concentric conductor is applied directly over the inner covering. The metallic sheath consists of lead or lead alloy applied as a tightly fitting seamless tube. The metallic armor consists of either flat wire armor, round wire armor, and double tape armor.

Table 3. Minimum Total Cross Section of Metallic Screen

Nom. Cross-Section Area of Cable	Min. Cross-Section of Metallic Screen	DC Resistance of the Copper Wire Screen
mm²	mm²	mm
up to 120	16	1.06
150-300	25	0.72
400-630	35	0.51
800-1000	50	0.35

Separation Sheath (for armored cable): The separation sheath comprises a layer of extruded PVC, PE or

LSZH applied over the laid up cores under the armor. PVC is normally of grade ST2 and PE of grade ST7. The nominal thickness is calculated by 0.02Du + 0.6mm where Du is the fictitious diameter under the sheath in mm. For Power Cable without a lead sheath, the nominal separation sheath thickness shall not be less than 1.2mm. For Power Cable where the separation sheath is applied over the lead sheath, the nominal separation sheath thickness shall not be less than 1.0mm.

Table 4. Separation Thickness

Cores Diameter		Approx. Thickness of Inner Sheath
mm		mm
>	<	
35	45	1.4
45	60	1.6
60	80	1.8
80	-	2

Lapped Bedding (for armored lead sheathed cable): The lapped bedding applied to the lead sheath consists of either impregnated/synthetic compounded paper tapes or a combination of two layers of these paper tapes followed by a few layers of compounded fabulous materials. The thickness is around 1.5mm.

Armour (for armored cable): The armor is applied over the inner covering helically. It consists of either flat galvanized steel wire armor (strip), round galvanized steel wire armor, and double steel tape armor. the armor up to and including 15mm, flat wire armor will not be used. The tape armor is applied helically in two layers so that the outer tape is approximately central over the gap of the inner tape. If tape armor is used, the inner covering shall be reinforced by taped bedding.

Table5. Round Armour Wire Diameter

Fictitious Diameter under the Armour		Armour Wire Diameter
mm		mm
>	<	
-	10	1.25
10	15	1.25
15	25	1.6
25	35	2
35	60	2.5
60	-	3.15

Table 6. Armour Tape Thickness

Fictitious Diameter under the Armour		Galvanized Steel / Steel	Aluminum / Aluminium Alloy
mm		mm	mm
>	<		
-	30	0.2	0.5
30	70	0.5	0.5
70	-	0.8	0.8

Over Sheath: Overall sheath comprises a layer of extruded either thermoplastic compound (PVC ST3 type or PE ST7 type or LSZH) or elastomeric compound (polychlorprene CSP or chlorosulfonated PE). The nominal over sheath thickness is calculated by 0.035D+1 where D is the fictitious diameter immediately under the over sheath in mm. For unarmored Power Cable and Power Cable with the over sheath not applied over the armor, metallic screen or concentric conductor, the nominal over sheath thickness shall not be less than 1.4mm. And for Power Cable with over sheath applied over the armor, metallic screen or concentric conductor, the nominal over sheath thickness shall not be less than 1.8mm.

Service Life: 30years

PHYSICAL PROPERTIES

Operating Temperature: up to 70°C (PVC insulation); up to 90°C (XLPE or EPR insulation)

Temperature Range: -5°C (PVC or LSZH sheath); -20°C (PE sheath)

Short Circuit Temperature(5 seconds maximum duration): 140-160 °C (PVC insulation); 250°C (XLPE or EPR insulation)

Bending Radius: 15 x OD

Table 7. Nominal/Operating/Testing Voltages

Rated Voltage Uo/U	Operating Voltage (Um)	Testing Voltage (rms)
1.8/3KV	3.6KV	6.5KV
3.6/6KV	7.2KV	12.5KV
6/10KV	12KV	21KV
8.7/15KV	17.5KV	30.5KV
12/20KV	24KV	42KV

18/30KV	36KV	63KV
21/35KV	42KV	73.5(53)*KV
26/35KV	42KV	91(65)*KV

*21/35KV and 26/35KV power frequency voltage test can be made under the following conditions: 2.5Uo x 30mins or 3.0Uo x 15mins.

Numbers in brackets refer to the test values for 3.0Uo x 1.5mins

TECHNICAL DATA:

Three Core 1.8/3KV (Um=3.6KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
10	2	0.1	16	1.8	23	650	460	1.2	1.6	1.8	28	1480	1290
16	2	0.1	16	1.8	24	840	540	1.2	1.6	1.9	29	1720	1410
25	2	0.1	16	1.8	26	1160	680	1.2	1.6	1.9	32	2130	1650
35	2	0.1	16	1.8	29	1490	820	1.2	2	2.1	36	2810	2140
50	2	0.1	16	1.9	32	1900	1000	1.2	2	2.2	39	3340	2450
70	2	0.1	16	2	36	2580	1290	1.2	2	2.3	42	4200	2910
95	2	0.1	16	2.2	40	3440	1640	1.3	2.5	2.4	47	5620	3820
120	2	0.1	16	2.3	43	4220	1950	1.3	2.5	2.5	51	6580	4310
150	2	0.1	25	2.4	46	5090	2290	1.4	2.5	2.7	54	7680	4870
185	2	0.1	25	2.5	50	6240	2730	1.5	2.5	2.8	58	9060	5560
240	2	0.1	25	2.7	56	8030	3430	1.6	2.5	3	64	11200	6600
300	2	0.1	25	2.8	60	9890	4100	1.6	2.5	3.1	69	13590	7500
400	2	0.1	35	3.1	68	12530	5150	1.8	3.15	3.4	78	17260	9880
500	2.2	0.1	35	3.3	75.7	16680	7510	1.8	3.15	3.5	84.3	21780	13025
630	2.4	0.1	35	3.5	84.9	21770	10040	1.8	3.15	3.8	94.6	27400	16050

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Nom Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
10	1.2	0.8	1.8	24.5	1245	1065	1.2	2 x 0.2	1.8	23.6	925	750
16	1.2	0.8	1.8	27.1	1565	1280	1.2	2 x 0.2	1.8	26.2	1205	925
25	1.2	0.8	1.8	29.7	1975	1525	1.2	2 x 0.2	1.9	29	1590	1145
35	1.2	0.8	1.9	32.5	2420	1805	1.2	2 x 0.2	1.9	31.6	1985	1370
50	1.2	0.8	2	35	2860	2080	1.2	2 x 0.2	2	34.1	2400	1605
70	1.2	0.8	2.1	38.7	3685	2525	1.2	2 x 0.5	2.2	39.5	3570	2410
95	1.3	0.8	2.2	42.9	4695	3080	1.3	2 x 0.5	2.3	43.7	4570	2950
120	1.3	0.8	2.3	46.4	5650	3585	1.3	2 x 0.5	2.4	46.1	5510	3440
150	1.4	0.8	2.4	49.6	6630	4085	1.4	2 x 0.5	2.6	50.6	6500	3955
185	1.5	0.8	2.6	54.1	7990	4820	1.5	2 x 0.5	2.7	54.9	7825	4650
240	1.6	0.8	2.7	59.2	10060	5790	1.6	2 x 0.5	2.8	60	9825	5600
300	1.6	0.8	2.9	64.6	12230	6865	1.6	2 x0.5	3	65.4	12030	6660
400	1.8	0.8	3.1	71	15200	8280	1.8	2 x 0.5	3.2	71.8	14970	8055
500	1.8	0.8	3.3	79.5	19090	10255	1.8	2 x 0.8	3.5	80.5	18880	10035
630	1.8	0.8	3.6	89.8	24400	12920	1.8	2 x 0.8	3.8	92.3	25070	13620

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	µΩ/m	µΩ/m	kA	pF/m	mA/m	kA	kA	µΩ/m	nH/m
10	1830/3080	2330/3920	1.4/0.9	160	0.25	2.6	0.4	101	390
16	1150/1910	1460/2420	2.2/1.4	180	0.27	2.6	0.4	98	370
25	727/1200	929/1538	3.6/2.3	220	0.29	2.6	0.4	95	350
35	524/868	668/1113	5.0/3.2	250	0.31	2.6	0.5	92	330
50	387/641	494/822	6.8/4.4	270	0.33	2.6	0.5	88	310
70	268/443	343/568	9.8/6.3	310	0.35	2.6	0.6	84	290
95	193/320	248/410	13.3/8.5	350	0.38	2.6	0.6	81	270
120	153/253	196/325	17.2/11.0	380	0.46	2.6	0.7	79	250
150	124/206	159/265	21.2/13.5	420	0.5	2.6	0.7	77	260
185	99.1/164	128/211	26.6/17.0	460	0.56	2.6	0.8	76	250
240	75.4/125	98/161	34.9/22.3	510	0.61	4.3	0.9	74	240
300	60.1/100	80/130	43.8/28.0	570	0.68	4.3	1	73	250
400	47.0/77.8	64/102	57.3/36.6	590	0.7	5.8	1.1	71	240

500	36.6/60.5	57/81	72.3/46.2	610	0.72	5.8	1.2	69	230
630	28.3/46.9	42/64	91.2/58.3	630	0.74	5.8	1.3	67	220

Three Core 3.6/6KV(Um=7.2KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
10	2.5	0.1	16	2	30	980	790	1.2	2	2.1	36	2310	2120
16	2.5	0.1	16	2	31	1190	890	1.2	2	2.2	38	2600	2290
25	2.5	0.1	16	2.1	34	1560	1080	1.2	2	2.3	41	3080	2600
35	2.5	0.1	16	2.2	37	1930	1270	1.3	2.5	2.4	45	3950	3280
50	2.5	0.1	16	2.3	40	2370	1480	1.3	2.5	2.5	47	4530	3630
70	2.5	0.1	16	2.4	43	3110	1820	1.4	2.5	2.6	51	5510	4210
95	2.5	0.1	16	2.5	47	4000	2200	1.5	2.5	2.8	55	6660	4860
120	2.5	0.1	16	2.6	50	4820	2550	1.5	2.5	2.9	59	7630	5360
150	2.5	0.1	25	2.8	54	5770	2970	1.6	2.5	3	62	8800	6000
185	2.5	0.1	25	2.9	58	6960	3460	1.6	2.5	3.1	66	10180	6670
240	2.6	0.1	25	3.1	65	8940	4340	1.8	3.15	3.4	75	13480	8870
300	2.8	0.1	25	3.3	70	10980	5190	1.9	3.15	3.6	81	15920	10130
400	3	0.1	35	3.5	79	13820	6440	2	3.5	3.9	90	19980	12590
500	3.2	0.1	35	3.7	87	19100	10755	2.1	3.5	4.1	98	24160	14820
630	3.2	0.1	35	4	95	30470	13150	2.2	3.5	4.4	107	29650	17710

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Nom Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
10	1.2	0.8	1.8	26.9	1415	1235	1.2	2X0.2	1.8	26	1060	885
16	1.2	0.8	1.8	29.2	1725	1445	1.2	2X0.2	1.8	28.3	1340	1055
25	1.2	0.8	1.9	32.2	2165	1735	1.2	2X0.2	1.9	31.3	1735	1305
35	1.3	0.8	2	35	2645	2025	1.3	2X0.2	2	34.1	2170	1555

50	1.3	0.8	2.1	37.4	3075	2295	1.3	2X0.5	2.1	38	2950	2170
70	1.4	0.8	2.2	41	3915	2755	1.4	2X0.5	2.3	41.8	3795	2635
95	1.5	0.8	2.3	45.3	4840	3335	1.5	2X0.5	2.4	46.1	4810	3200
120	1.5	0.8	2.4	48.7	5915	3855	1.5	2X0.5	2.5	49.5	5770	3705
150	1.6	0.8	2.5	52.1	6930	4395	1.6	2X0.5	2.6	52.9	6775	4235
185	1.6	0.8	2.6	56.2	8265	5100	1.6	2X0.5	2.8	57.2	8120	4950
240	1.8	0.8	2.8	62.2	10440	6220	1.8	2X0.5	2.9	63	10250	6025
300	1.9	0.8	3	68.2	12780	7420	1.9	2X0.5	3.1	69	12570	7200
400	2	0.8	3.3	75.9	15970	9110	2	2X0.5	3.4	76.7	15740	8870
500	2.1	0.8	3.5	84.2	19940	11130	2.1	2X0.8	3.6	86.5	20550	11750
630	2.2	0.8	3.7	93.5	25120	13670	2.2	2X0.8	3.9	96	25830	14400

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	nH/m
10	1830/3080	2330/3920	1.4/0.9	212	0.27	2.6	0.4	132	410
16	1150/1910	1470/2420	2.2/1.4	242	0.3	2.6	0.4	124	390
25	727/1200	927/1538	3.6/2.3	272	0.33	2.6	0.4	116	370
35	524/868	668/1113	5.0/3.2	301	0.36	2.6	0.5	108	350
50	387/641	494/822	6.8/4.4	332	0.4	2.6	0.5	102	330
70	268/443	343/568	9.8/6.3	383	0.46	2.6	0.6	97	310
95	193/320	248/410	13.3/8.5	432	0.52	2.6	0.6	92	290
120	153/253	196/325	17.2/11.0	474	0.57	2.6	0.7	89	280
150	124/206	159/265	21.2/13.5	511	0.61	4.3	0.7	87	280
185	99.1/164	128/211	26.6/17.0	562	0.67	4.3	0.8	86	270
240	75.4/125	98/161	34.9/22.3	602	0.72	4.3	0.9	83	260
300	60.1/100	80/130	43.8/28.0	622	0.75	4.3	1	82	260
400	47.0/77.8	64/102	57.3/36.6	648	0.78	5.8	1.1	80	250
500	36.6/60.5	51/81	72.3/46.2	668	0.82	5.8	1.2	78	250
630	28.3/46.9	42/64	91.2/58.3	758	0.92	5.8	1.3	76	240

Three Core 6/10KV(Um=12KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round-Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
16	3.4	0.1	16	2.2	36	1410	1110	1.2	2	2.4	42	3000	2700
25	3.4	0.1	16	2.3	39	1800	1320	1.3	2.5	2.5	46	3900	3430
35	3.4	0.1	16	2.3	41	2170	1500	1.3	2.5	2.6	49	4430	3770
50	3.4	0.1	16	2.4	44	2630	1730	1.4	2.5	2.7	52	5080	4190
70	3.4	0.1	16	2.6	48	3400	2110	1.5	2.5	2.8	56	6050	4750
95	3.4	0.1	16	2.7	52	4310	2510	1.5	2.5	2.9	60	7180	5380
120	3.4	0.1	16	2.8	55	5150	2890	1.6	2.5	3	63	8230	5960
150	3.4	0.1	25	2.9	58	6100	3300	1.7	2.5	3.1	67	9380	6580
185	3.4	0.1	25	3	62	7310	3810	1.7	3.15	3.3	72	11610	8110
240	3.4	0.1	25	3.2	69	9290	4680	1.8	3.15	3.5	79	14110	9510
300	3.4	0.1	25	3.3	73	11240	5450	1.9	3.15	3.7	84	16420	10630
400	3.4	0.1	35	3.6	81	14040	6660	2	3.5	3.9	92	20620	12880
500	3.4	0.1	35	3.7	88	17830	8450	2.1	3.5	4	99	25090	16530
630	3.4	0.1	35	3.9	96	20030	10895	2.2	3.5	4.1	109	30880	19670

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Nom Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
16	1.2	0.8	2.2	39.7	2795	2515	1.2	2x0.5	2.3	40.5	2680	2395
25	1.3	0.8	2.2	42.7	3305	2885	1.3	2x0.5	2.4	43.7	3195	2775
35	1.3	0.8	2.3	45.2	3835	3215	1.3	2x0.5	2.5	46.2	3720	3100
50	1.4	0.8	2.4	47.8	4325	3570	1.4	2x0.5	2.6	48.8	4200	3445
70	1.5	0.8	2.5	51.8	5320	4185	1.5	2x0.5	2.7	52.8	5185	4050
95	1.5	0.8	2.7	56.1	6450	4875	1.5	2x0.5	2.8	56.9	6280	4700
120	1.6	0.8	2.8	59.7	7545	5510	1.6	2x0.5	2.9	60.5	7360	5325
150	1.7	0.8	2.9	63.1	8610	6150	1.7	2x0.5	3	63.9	8420	5950
185	1.7	0.8	3	67.4	10120	6995	1.7	2x0.5	3.1	68.2	9910	6780
240	1.8	0.8	3.2	73	12430	8205	1.8	2x0.5	3.3	73.8	12200	7970
300	1.9	0.8	3.3	78.3	14775	9455	1.9	2x0.5	3.4	79.1	14530	9200
400	2	0.8	3.5	85.2	17950	11190	2	2x0.8	3.7	87.7	18600	11850
500	2.1	0.8	3.7	92.8	21970	13270	2.1	2x0.8	3.9	95.3	22680	13990
630	2.2	0.8	4	102.7	27480	16160	2.2	2x0.8	4.1	105	28200	16910

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	nH/m
16	1150/1910	1470/2420	2.2/1.4	186	0.4	2.6	0.5	131	410
25	727/1200	927/1538	3.6/2.3	216	0.43	2.6	0.5	123	390
35	524/868	668/1113	5.0/3.2	237	0.47	2.6	0.6	115	370
50	387/641	494/822	6.8/4.4	266	0.52	2.6	0.6	109	350
70	268/443	343/568	9.8/6.3	298	0.6	2.6	0.7	103	330
95	193/320	248/410	13.3/8.5	334	0.67	2.6	0.7	99	320
120	153/253	196/325	17.2/11.0	365	0.73	2.6	0.8	96	310
150	124/206	159/265	21.2/13.5	392	0.78	4.3	0.8	93	300
185	99.1/164	128/211	26.6/17.0	430	0.86	4.3	0.9	90	290
240	75.4/125	98/161	34.9/22.3	476	0.95	4.3	0.9	87	280
300	60.1/100	80/130	43.8/28.0	524	1.05	4.3	1	85	270
400	47.0/77.8	64/102	57.3/36.6	580	1.16	5.8	1.1	81	260
500	36.6/60.5	51/81	72.3/46.2	630	1.26	5.8	1.2	78	250
630	28.3/46.9	42/64	91.2/58.3	690	1.36	5.8	1.3	76	240

Three Core 8.7/15KV(Um=17.5KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round-Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
25	4.5	0.1	16	2.4	44	2100	1620	1.4	2.5	2.7	52	4560	4080
35	4.5	0.1	16	2.5	46	2510	1840	1.4	2.5	2.7	54	5080	4410
50	4.5	0.1	16	2.6	49	2980	2080	1.5	2.5	2.9	57	5740	4840
70	4.5	0.1	16	2.7	53	3760	2470	1.6	2.5	3	62	6770	5480
95	4.5	0.1	16	2.8	57	4700	2900	1.6	2.5	3.1	65	7890	6100
120	4.5	0.1	16	3	60	5590	3320	1.7	2.5	3.2	69	8970	6700
150	4.5	0.1	25	3.1	64	6560	3760	1.8	3.15	3.4	74	11030	8220
185	4.5	0.1	25	3.2	67	7800	4300	1.8	3.15	3.5	78	12490	8980
240	4.5	0.1	25	3.4	74	9820	5220	1.9	3.15	3.7	84	15040	10440

300	4.5	0.1	25	3.5	79	11800	6010	2	3.5	3.8	90	17920	12130
400	4.5	0.1	35	3.7	86	14620	7240	2.1	3.5	4.1	98	21360	13970
500	4.5	0.1	35	3.8	93	18160	9355	2.2	3.5	4.3	106	26490	17830

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom.Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Nom Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
25	1.4	0.8	2.4	48	3915	3495	1.4	2x0.5	2.5	48.8	3770	3345
35	1.4	0.8	2.5	50.8	4510	3890	1.4	2x0.5	2.6	51.6	4350	3735
50	1.5	0.8	2.6	53.3	5020	4270	1.5	2x0.5	2.7	54.1	4855	4105
70	1.6	0.8	2.7	57	5990	4870	1.6	2x0.5	2.8	57.8	5815	4690
95	1.6	0.8	2.8	61.2	7170	5600	1.6	2x0.5	3	62.2	7010	5435
120	1.7	0.8	2.9	65.1	8340	6320	1.7	2x0.5	3.1	66.1	8170	6145
150	1.8	0.8	3	68.3	9440	6955	1.8	2x0.5	3.2	69.3	9260	6770
185	1.8	0.8	3.2	72.8	10990	7880	1.8	2x0.5	3.3	73.6	10760	7650
240	1.9	0.8	3.3	78.3	13370	9155	1.9	2x0.5	3.4	79.1	13120	8900
300	2	0.8	3.5	83.7	15760	10460	2	2x0.8	3.6	86	16360	11070
400	2.1	0.8	3.7	90.5	19050	12260	2.1	2x0.8	3.9	93	19750	12960
500	2.2	0.8	3.9	98.2	23160	14430	2.2	2x0.8	4.1	100.7	23900	15190

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	nH/m
25	727/1200	927/1538	3.6/2.3	176	0.48	2.6	0.6	132	410
35	524/868	668/1113	5.0/3.2	193	0.53	2.6	0.6	123	390
50	387/641	494/822	6.8/4.4	211	0.58	2.6	0.7	116	370
70	268/443	343/568	9.8/6.3	240	0.65	2.6	0.7	110	350
95	193/320	248/410	13.3/8.5	267	0.73	2.6	0.8	105	330
120	153/253	196/325	17.2/11.0	291	0.79	2.6	0.8	102	320
150	124/206	159/265	21.2/13.5	312	0.85	4.3	0.9	98	310
185	99.1/164	128/211	26.6/17.0	340	0.93	4.3	0.9	95	300
240	75.4/125	98/161	34.9/22.3	375	1.02	4.3	1	91	290

300	60.1/100	80/130	43.8/28.0	411	1.12	4.3	1.1	89	280
400	47.0/77.8	64/102	57.3/36.6	454	1.24	5.8	1.2	84	270
500	36.6/60.5	51/81	72.3/46.2	504	1.34	5.8	1.3	78	250

Three Core 12/20KV(Um=24KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round-Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
35	5.5	0.1	16	2.7	51	2850	2180	1.5	2.5	2.9	60	5700	5010
50	5.5	0.1	16	2.8	54	3340	2450	1.6	2.5	3	62	6370	5480
70	5.5	0.1	16	2.9	58	4150	2850	1.6	2.5	3.1	66	7370	6070
95	5.5	0.1	16	3	62	5110	3310	1.7	3.15	3.3	72	9400	7600
120	5.5	0.1	16	3.1	65	5990	3730	1.8	3.15	3.4	75	10530	8270
150	5.5	0.1	25	3.2	68	6980	4180	1.8	3.15	3.5	80	11800	8940
185	5.5	0.1	25	3.3	72	8240	4740	1.9	3.15	3.7	83	13350	9850
240	5.5	0.1	25	3.6	79	10310	5700	2	3.5	3.8	90	16430	11820
300	5.5	0.1	25	3.7	84	12360	6570	2.1	3.5	4	95	18870	13080
400	5.5	0.1	35	3.9	91	15220	7830	2.2	4	4.3	103	23260	15930
500	5.5	0.1	35	4.1	97	19105	10325	2.3	4.2	4.5	110	27800	19170

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Nom Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
35	1.5	0.8	2.7	55.7	5150	4530	1.5	2x0.5	2.8	56.5	4975	4355
50	1.6	0.8	2.8	58.2	5675	4935	1.6	2x0.5	2.9	59	5495	4750
70	1.6	0.8	2.9	61.9	6685	5570	1.6	2x0.5	3	62.7	6490	5375
95	1.7	0.8	3	66.4	7945	6390	1.7	2x0.5	3.1	67.2	7735	6180
120	1.8	0.8	3.1	70	9110	7103	1.8	2x0.5	3.2	70.8	8890	6880
150	1.8	0.8	3.2	73.2	10240	7770	1.8	2x0.5	3.3	74	10010	7535
185	1.9	0.8	3.3	77.7	11840	8750	1.9	2x0.5	3.4	78.5	11600	8500
240	2	0.8	3.5	83.2	14270	10070	2	2x0.8	3.6	85.5	14870	10680

300	2.1	0.8	3.6	88.6	16730	11440	2.1	2x0.8	3.8	91.1	17400	12130
400	2.2	0.8	3.9	95.6	20130	13350	2.2	2x0.8	4	97.9	20820	14050
500	2.3	0.8	4.1	103.3	24310	15600	2.3	2x0.8	4.2	105.6	25050	16350

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	nH/m
35	524/868	668/1113	5.0/3.2	168	0.67	2.6	0.7	129	410
50	387/641	494/822	6.8/4.4	183	0.73	2.6	0.8	122	390
70	268/443	343/568	9.8/6.3	207	0.83	2.6	0.8	115	370
95	193/320	248/410	13.3/8.5	229	0.92	2.6	0.9	110	350
120	153/253	196/325	17.2/11.0	249	1	2.6	0.9	106	340
150	124/206	159/265	21.2/13.5	266	1.06	4.3	1	103	330
185	99.1/164	128/211	26.6/17.0	289	1.16	4.3	1	100	320
240	75.4/125	98/161	34.9/22.3	318	1.27	4.3	1.1	95	300
300	60.1/100	80/130	43.8/28.0	348	1.39	4.3	1.2	93	290
400	47.0/77.8	64/102	57.3/36.6	388	1.53	5.8	1.3	87	280
500	36.6/60.5	51/81	72.3/46.2	422	1.67	5.8	1.4	78	250

Three Core 18/30KV(Um=36KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	8	0.1	16	3.2	65	4340	3460	1.8	3.15	3.5	75	8950	8080
70	8	0.1	16	3.3	70	5220	3930	1.9	3.15	3.6	80	10150	8860
95	8	0.1	16	3.4	74	6240	4440	1.9	3.15	3.7	84	11390	9590
120	8	0.1	16	3.5	77	7180	4910	2	3.5	3.8	89	13200	10860
150	8	0.1	25	3.6	80	8220	5420	2.1	3.5	4	92	14520	11720
185	8	0.1	25	3.7	84	9540	6040	2.1	4	4.1	97	17020	13510
240	8	0.1	25	3.9	91	11720	7110	2.2	4	4.3	104	19810	15200

300	8	0.1	25	4	95	13790	8000	2.3	4.5	4.5	108	23310	17470
400	8	0.1	35	4.3	103	16820	9430	2.4	4.5	4.7	117	27010	19620
500	8	0.1	35	4.5	110	21550	12880	2.5	4.5	4.9	124	31130	22610

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom.Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Non Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	1.8	0.8	3.1	70.2	7490	6775	1.8	2x0.5	3.3	71.2	7300	6585
70	1.9	0.8	3.2	74	8590	7540	1.9	2x0.5	3.4	75	8390	7335
95	1.9	0.8	3.4	78.5	9990	8460	1.9	2x0.5	3.5	79.3	9740	8210
120	2	0.8	3.5	82.2	11250	9270	2	2x0.8	3.6	84.5	11845	9875
150	2.1	0.8	3.6	85.6	12510	10070	2.1	2x0.8	3.7	87.9	13120	10700
185	2.1	0.8	3.7	89.8	14155	11100	2.1	2x0.8	3.9	92.3	14850	11800
240	2.2	0.8	3.8	95.4	16740	12575	2.2	2x0.8	4	97.9	17480	13320
300	2.3	0.8	4	100.9	19310	14120	2.3	2x0.8	4.2	103.4	20080	14900
400	2.4	0.8	4.2	107.8	22840	16170	2.4	2x0.8	4.4	110.3	23660	17000
500	2.5	0.8	4.4	115.5	27200	18610	2.5	2x0.8	4.6	118	28080	19510

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	µΩ/m	µΩ/m	kA	pF/m	mA/m	kA	kA	µΩ/m	nH/m
50	387/641	494/822	6.8/4.4	142	0.85	2.6	1	134	430
70	268/443	343/568	9.8/6.3	159	0.95	2.6	1	127	400
95	193/320	248/410	13.3/8.5	175	1.05	2.6	1.1	121	390
120	153/253	196/325	17.2/11.0	189	1.13	2.6	1.1	117	370
150	124/206	159/265	21.2/13.5	201	1.21	4.3	1.2	113	360
185	99.1/164	128/211	26.6/17.0	217	1.3	4.3	1.2	109	350
240	75.4/125	98/161	34.9/22.3	237	1.42	4.3	1.3	104	330
300	60.1/100	80/130	43.8/28.0	258	1.55	4.3	1.4	101	320
400	47.0/77.8	64/102	57.3/36.6	282	1.69	5.8	1.5	96	290
500	36.6/60.5	51/81	72.3/46.2	302	1.79	5.8	1.6	78	250

Three Core 21/35KV(Um=42KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round-Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	9.3	0.1	16	3.2	73.9	5320	4446	1.9	3.15	3.8	87.1	10970	10090
70	9.3	0.1	16	3.3	78	6166	4880	2	3.5	3.9	91.3	12220	10750
95	9.3	0.1	16	3.5	81.9	7144	5430	2.1	3.5	4	94.5	13560	11780
120	9.3	0.1	16	3.6	85.1	8232	6049	2.1	4	4.1	97.5	14880	13650
150	9.3	0.1	25	3.7	88.6	9273	6549	2.1	4	4.2	100.5	16150	14060
185	9.3	0.1	25	3.8	93.5	10845	7392	2.2	4	4.3	105.5	17840	14390
240	9.3	0.1	25	4	98.2	12675	8310	2.3	4.5	4.5	111.5	20410	15870
300	9.3	0.1	25	4.1	103.6	14960	9362	2.4	4.5	4.6	116.5	24100	18460
400	9.3	0.1	35	4.3	110	18055	10698	2.5	4.5	4.8	124.3	28680	20560

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Nom Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	1.9	0.8	3.3	80.5	9825	8986	1.9	2x0.5	3.5	82.5	9625	8786
70	2	0.8	3.6	85.5	11015	9769	2	2x0.8	3.8	87.6	10825	9569
95	2.1	0.8	3.8	88.5	12360	10580	2.1	2x0.8	3.9	90.5	12116	10327
120	2.1	0.8	3.9	91.5	13900	11715	2.1	2x0.8	4	94.5	13306	11110
150	2.1	0.8	4	94.8	15160	12440	2.1	2x0.8	4.1	97.5	14550	11830
185	2.2	0.8	4.1	99.5	17500	13450	2.2	2x0.8	4.2	101.7	16810	12765
240	2.3	0.8	4.2	104.1	19390	14890	2.3	2x0.8	4.4	107.5	18650	14150
300	2.4	0.8	4.4	109.5	21970	16280	2.4	2x0.8	4.6	112.8	21200	15500
400	2.5	0.8	4.6	116.3	25600	18430	2.5	2x0.8	4.8	118.8	24780	17600

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	nH/m
50	387/641	494/822	6.8/4.4	135	0.91	2.6	1.1	140	450
70	268/443	343/568	9.8/6.3	151	1.01	2.6	1.1	134	415
95	193/320	248/410	13.3/8.5	166	1.11	2.6	1.2	126	405
120	153/253	196/325	17.2/11.0	179	1.21	2.6	1.2	123	385
150	124/206	159/265	21.2/13.5	189	1.29	4.3	1.3	118	375
185	99.1/164	128/211	26.6/17.0	202	1.38	4.3	1.3	114	365
240	75.4/125	98/161	34.9/22.3	221	1.49	4.3	1.4	109	345
300	60.1/100	80/130	43.8/28.0	240	1.65	4.3	1.5	105	335
400	47.0/77.8	64/102	57.3/36.6	267	1.75	5.8	1.6	101	305

Three Core 26/35KV(Um=42KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round-Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm²	mm	mm	mm²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	10.5	0.1	16	3.4	79.7	5928	5053	1.9	3.5	4	93.5	12050	11150
70	10.5	0.1	16	3.5	83.6	6900	5634	2	4	4.1	97.5	13150	11850
95	10.5	0.1	16	3.6	87.2	7863	6131	2.1	4	4.2	101.5	14800	12950
120	10.5	0.1	16	3.8	90.7	8817	6634	2.2	4	4.4	105.5	16050	13800
150	10.5	0.1	25	3.9	94.1	10085	7361	2.3	4.5	4.5	108.5	17420	14640
185	10.5	0.1	25	4	99.1	11573	8120	2.3	4.5	4.6	112	19200	15700
240	10.5	0.1	25	4.1	103.6	13387	9023	2.4	4.5	4.7	117	21050	16800
300	10.5	0.1	25	4.3	109.2	15658	10060	2.5	4.5	4.8	122.5	24900	19100
400	10.5	0.1	35	4.5	115.6	19013	11657	2.6	4.5	5.1	129	29200	21560

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel Tapes x Nom Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
50	1.9	0.8	3.5	86.5	10880	9990	1.9	2x0.8	3.7	87.5	10690	9800
70	2	0.8	3.6	90.5	12000	10795	2	2x0.8	3.8	91.4	10800	10590
95	2.1	0.8	3.8	94	13360	11570	2.1	2x0.8	3.9	95.2	13110	11327
120	2.2	0.8	3.9	96.4	13705	12710	2.2	2x0.8	4	98.7	14300	12110
150	2.3	0.8	4	99.5	16160	13440	2.3	2x0.8	4.1	102.1	15550	12800
185	2.3	0.8	4.1	105.1	18505	14465	2.3	2x0.8	4.2	107.3	17810	13765
240	2.4	0.8	4.2	109.8	20390	15890	2.4	2x0.8	4.4	112.2	19650	15150
300	2.5	0.8	4.4	115.5	22970	17280	2.5	2x0.8	4.6	118	22200	16500
400	2.6	0.8	4.6	122.1	26600	19430	2.6	2x0.8	4.8	124.6	25780	18600

Electrical Data

Nom. Cross-Section Area	DC Resistance CU / AL	AC Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capaci-tance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	nH/m
50	387/641	494/822	6.8/4.4	131	0.97	2.6	1.2	146	470
70	268/443	343/568	9.8/6.3	145	1.07	2.6	1.2	139	430
95	193/320	248/410	13.3/8.5	158	1.18	2.6	1.3	132	420
120	153/253	196/325	17.2/11.0	169	1.26	2.6	1.3	128	400
150	124/206	159/265	21.2/13.5	178	1.36	4.3	1.4	123	390
185	99.1/164	128/211	26.6/17.0	185	1.44	4.3	1.4	118	380
240	75.4/125	98/161	34.9/22.3	203	1.57	4.3	1.5	113	360
300	60.1/100	80/130	43.8/28.0	219	1.72	4.3	1.6	109	350
400	47.0/77.8	64/102	57.3/36.6	245	1.85	5.8	1.7	105	320

Current Rating for Three Core 1.8/3KV(Um=7.2)KV to 26/35KV(Um=42KV) XLPE Insulation

Nom. Cross-Section Area	Unarmored						Armored					
	Buried direct in Ground		Laid in Single Way Duct		Laid in Air		Buried direct in Ground		Laid in Single Way Duct		Laid in Air	
	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL
mm²	A		A		A		A		A		A	
10	76	53	62	42	87	62	76	53	63	43	88	63
16	101	78	87	67	109	84	101	78	88	68	110	85
25	129	100	112	87	142	110	129	100	112	87	143	111
35	153	119	133	103	170	132	154	119	134	104	172	133
50	181	140	158	122	204	158	181	140	158	123	205	159
70	221	171	193	150	253	196	220	171	194	150	253	196
95	262	203	231	179	304	236	263	204	232	180	307	238
120	298	232	264	205	351	273	298	232	264	206	352	274
150	334	260	297	231	398	309	332	259	296	231	397	309
185	377	294	336	262	455	355	374	293	335	262	453	354
240	434	340	390	305	531	415	431	338	387	304	529	415
300	489	384	441	346	606	475	482	380	435	343	599	472
400	553	438	501	398	696	552	541	432	492	393	683	545
500	613	498	541	451	786	652	601	492	532	446	773	645
630	663	568	591	501	896	762	651	562	582	496	883	755

Current Rating for Three Core 1.8/3KV(Um=7.2)KV to 26/35KV(Um=42KV) EPR Insulation

Nom. Cross-Section Area	Unarmored						Armored					
	Buried direct in Ground		Laid in Single Way Duct		Laid in Air		Buried direct in Ground		Laid in Single Way Duct		Laid in Air	
	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL
mm²	A		A		A		A		A		A	
10	73	51	59	40	82	58	73	51	60	41	82	59
16	98	76	84	65	104	80	98	76	85	66	104	81
25	125	97	109	84	135	105	125	97	109	85	136	105
35	150	116	130	101	164	127	150	116	131	101	164	127
50	176	137	154	119	195	151	177	137	155	120	197	153
70	216	167	189	147	243	189	216	168	190	147	244	190
95	258	200	227	176	296	229	257	200	227	176	296	230
120	292	227	258	201	339	263	292	227	259	201	339	264
150	328	255	291	226	385	299	327	254	291	226	385	300
185	371	289	330	257	441	343	368	288	328	257	439	343
240	429	335	384	300	519	406	424	332	381	299	513	402

300	482	378	434	340	590	462	475	374	429	338	583	459
400	545	432	494	392	678	538	534	426	485	387	666	530
500	605	492	534	445	768	638	594	486	525	440	756	630
630	655	562	584	495	878	749	644	556	575	490	862	741

CURRENT RATING CONDITIONS

Ground Temperature: 20°C

Ambient Temperature (air): 30°C

Depth of Soil: 0.8 m

Thermal Resistance of Soil: 1.5Km/W

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