



ABHAR CABLE CO.



ISO 9002
Certificate No.
QS-1147HH



Accredited by the
Dutch Council for
Accreditation

AC ABHAR
CABLE



Medium Voltage Cables

Medium voltage cables are XLPE insulated copper or aluminium cables with a rated operating voltage of between 1 and 36 KV, used widely in power distribution networks in residential and industrial areas; our medium voltage cables are produced in accordance with IEC or alternatively BS, VDE standards

AC is Iran's leading producer of XLPE insulated medium voltage cables with dedicated production facilities utilising the latest production technology, such as dry curing Method. Our production facilities are designed to ensure the production of a high quality, reliable product that will give many years of trouble-free service. Pressurised material handling rooms using fine HEPA filters ensure complete clean room conditions that preclude the inclusion of even the smallest foreign particles in the insulation material; while continuous X-Ray monitoring of the cables ensures the total centricity of the cable for a uniform, highly dependable product.

We will gladly customise the cables in accordance with the requirements of our clients and are able to offer MV cables with lead sheathing with or without wire/tape armour. Additionally the cables can be made totally water proof with the addition of an aluminium polymer laminated sheath.

AC is a reliable source of Low Smoke, Zero Halogen, Oil - Hydrocarbon resistant and fire flame retardant cables to major projects in the region.

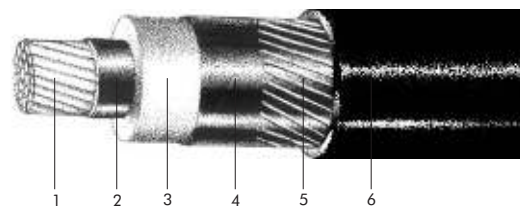


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Cu/SC/XLPE/SC/SCT/CWS/PVC**IEC 60502-2**

Wire screened, single core medium voltage power cable with copper conductor and XLPE insulation.

**6/10(12) kV**

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 25 RM/16	3.4	1.8	23.6	725
1x 35 RM/16	3.4	1.8	24.6	835
1x 50 RM/16	3.4	1.8	25.8	973
1x 70 RM/16	3.4	1.8	27.4	1196
1x 95 RM/16	3.4	1.8	29.1	1467
1x 120 RM/16	3.4	1.8	30.8	1719
1x 150 RM/25	3.4	1.9	32.5	2095
1x 185 RM/25	3.4	1.9	34.2	2461
1x 240 RM/25	3.4	2.0	36.8	3044
1x 300 RM/25	3.4	2.1	38.9	3644
1x 400 RM/35	3.4	2.2	42.4	4573
1x 500 RM/35	3.4	2.3	46.0	5652
1x 630 RM/35	3.4	2.4	49.2	7024
1x 800 RM/35	3.4	2.5	53.5	8788

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen 6-PVC Overall Sheath

Maximum conductor temperature: 90°C

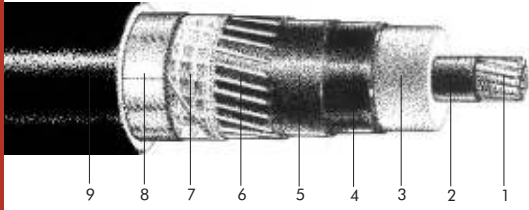
Also available with aluminium conductor, copper tape screen & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 25 RM / 16	0.927	0.927	0.151	0.252	0.20
1 x 35 RM / 16	0.668	0.668	0.144	0.243	0.22
1 x 50 RM / 16	0.494	0.494	0.134	0.231	0.24
1 x 70 RM / 16	0.342	0.342	0.127	0.221	0.28
1 x 95 RM / 16	0.247	0.246	0.121	0.212	0.31
1 x 120 RM / 16	0.196	0.196	0.115	0.204	0.34
1 x 150 RM / 25	0.159	0.159	0.112	0.199	0.36
1 x 185 RM / 25	0.1276	0.1271	0.108	0.193	0.40
1 x 240 RM / 25	0.0979	0.0971	0.104	0.185	0.44
1 x 300 RM / 25	0.0789	0.0778	0.101	0.18	0.48
1 x 400 RM / 35	0.0629	0.0614	0.098	0.173	0.54
1 x 500 RM / 35	0.0506	0.0486	0.094	0.167	0.61
1 x 630 RM / 35	0.0411	0.0386	0.092	0.162	0.66
1 x 800 RM / 35	0.0343	0.0313	0.09	0.157	0.73

AC ABHAR CABLE

6/10(12)kV**MEDIUM VOLTAGE CABLES****21**



IEC 60502-2

Cu/SC/XLPE/SC/SCT/CWS/WBT/AIC/PE

Wire screened, water blocked, single core medium voltage power cables with copper conductor and XLPE insulation.

6/10(12)kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 25 RM/16	3.4	1.8	25.9	794
1x 35 RM/16	3.4	1.8	26.9	828
1x 50 RM/16	3.4	1.8	28.1	965
1x 70 RM/16	3.4	1.8	29.9	1186
1x 95 RM/16	3.4	1.8	31.6	1455
1x 120 RM/16	3.4	1.8	33.1	1706
1x 150 RM/25	3.4	1.9	34.8	2075
1x 185 RM/25	3.4	1.9	36.5	2438
1x 240 RM/25	3.4	2.0	39.1	3012
1x 300 RM/25	3.4	2.1	41.2	3604
1x 400 RM/35	3.4	2.2	44.7	4521
1x 500 RM/35	3.4	2.3	48.3	5586
1x 630 RM/35	3.4	2.4	51.5	6944
1x 800 RM/35	3.4	2.5	55.8	8691

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Tape 6-Copper Wire Screen 7-Water - blocking Tape 8- Aluminium Copolymer Layer 9-PE Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/tape screen.

Electrical Data

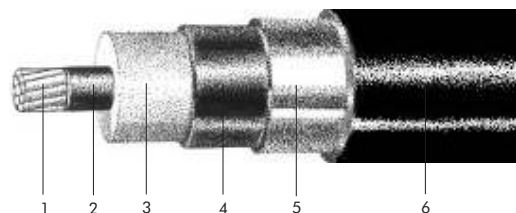
Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 25 RM / 16	0.927	0.927	0.156	0.253	0.20
1 x 35 RM / 16	0.668	0.668	0.149	0.244	0.22
1 x 50 RM / 16	0.494	0.494	0.138	0.232	0.24
1 x 70 RM / 16	0.342	0.342	0.131	0.222	0.28
1 x 95 RM / 16	0.247	0.246	0.124	0.213	0.31
1 x 120 RM / 16	0.196	0.196	0.119	0.205	0.34
1 x 150 RM / 25	0.159	0.159	0.116	0.200	0.36
1 x 185 RM / 25	0.1276	0.1271	0.111	0.194	0.40
1 x 240 RM / 25	0.0978	0.0971	0.107	0.186	0.440
1 x 300 RM / 25	0.0788	0.0778	0.104	0.181	0.48
1 x 400 RM / 35	0.0628	0.0614	0.100	0.174	0.54
1 x 500 RM / 35	0.0505	0.0486	0.097	0.167	0.61
1 x 630 RM / 35	0.0409	0.0385	0.094	0.162	0.66
1 x 800 RM / 35	0.0341	0.0313	0.092	0.158	0.73



Cu/SC/XLPE/SC/SCT/Lsh/PVC

IEC 60502-2

Lead sheathed, single core medium voltage power cable with copper conductor and XLPE insulation.



6/10(12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 25 RM	3.4	1.3	1.8	24.1	1449
1x 35 RM	3.4	1.3	1.8	25.1	1605
1x 50 RM	3.4	1.4	1.8	26.5	1880
1x 70 RM	3.4	1.4	1.8	28.1	2184
1x 95 RM	3.4	1.5	1.9	30.5	2647
1x 120 RM	3.4	1.5	1.9	32.0	2981
1x 150 RM	3.4	1.5	2.0	33.6	3350
1x 185 RM	3.4	1.6	2.0	35.5	3919
1x 240 RM	3.4	1.7	2.1	38.3	4762
1x 300 RM	3.4	1.7	2.2	40.5	5479
1x 400 RM	3.4	1.8	2.3	44.1	6652
1x 500 RM	3.4	1.9	2.4	48.0	8105
1x 630 RM	3.4	2.0	2.5	51.3	9840
1x 800 RM	3.4	2.1	2.6	55.2	11888

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-Conductive Insulation Screen 5-S.C Tape + Lead Sheath
6-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/ tape screen & PE sheath.

Electrical Data

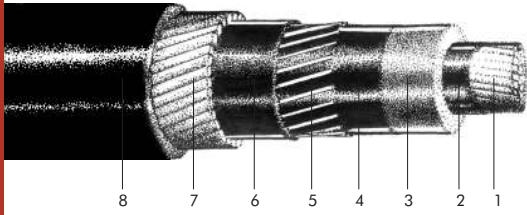
Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 25 RM	0.927	0.927	0.153	0.253	0.202
1 x 35 RM	0.668	0.668	0.146	0.243	0.22
1 x 50 RM	0.494	0.494	0.136	0.232	0.24
1 x 70 RM	0.342	0.342	0.129	0.221	0.31
1 x 95 RM	0.247	0.246	0.124	0.212	0.31
1 x 120 RM	0.196	0.196	0.118	0.205	0.34
1 x 150 RM	0.159	0.159	0.115	0.199	0.36
1 x 185 RM	0.1274	0.127	0.111	0.194	0.40
1 x 240 RM	0.0976	0.0971	0.107	0.186	0.440
1 x 300 RM	0.0786	0.0778	0.104	0.181	0.48
1 x 400 RM	0.0625	0.0614	0.101	0.174	0.54
1 x 500 RM	0.050	0.0486	0.097	0.167	0.61
1 x 630 RM	0.0404	0.0385	0.095	0.163	0.66
1 x 800 RM	0.0334	0.0312	0.093	0.158	0.73

AC ABHAR CABLE

6/10(12)kV

MEDIUM VOLTAGE CABLES

2
3

**IEC 60502-2** Cu/SC/XLPE/SC/SCT/CWS/Bd/AWA/PVC

Wire armoured, wire screened, single core medium voltage power cable with copper conductor and XLPE insulation.

6/10(12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 25 RM/16	3.4	1.6	1.8	29.7	1150
1x 35 RM/16	3.4	1.6	1.8	30.7	1277
1x 50 RM/16	3.4	1.6	1.9	32.2	1448
1x 70 RM/16	3.4	1.6	1.9	33.8	1698
1x 95 RM/16	3.4	1.6	2.0	35.7	2013
1x 120 RM/16	3.4	2.0	2.0	38.2	2389
1x 150 RM/25	3.4	2.0	2.1	39.8	2796
1x 185 RM/25	3.4	2.0	2.1	41.5	3199
1x 240 RM/25	3.4	2.0	2.2	44.2	3837
1x 300 RM/25	3.4	2.0	2.3	46.3	4471
1x 400 RM/35	3.4	2.5	2.4	51.0	5648
1x 500 RM/35	3.4	2.5	2.5	54.6	6824
1x 630 RM/35	3.4	2.5	2.7	58.5	8314
1x 800 RM/35	3.4	2.5	2.8	63.1	10226

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

6-Extruded PVC Bedding 7-Aluminium Wire Armour 8-PVC Overall Sheath

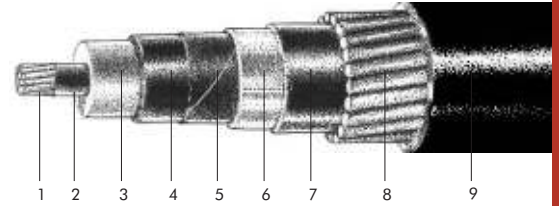
Maximum conductor temperature: 90°C

Also available with aluminium conductor, tape screen, tape armour & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 25 RM / 16	0.927	0.927	0.168	0.257	0.20
1 x 35 RM / 16	0.668	0.668	0.160	0.248	0.22
1 x 50 RM / 16	0.494	0.494	0.150	0.236	0.24
1 x 70 RM / 16	0.342	0.342	0.142	0.225	0.28
1 x 95 RM / 16	0.247	0.246	0.135	0.216	0.31
1 x 120 RM / 16	0.196	0.196	0.129	0.209	0.34
1 x 150 RM / 25	0.159	0.159	0.125	0.203	0.36
1 x 185 RM / 25	0.1274	0.127	0.121	0.197	0.40
1 x 240 RM / 25	0.0976	0.0971	0.115	0.189	0.44
1 x 300 RM / 25	0.0785	0.0778	0.112	0.184	0.48
1 x 400 RM / 35	0.0624	0.0614	0.110	0.178	0.54
1 x 500 RM / 35	0.0499	0.0486	0.105	0.171	0.61
1 x 630 RM / 35	0.0402	0.0385	0.103	0.167	0.66
1 x 800 RM / 35	0.0333	0.0312	0.101	0.162	0.73

Wire armoured, lead sheathed, single core medium voltage power cable with copper conductor and XLPE insulation.



6/10(12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 25 RM	3.4	1.3	1.6	1.9	30.1	1867
1x 35 RM	3.4	1.3	1.6	1.9	31.1	2039
1x 50 RM	3.4	1.4	1.6	1.9	32.5	2333
1x 70 RM	3.4	1.4	2.0	2.0	35.3	2785
1x 95 RM	3.4	1.5	2.0	2.1	37.5	3291
1x 120 RM	3.4	1.5	2.0	2.1	39.0	3652
1x 150 RM	3.4	1.5	2.0	2.2	41.0	4078
1x 185 RM	3.4	1.6	2.0	2.3	43.1	4706
1x 240 RM	3.4	1.7	2.0	2.3	45.7	5576
1x 300 RM	3.4	1.7	2.5	2.5	49.3	6536
1x 400 RM	3.4	1.8	2.5	2.6	52.9	7795
1x 500 RM	3.4	1.9	2.5	2.7	57.3	9372
1x 630 RM	3.4	2.0	2.5	2.8	60.9	11218
1x 800 RM	3.4	2.1	2.5	2.9	64.9	13357

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Bedding Tape

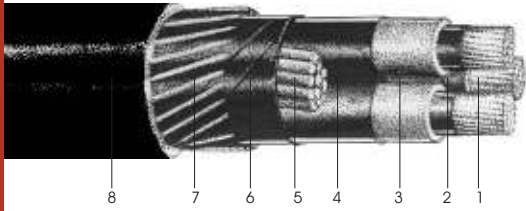
6-Lead Sheath 7-Extruded PVC Bedding 8-Aluminium Wire Armour 9-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/tape screen & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 25 RM	0.927	0.927	0.169	0.257	0.20
1 x 35 RM	0.668	0.668	0.161	0.248	0.22
1 x 50 RM	0.494	0.494	0.151	0.236	0.24
1 x 70 RM	0.342	0.342	0.143	0.226	0.28
1 x 95 RM	0.247	0.246	0.137	0.217	0.31
1 x 120 RM	0.196	0.196	0.131	0.209	0.34
1 x 150 RM	0.159	0.159	0.406	0.649	0.36
1 x 185 RM	0.1273	0.127	0.123	0.198	0.40
1 x 240 RM	0.0974	0.097	0.118	0.190	0.44
1 x 300 RM	0.0783	0.0778	0.117	0.186	0.48
1 x 400 RM	0.0621	0.0614	0.112	0.179	0.54
1 x 500 RM	0.0496	0.0485	0.109	0.172	0.61
1 x 630 RM	0.0398	0.0385	0.106	0.168	0.66
1 x 800 RM	0.0327	0.0312	0.103	0.163	0.73



IEC 60502-2

Cu/SC/XLPE/SC/SCYF/SCT/OCWS/PVC

Three core medium voltage cable with copper conductor, XLPE insulation and common wire screen.

6/10(12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 25 RM/16	3.4	2.2	47.3	2651
3x 35 RM/16	3.4	2.3	49.7	3101
3x 50 RM/16	3.4	2.4	52.6	3662
3x 70 RM/16	3.4	2.5	56.5	4525
3x 95 RM/16	3.4	2.6	60.4	5560
3x 120 RM/16	3.4	2.7	63.9	6531
3x 150 RM/25	3.4	2.8	67.1	7581
3x 185 RM/25	3.4	2.9	71.1	8943
3x 240 RM/25	3.4	3.1	76.8	11072
3x 300 RM/25	3.4	3.3	81.4	13194

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Yarn Filler
6-Semi-conductive Tape 7-Copper Wire Screen 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper tape screen & PE sheath.

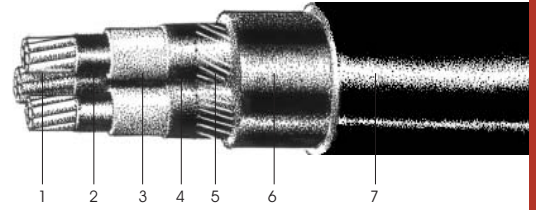
Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 25 RM / 16	0.927	0.132	0.20
3 x 35 RM / 16	0.668	0.126	0.22
3 x 50 RM / 16	0.494	0.117	0.24
3 x 70 RM / 16	0.342	0.111	0.28
3 x 95 RM / 16	0.247	0.105	0.31
3 x 120 RM / 16	0.196	0.101	0.34
3 x 150 RM / 25	0.159	0.098	0.36
3 x 185 RM / 25	0.128	0.095	0.40
3 x 240 RM / 25	0.0984	0.091	0.44
3 x 300 RM / 25	0.0795	0.088	0.48

Cu/SC/XLPE/SC/SCT/ICWS/PVC

IEC 60502-2

Individual wire screened, three core medium voltage power cables with copper conductor and XLPE insulation.



6/10(12)kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 25 RM/16	3.4	2.2	49.1	2899
3x 35 RM/16	3.4	2.3	52.0	3414
3x 50 RM/16	3.4	2.4	54.8	3980
3x 70 RM/16	3.4	2.5	58.8	4859
3x 95 RM/16	3.4	2.6	63.3	6019
3x 120 RM/16	3.4	2.8	67.0	7047
3x 150 RM/25	3.4	2.9	70.3	8176
3x 185 RM/25	3.4	3.0	74.2	9562
3x 240 RM/25	3.4	3.1	80.2	11783
3x 300 RM/25	3.4	3.3	84.8	13938

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Individual S.C Tape + Copper Wire Screen 6-Extruded PVC Inner Sheath 7-PVC Overall Sheath

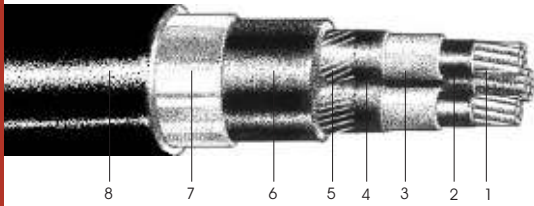
Maximum conductor temperature: 90°C

Also available with aluminium conductor & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 25 RM / 16	0.927	0.138	0.20
3 x 35 RM / 16	0.668	0.131	0.22
3 x 50 RM / 16	0.494	0.122	0.24
3 x 70 RM / 16	0.342	0.115	0.28
3 x 95 RM / 16	0.247	0.110	0.31
3 x 120 RM / 16	0.196	0.105	0.34
3 x 150 RM / 25	0.159	0.102	0.36
3 x 185 RM / 25	0.1279	0.098	0.40
3 x 240 RM / 25	0.0982	0.094	0.440
3 x 300 RM / 25	0.0794	0.091	0.48

AC ABHAR CABLE

**IEC 60502-2 Cu/SC/XLPE/SC/SCT/ICWS/Bd/LSH/PVC**

Lead sheathed, individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.

6/10(12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 25 RM/16	3.4	1.8	2.4	53.2	5811
3x 35 RM/16	3.4	1.8	2.4	56.1	6461
3x 50 RM/16	3.4	1.9	2.5	59.1	7369
3x 70 RM/16	3.4	2.0	2.7	63.3	8705
3x 95 RM/16	3.4	2.1	2.8	68.0	10368
3x 120 RM/16	3.4	2.2	2.9	71.7	11823
3x 150 RM/25	3.4	2.3	3.0	75.1	13416
3x 185 RM/25	3.4	2.4	3.1	79.3	15344
3x 240 RM/25	3.4	2.5	3.3	85.7	18331
3x 300 RM/25	3.4	2.7	3.5	90.7	21421

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

6-Extruded PVC Bedding 7-Lead Sheath 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

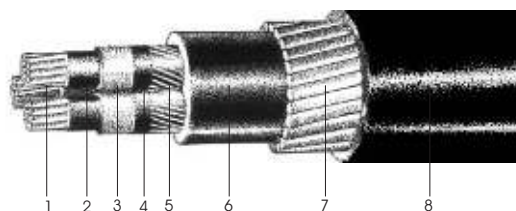
Also available with aluminium conductor & PE sheath.

Electrical Data

Number of cores					AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3	x	25	RM	/ 16	0.927	0.138	0.20
3	x	35	RM	/ 16	0.668	0.131	0.22
3	x	50	RM	/ 16	0.494	0.122	0.24
3	x	70	RM	/ 16	0.342	0.115	0.28
3	x	95	RM	/ 16	0.247	0.110	0.31
3	x	120	RM	/ 16	0.196	0.105	0.34
3	x	150	RM	/ 25	0.159	0.102	0.36
3	x	185	RM	/ 25	0.1279	0.098	0.40
3	x	240	RM	/ 25	0.0982	0.094	0.440
3	x	300	RM	/ 25	0.0794	0.091	0.48

Cu/SC/XLPE/SC/SCT/ICWS/Bd/SWA/PVC IEC 60502-2

Wire armoured, individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation



6/10 (12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 25 RM/16	3.4	2.5	2.5	55.1	5158
3x 35 RM/16	3.4	2.5	2.5	57.5	5696
3x 50 RM/16	3.4	2.5	2.7	60.8	6431
3x 70 RM/16	3.4	2.5	2.8	64.5	7497
3x 95 RM/16	3.4	2.5	2.9	68.8	8754
3x 120 RM/16	3.4	2.5	3.0	72.5	9973
3x 150 RM/25	3.4	2.5	3.1	75.8	11206
3x 185 RM/25	3.4	2.5	3.2	80.0	12814
3x 240 RM/25	3.4	3.15	3.4	87.2	16274
3x 300 RM/25	3.4	3.15	3.6	92.0	18709

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5- S.C Tape + Copper Wire Screen

6-Extruded PVC Bedding 7-Galvanized Steel Wire Armour 8-PVC Overall Sheath

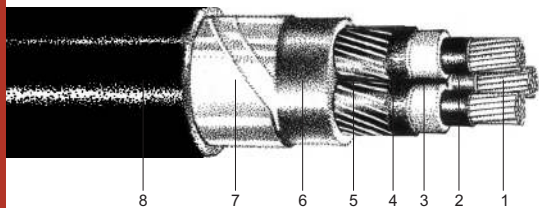
Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/ tape common screen galvanized steel tape armour & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 25 RM / 16	0.927	0.138	0.20
3 x 35 RM / 16	0.668	0.131	0.22
3 x 50 RM / 16	0.494	0.122	0.24
3 x 70 RM / 16	0.342	0.115	0.28
3 x 95 RM / 16	0.247	0.11	0.31
3 x 120 RM / 16	0.196	0.105	0.34
3 x 150 RM / 25	0.159	0.102	0.36
3 x 185 RM / 25	0.1279	0.098	0.40
3 x 240 RM / 25	0.0982	0.094	0.44
3 x 300 RM / 25	0.0794	0.091	0.48



**IEC 60502-2 Cu/SC/XLPE/SC/SCT/ICWS/Bd//DTA/PVC**

Tape armoured, individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.

6/10(12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Tape Armour Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 25 RM/16	3.4	0.5	2.4	52.4	3605
3x 35 RM/16	3.4	0.5	2.4	54.5	4058
3x 50 RM/16	3.4	0.5	2.5	57.8	4689
3x 70 RM/16	3.4	0.5	2.7	61.8	5637
3x 95 RM/16	3.4	0.5	2.8	66.0	6798
3x 120 RM/16	3.4	0.5	2.9	69.8	7874
3x 150 RM/25	3.4	0.5	3.0	73.0	9034
3x 185 RM/25	3.4	0.5	3.1	77.3	10506
3x 240 RM/25	3.4	0.5	3.3	83.2	12765
3x 300 RM/25	3.4	0.5	3.5	88.0	15013

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C. Tape + Copper Wire Screen
6-Extruded PVC Bedding 7-Galvanized Steel Tape Armour 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

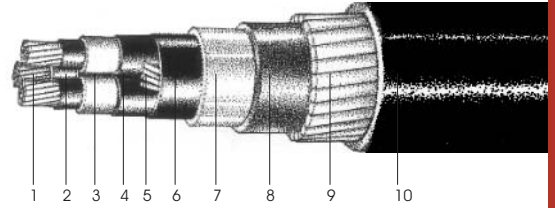
Also available with aluminium conductor, common wire screen & PE sheath.

Electrical Data

Number of cores					AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3	x	25	RM	/ 16	0.927	0.138	0.20
3	x	35	RM	/ 16	0.668	0.131	0.22
3	x	50	RM	/ 16	0.494	0.122	0.24
3	x	70	RM	/ 16	0.342	0.115	0.28
3	x	95	RM	/ 16	0.247	0.110	0.31
3	x	120	RM	/ 16	0.196	0.105	0.34
3	x	150	RM	/ 25	0.159	0.102	0.36
3	x	185	RM	/ 25	0.1279	0.098	0.40
3	x	240	RM	/ 25	0.0982	0.094	0.44
3	x	300	RM	/ 25	0.0794	0.091	0.48

Cu/SC/XLPE/SC/SCYF/SCT/Lsh/Bd/SWA/PVC IEC 60502-2

Wire armoured, lead sheathed, three core medium voltage power cable with copper conductor and XLPE insulation.



6/10 (12) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 25 RM	3.4	1.8	2.5	2.6	59.8	8458
3x 35 RM	3.4	1.8	2.5	2.8	62.7	9312
3x 50 RM	3.4	1.9	2.5	3.0	66.1	10403
3x 70 RM	3.4	2.0	2.5	3.0	70.4	11998
3x 95 RM	3.4	2.1	2.5	3.1	75.2	13934
3x 120 RM	3.4	2.2	2.5	3.2	79.2	15622
3x 150 RM	3.4	2.3	3.15	3.4	84.4	18397
3x 185 RM	3.4	2.4	3.15	3.5	88.5	20614
3x 240 RM	3.4	2.5	3.15	3.7	95.2	24096
3x 300 RM	3.4	2.7	3.15	3.8	100.1	27488

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Yarn Filler

6-Semi-conductive Tape 7-Lead Sheath 8-Extruded PVC Bedding 9-Galvanized Steel Wire Armour 10-PVC Overall Sheath

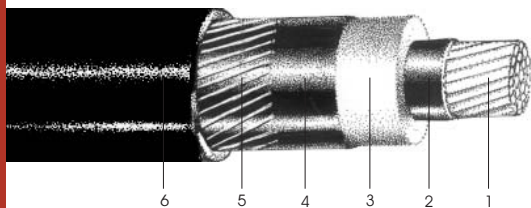
Maximum conductor temperature: 90°C

Also available with aluminium conductor, galvanized steel tape armour & PE sheath.

Electrical Data

Number of cores				AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3	x	25	RM	0.927	0.132	0.20
3	x	35	RM	0.668	0.126	0.22
3	x	50	RM	0.494	0.117	0.24
3	x	70	RM	0.342	0.111	0.28
3	x	95	RM	0.247	0.105	0.31
3	x	120	RM	0.196	0.101	0.34
3	x	150	RM	0.159	0.098	0.36
3	x	185	RM	0.128	0.095	0.40
3	x	240	RM	0.0984	0.091	0.44
3	x	300	RM	0.0795	0.088	0.48





IEC 60502-2

Cu/SC/XLPE/SC/SCT/CWS/PVC

Wire screened, single core medium voltage power cable with copper conductor and XLPE insulation.

12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 35 RM/16	5.5	1.8	28.8	992
1x 50 RM/16	5.5	1.8	30.2	1137
1x 70 RM/16	5.5	1.9	32.1	1385
1x 95 RM/16	5.5	1.9	33.8	1667
1x 120 RM/16	5.5	2.0	35.5	1946
1x 150 RM/25	5.5	2.0	36.9	2317
1x 185 RM/25	5.5	2.1	38.8	2712
1x 240 RM/25	5.5	2.1	41.2	3295
1x 300 RM/25	5.5	2.2	43.4	3911
1x 400 RM/35	5.5	2.3	46.8	4863
1x 500 RM/35	5.5	2.4	50.5	5966
1x 630 RM/35	5.5	2.5	53.6	7360
1x 800 RM/35	5.5	2.7	58.5	9177

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

6-PVC Overall Sheath

Maximum conductor temperature: 90°C

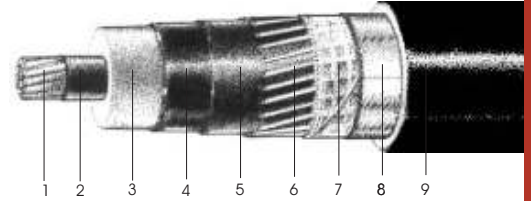
Also available with aluminium conductor copper tape screen & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 35 RM / 16	0.668	0.668	0.155	0.246	0.16
1 x 50 RM / 16	0.494	0.494	0.145	0.234	0.17
1 x 70 RM / 16	0.342	0.342	0.137	0.224	0.19
1 x 95 RM / 16	0.247	0.246	0.130	0.215	0.21
1 x 120 RM / 16	0.196	0.196	0.125	0.207	0.23
1 x 150 RM / 25	0.159	0.159	0.121	0.202	0.25
1 x 185 RM / 25	0.1275	0.127	0.117	0.195	0.27
1 x 240 RM / 25	0.0977	0.0971	0.111	0.188	0.30
1 x 300 RM / 25	0.0787	0.0778	0.108	0.183	0.32
1 x 400 RM / 35	0.0626	0.0614	0.104	0.175	0.36
1 x 500 RM / 35	0.0502	0.0486	0.101	0.169	0.40
1 x 630 RM / 35	0.0406	0.0385	0.098	0.164	0.44
1 x 800 RM / 35	0.0337	0.0312	0.096	0.16	0.48

Cu/SC/XLPE/SC/SCT/CWS/WBT/AIC/PE IEC 60502-2

Wire screened, water blocked, single core medium voltage power cable with copper conductor and XLPE insulation.



12/20(24)kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 35 RM/16	5.5	1.8	31.3	980
1x 50 RM/16	5.5	1.8	32.5	1124
1x 70 RM/16	5.5	1.9	34.4	1366
1x 95 RM/16	5.5	1.9	36.1	1645
1x 120 RM/16	5.5	2.0	37.8	1917
1x 150 RM/25	5.5	2.0	39.2	2286
1x 185 RM/25	5.5	2.1	41.1	2672
1x 240 RM/25	5.5	2.2	43.8	3264
1x 300 RM/25	5.5	2.2	45.7	3857
1x 400 RM/35	5.5	2.4	49.4	4810
1x 500 RM/35	5.5	2.4	52.8	5884
1x 630 RM/35	5.5	2.6	56.1	7279
1x 800 RM/35	5.5	2.7	60.8	9051

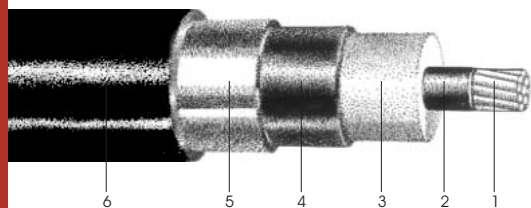
1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Tape
6-Copper Wire Screen 7-Water-Blocking Tape 8-Aluminium Copolymer Layer 9-PE Overall Sheath

Maximum conductor temperature: 90°C
Also available with aluminium conductor, copper wire/ tape screen.

Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 35 RM / 16	0.668	0.668	0.159	0.247	0.16
1 x 50 RM / 16	0.494	0.494	0.148	0.235	0.17
1 x 70 RM / 16	0.342	0.342	0.141	0.225	0.19
1 x 95 RM / 16	0.247	0.246	0.134	0.216	0.21
1 x 120 RM / 16	0.196	0.196	0.128	0.208	0.23
1 x 150 RM / 25	0.159	0.159	0.124	0.203	0.25
1 x 185 RM / 25	0.1274	1270	0.120.	0.196	0.27
1 x 240 RM / 25	0.0976	0.0971	0.114	0.189	0.30
1 x 300 RM / 25	0.0786	0.0778	0.111	0.183	0.32
1 x 400 RM / 35	0.0625	0.0614	0.107	0.177	0.36
1 x 500 RM / 35	0.0501	0.0486	0.103	0.170.	0.40
1 x 630 RM / 35	0.0404	0.0385	0.101	0.165	0.44
1 x 800 RM / 35	0.0335	0.0312	0.098	0.161	0.48





IEC 60502-2

Cu/SC/XLPE/SC/SCT/Lsh/PVC

Lead sheathed, single core medium voltage power cable with copper conductor and XLPE insulation.

12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 35 RM	5.5	1.5	1.9	30.2	2156
1x 50 RM	5.5	1.5	1.9	31.4	2367
1x 70 RM	5.5	1.5	2.0	33.2	2701
1x 95 RM	5.5	1.6	2.0	35.1	3185
1x 120 RM	5.5	1.6	2.1	36.8	3551
1x 150 RM	5.5	1.7	2.1	38.4	4041
x 185 RM	5.5	1.7	2.2	40.4	4541
1x 240 RM	5.5	1.8	2.3	43.2	5428
1x 300 RM	5.5	1.8	2.3	45.1	6147
1x 400 RM	5.5	1.9	2.5	49.0	7394
1x 500 RM	5.5	2.0	2.6	52.8	8901
1x 630 RM	5.5	2.1	2.7	56.2	10686
1x 800 RM	5.5	2.2	2.8	60.4	12789

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Lead Sheath

6-PVC Overall Sheath

Maximum conductor temperature: 90°C

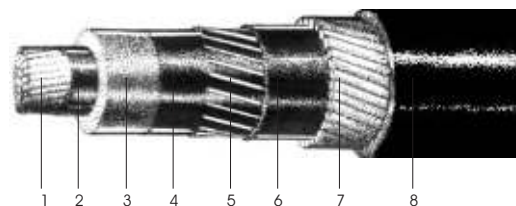
Also available with aluminium conductor, copper wire/ tape screen & PE sheath.

Electrical Data

Number of cores				AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
				Trefoil	Flat	Trefoil	Flat	
1	x	35	RM	0.668	0.668	0.158	0.247	0.16
1	x	50	RM	0.494	0.494	0.148	0.235	0.17
1	x	70	RM	0.342	0.342	0.140.	0.225	0.19
1	x	95	RM	0.247	0.246	0.133	0.216	0.21
1	x	120	RM	0.196	0.196	0.128	0.208	0.23
1	x	150	RM	0.159	0.159	0.124	0.203	0.25
1	x	185	RM	0.1274	0.1270	0.120.	0.197	0.27
1	x	240	RM	0.0976	0.0971	0.115	0.189	0.30
1	x	300	RM	0.0786	0.0778	0.111	0.184	0.32
1	x	400	RM	0.0625	0.0614	0.107	0.177	0.36
1	x	500	RM	0.0500.	0.0486	0.104	0.170.	0.40
1	x	630	RM	0.0403	0.0385	0.102	0.166	0.44
1	x	800	RM	0.0335	0.0312	0.099	0.161	0.48

Cu/SC/XLPE /SC/SCT/CWS/Bd/AWA/PVC IEC 60502-2

Wire armoured, wire screened, single core medium voltage power cable with copper conductor and XLPE insulation.



12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 35 RM/16	5.5	1.6	2.0	35.4	1536
1x 50 RM/16	5.5	2.0	2.0	37.6	1795
1x 70 RM/16	5.5	2.0	2.1	39.4	2083
1x 95 RM/16	5.5	2.0	2.1	41.1	2394
1x 120 RM/16	5.5	2.0	2.2	42.9	2713
1x 150 RM/25	5.5	2.0	2.2	44.3	3111
1x 185 RM/25	5.5	2.0	2.3	46.2	3539
1x 240 RM/25	5.5	2.5	2.4	50.1	4370
1x 300 RM/25	5.5	2.5	2.5	52.2	5045
1x 400 RM/35	5.5	2.5	2.6	55.8	6104
1x 500 RM/35	5.5	2.5	2.7	59.8	7295
1x 630 RM/35	5.5	2.5	2.8	63.2	8799
1x 800 RM/35	5.5	2.5	3.0	68.1	10759

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

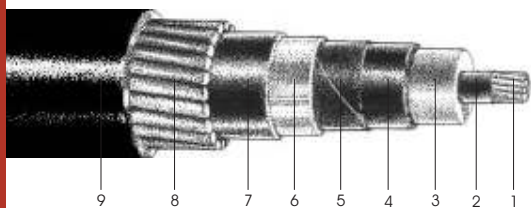
6-Extruded PVC Bedding 7-Aluminium Wire Armour 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, tape screen, tape armour & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 35 RM / 16	0.668	0.668	0.170	0.251	0.16
1 x 50 RM / 16	0.494	0.494	0.159	0.238	0.17
1 x 70 RM / 16	0.342	0.342	0.150	0.228	0.19
1 x 95 RM / 16	0.247	0.246	0.143	0.219	0.21
1 x 120 RM / 16	0.196	0.196	0.137	0.211	0.23
1 x 150 RM / 25	0.159	0.159	0.133	0.206	0.25
1 x 185 RM / 25	0.1273	0.1270	0.128	0.200	0.27
1 x 240 RM / 25	0.0975	0.0970	0.124	0.193	0.30
1 x 300 RM / 25	0.0783	0.0778	0.120	0.188	0.32
1 x 400 RM / 35	0.0622	0.0614	0.115	0.18	0.32
1 x 500 RM / 35	0.0497	0.0486	0.112	0.174	0.40
1 x 630 RM / 35	0.0399	0.385	0.108	0.169	0.44
1 x 800 RM / 35	0.0329	0.0312	0.106	0.164	0.48



IEC 60502-2

Cu/SC/XLPE/SC/SCT/Lsh/Bd/AWA/PVC

Wire armoured, lead sheathed, single core medium voltage power cable with copper conductor and XLPE insulation.

12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 35 RM	5.5	1.5	2.0	2.1	37.2	2790
1x 50 RM	5.5	1.5	2.0	2.1	38.4	3025
1x 70 RM	5.5	1.5	2.0	2.2	40.6	3418
1x 95 RM	5.5	1.6	2.0	2.3	42.7	3961
1x 120 RM	5.5	1.6	2.0	2.3	44.2	4338
1x 150 RM	5.5	1.7	2.0	2.4	46.1	4887
1x 185 RM	5.5	1.7	2.5	2.5	49.2	5597
1x 240 RM	5.5	1.8	2.5	2.5	51.8	6525
1x 300 RM	5.5	1.8	2.5	2.6	54.1	7347
1x 400 RM	5.5	1.9	2.5	2.7	58.1	8658
1x 500 RM	5.5	2.0	2.5	2.8	62.2	10293
1x 630 RM	5.5	2.1	2.5	3.0	66.0	12221
1x 800 RM	5.5	2.2	2.5	3.1	70.1	14419

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Bedding Tape

6-Lead Sheath 7-Extruded PVC Bedding 8-Aluminium Wire Armour 9-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/ tape screen & PE sheath.

Electrical Data

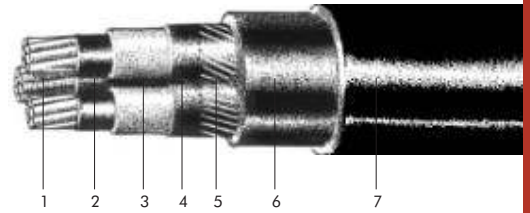
Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 35 RM	0.668	0.668	0.171	0.251	0.16
1 x 50 RM	0.494	0.494	0.161	0.239	0.17
1 x 70 RM	0.342	0.342	0.152	0.229	0.19
1 x 95 RM	0.247	0.246	0.145	0.220	0.21
1 x 120 RM	0.196	0.196	0.139	0.212	0.23
1 x 150 RM	0.159	0.159	0.135	0.207	0.25
1 x 185 RM	0.1272	0.1270	0.132	0.201	0.27
1 x 240 RM	0.0974	0.0970	0.126	0.194	0.30
1 x 300 RM	0.0782	0.0778	0.123	0.188	0.36
1 x 400 RM	0.0620	0.0614	0.118	0.181	0.36
1 x 500 RM	0.0494	0.0485	0.114	0.175	0.40
1 x 630 RM	0.0396	0.0385	0.112	0.171	0.44
1 x 800 RM	0.0324	0.0311	0.108	0.165	0.48

AC ABHAR
CABLE

Cu/SC/XLPE/SC/SCT/ICWS/PVC

IEC 60502-2

Individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.



12/20(24)kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 35 RM/16	5.5	2.6	62.7	4535
3x 50 RM/16	5.5	2.7	65.5	5166
3x 70 RM/16	5.5	2.8	69.2	6127
3x 95 RM/16	5.5	3.0	73.3	7295
3x 120 RM/16	5.5	3.1	76.9	8359
3x 150 RM/25	5.5	3.2	80.6	9635
3x 185 RM/25	5.5	3.3	84.6	11098
3x 240 RM/25	5.5	3.5	90.2	13363
3x 300 RM/25	5.5	3.6	94.5	15560

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire screen
6-Extruded PVC Inner Sheath 7-PVC Overall Sheath

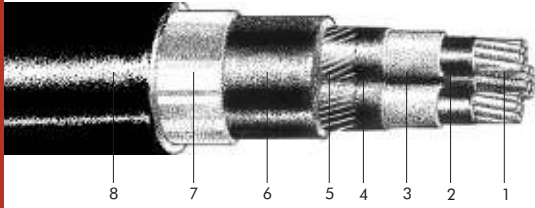
Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper tape screen & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 35 RM / 16	0.668	0.144	0.16
3 x 50 RM / 16	0.494	0.134	0.17
3 x 70 RM / 16	0.342	0.127	0.19
3 x 95 RM / 16	0.247	0.12	0.21
3 x 120 RM / 16	0.196	0.115	0.23
3 x 150 RM / 25	0.159	0.111	0.25
3 x 185 RM / 25	0.1276	0.107	0.27
3 x 240 RM / 25	0.0979	0.102	0.30
3 x 300 RM / 25	0.079	0.099	0.32

AC ABHAR CABLE



IEC 60502-2

Cu/SC/XLPE/SC/ICWS/Bd/Lsh/PVC

Lead sheathed, individual wire screened, three core medium voltage power cables with copper conductor and XLPE insulation.

12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 35 RM/16	5.5	2.1	2.8	66.9	8776
3x 50 RM/16	5.5	2.2	2.9	70.0	9818
3x 70 RM/16	5.5	2.3	3.0	73.9	11276
3x 95 RM/16	5.5	2.4	3.1	78.0	12939
3x 120 RM/16	5.5	2.5	3.2	81.7	14533
3x 150 RM/25	5.5	2.6	3.4	85.9	16412
3x 185 RM/25	5.5	2.7	3.5	90.0	18477
3x 240 RM/25	5.5	3.0	3.8	95.3	19269
3x 300 RM/25	5.5	3.2	3.9	102.2	22335

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

6-Extruded PVC Bedding 7-Lead Sheath 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor & PE sheath.

Electrical Data

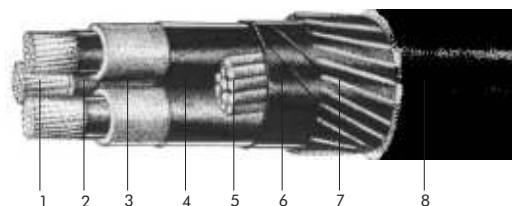
Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 35 RM / 16	0.668	0.144	0.16
3 x 50 RM / 16	0.494	0.134	0.17
3 x 70 RM / 16	0.342	0.124	0.19
3 x 95 RM / 16	0.196	0.115	0.23
3 x 120 RM / 16	0.196	0.231	0.47
3 x 150 RM / 25	0.159	0.111	0.25
3 x 185 RM / 25	0.1276	0.107	0.27
3 x 240 RM / 25	0.0979	0.102	0.30
3 x 300 RM / 25	0.079	0.099	0.32

AC ABHAR CABLE

Cu/SC/XLPE/SC/SCYF/SCT/OCWS/PVC

IEC 60502-2

Three core medium voltage cable with copper conductor, XLPE insulation, and common wire screen.



12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 35 RM/16	5.5	2.6	59.7	4088
3x 50 RM/16	5.5	2.7	62.6	4701
3x 70 RM/16	5.5	2.8	66.3	5634
3x 95 RM/16	5.5	2.9	70.2	6738
3x 120 RM/16	5.5	3.0	73.7	7775
3x 150 RM/25	5.5	3.1	77.0	8885
3x 185 RM/25	5.5	3.3	81.1	10355
3x 240 RM/25	5.5	3.4	86.5	12537
3x 300 RM/25	5.5	3.6	91.1	14757

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Yarn Filler

6-Semi-conductive Tape 7-Copper Wire Screen 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper tape screen & PE sheath.

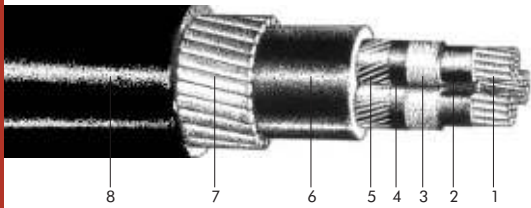
Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 35 RM / 16	0.668	0.14	0.16
3 x 50 RM / 16	0.494	0.13	0.17
3 x 70 RM / 16	0.342	0.123	0.19
3 x 95 RM / 16	0.247	0.117	0.21
3 x 120 RM / 16	0.196	0.111	0.23
3 x 150 RM / 25	0.159	0.108	0.25
3 x 185 RM / 25	0.1277	0.104	0.27
3 x 240 RM / 25	0.098	0.100.	0.30
3 x 300 RM / 25	0.0791	0.097	0.32

AC ABHAR CABLE

12/20(24) kV

MEDIUM VOLTAGE CABLES



IEC 60502-2

Cu/SC/XLPE/SC/SCT/ICWS/Bd/SWA/PVC

Wire armoured, individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.

12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 35 RM/16	5.5	2.5	2.9	68.2	7274
3x 50 RM/16	5.5	2.5	3.0	71.2	8051
3x 70 RM/16	5.5	2.5	3.1	75.0	9155
3x 95 RM/16	5.5	2.5	3.2	79.1	10512
3x 120 RM/16	5.5	3.15	3.4	84.4	12778
3x 150 RM/25	5.5	3.15	3.5	87.7	14129
3x 185 RM/25	5.5	3.15	3.6	91.8	15870
3x 240 RM/25	5.5	3.15	3.8	97.7	18477
3x 300 RM/25	5.5	3.15	3.9	102.4	20959

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5- S.C Tape + Copper Wire Screen

6-Extruded PVC Bedding 7-Galvanized Steel Wire Armour 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

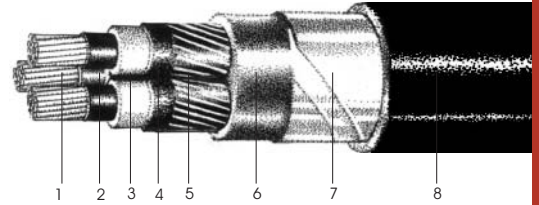
Also available with aluminium conductor, copper wire/tape common screen, galvanized steel tape armour & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 35 RM / 16	0.665	0.144	0.16
3 x 50 RM / 16	0.494	0.134	0.17
3 x 70 RM / 16	0.342	0.127	0.19
3 x 95 RM / 16	0.247	0.120	0.22
3 x 120 RM / 16	0.196	0.115	0.23
3 x 150 RM / 25	0.159	0.111	0.25
3 x 185 RM / 25	0.1276	0.107	0.27
3 x 240 RM / 25	0.0979	0.102	0.30
3 x 300 RM / 25	0.0970	0.099	0.32

Cu/SC/XLPE/SC/SCT/ICWS/Bd/DTA/PVC IEC 60502-2

Tape armoured, individual wire screened, three core medium voltage power cables with copper conductor and XLPE insulation.



12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Tape Armour Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 50 RM/16	5.5	0.5	2.9	68.5	6010
3x 70 RM/16	5.5	0.5	3.0	72.2	7010
3x 95 RM/16	5.5	0.5	3.1	76.4	8229
3x 120 RM/16	5.5	0.5	3.2	80.1	9376
3x 150 RM/25	5.5	0.5	3.3	83.4	10582
3x 185 RM/25	5.5	0.5	3.5	87.8	12171
3x 240 RM/25	5.5	0.8	3.7	95.2	15372
3x 300 RM/25	5.5	0.8	3.8	99.8	17714

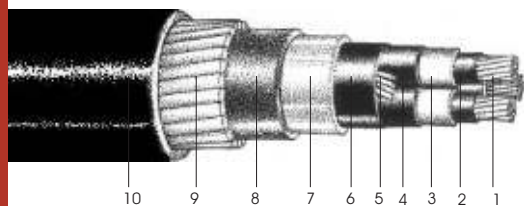
1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen
6-Extruded PVC Bedding 7-Galvanized Steel Tape Armour 8-PVC Overall Sheath

Maximum conductor temperature: 90°C
Also available with aluminium conductor, Common wire screen & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 50 RM / 16	0.494	0.134	0.17
3 x 70 RM / 16	0.342	0.127	0.19
3 x 95 RM / 16	0.247	0.12	0.21
3 x 120 RM / 16	0.196	0.115	0.23
3 x 150 RM / 25	0.159	0.111	0.25
3 x 185 RM / 25	0.1276	0.107	0.27
3 x 240 RM / 25	0.0979	0.102	0.30
3 x 300 RM / 25	0.0790.	0.099	0.32





IEC 60502-2

Cu/SC/XLPE/SC/SCT/Lsh/Bd/SWA/PVC

Wire armoured, lead sheathed, three core medium voltage power cable with copper conductor and XLPE insulation.

12/20 (24) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 35 RM	5.5	2.1	2.5	3.1	74.4	12329
3x 50 RM	5.5	2.2	2.5	3.2	77.9	13628
3x 70 RM	5.5	2.3	3.15	3.3	83.1	16223
3x 95 RM	5.5	2.4	3.15	3.5	87.7	18265
3x 120 RM	5.5	2.5	3.15	3.6	91.6	20115
3x 150 RM	5.5	2.6	3.15	3.7	95.8	22246
3x 185 RM	5.5	2.7	3.15	3.8	99.9	24627
3x 240 RM	5.5	2.8	3.15	4.0	106	28114
3x 300 RM	5.5	3.0	3.15	4.4	105.9	28454

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Yarn Filler

6-Semi-conductive Tape 7-Lead Sheath 8-Extruded PVC Bedding 9-Galvanized Steel Wire Armour 10-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor , galvanized steel tape armour & PE sheath.

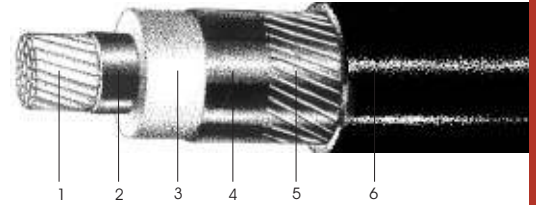
Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 35 RM	0.668	0.14	0.16
3 x 50 RM	0.494	0.13	0.17
3 x 70 RM	0.342	0.123	0.19
3 x 95 RM	0.247	0.117	0.21
3 x 120 RM	0.196	0.111	0.23
3 x 150 RM	0.159	0.108	0.25
3 x 185 RM	0.1277	0.104	0.27
3 x 240 RM	0.098	0.100	0.30
3 x 300 RM	0.0791	0.097	0.32

AC ABHAR
CABLE

Cu/SC/XLPE/SC/SCT/CWS/PVC**IEC 60502-2**

Wire screened, single core medium voltage power cable with copper conductor and XLPE insulation.

**18/30 (36) kV**

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 50 RM/16	8.0	2.0	35.7	1396
1x 70 RM/16	8.0	2.0	37.3	1642
1x 95 RM/16	8.0	2.1	39.2	1955
1x 120 RM/16	8.0	2.1	40.7	2230
1x 150 RM/16	8.0	2.2	42.4	2631
1x 185 RM/25	8.0	2.2	44.1	3022
1x 240 RM/25	8.0	2.3	46.7	3645
1x 300 RM/25	8.0	2.4	48.9	4278
1x 400 RM/35	8.0	2.5	52.3	5258
1x 500 RM/35	8.0	2.6	55.9	6392
1x 630 RM/35	8.0	2.7	59.4	7812
1x 800 RM/35	8.0	2.8	63.7	9633

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

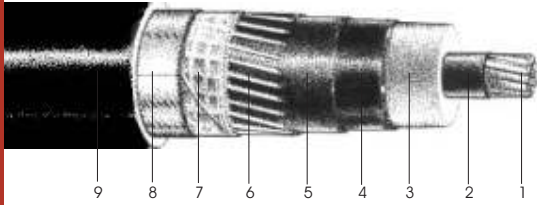
6-PVC Overall Sheath.

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper tape screen & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 50 RM / 16	0.494	0.494	0.155	0.237	0.14
1 x 70 RM / 16	0.342	0.342	0.147	0.227	0.15
1 x 95 RM / 16	0.247	0.246	0.140.	0.218	0.16
1 x 120 RM / 16	0.196	0.196	0.133	0.210.	0.18
1 x 150 RM / 16	0.159	0.159	0.130.	0.205	0.19
1 x 185 RM / 16	0.1274	0.1270.	0.125	0.199	0.20
1 x 240 RM / 25	0.0975	0.097	0.119	0.191	0.22
1 x 300 RM / 25	0.0784	0.0778	0.116	0.186	0.24
1 x 400 RM / 35	0.0624	0.0614	0.111	0.178	0.26
1 x 500 RM / 35	0.0498	0.0486	0.108	0.172	0.30
1 x 630 RM / 35	0.0401	0.0385	0.105	0.167	0.320.
1 x 800 RM / 35	0.0332	0.0312	0.102	0.162	0.35

**IEC 60502-2 Cu/SC/XLPE/SC/SCWBT/CWS/WBT/AIC/PE**

Wire screened, water blocked, single core medium voltage power cable with copper conductor and XLPE insulation.

18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 50 RM/16	8.0	2.0	38.0	1366
1x 70 RM/16	8.0	2.1	39.8	1622
1x 95 RM/16	8.0	2.1	41.5	1914
1x 120 RM/16	8.0	2.2	43.3	2199
1x 150 RM/16	8.0	2.2	44.7	2579
1x 185 RM/25	8.0	2.3	46.6	2980
1x 240 RM/25	8.0	2.3	49.0	3578
1x 300 RM/25	8.0	2.4	51.2	4199
1x 400 RM/35	8.0	2.5	54.6	5164
1x 500 RM/35	8.0	2.6	58.5	6281
1x 630 RM/35	8.0	2.7	61.7	7683
1x 800 RM/35	8.0	2.9	66.3	9503

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Tape

6-Copper Wire Screen 7- Water-blocking Tape 8-Aluminium Copolymer Layer 9-PE Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/tape screen, & PVC sheath.

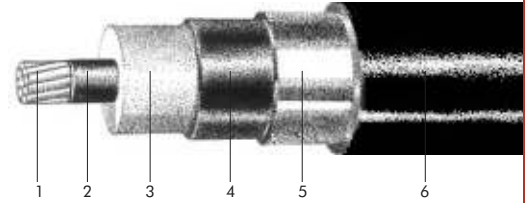
Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 50 RM / 16	0.494	0.494	0.158	0.238	0.14
1 x 70 RM / 16	0.342	0.342	0.150	0.228	0.15
1 x 95 RM / 16	0.247	0.246	0.142	0.219	0.16
1 x 120 RM / 16	0.196	0.196	0.136	0.211	0.18
1 x 150 RM / 16	0.159	0.159	0.132	0.206	0.19
1 x 185 RM / 25	0.1273	0.1270	0.127	0.199	0.20
1 x 240 RM / 25	0.0975	0.0970	0.121	0.192	0.22
1 x 300 RM / 25	0.0784	0.0778	0.118	0.187	0.24
1 x 400 RM / 35	0.0623	0.0614	0.113	0.179	0.26
1 x 500 RM / 35	0.0497	0.0486	0.110	0.173	0.30
1 x 630 RM / 35	0.0400	0.0385	0.107	0.168	0.320
1 x 800 RM / 35	0.0330	0.0312	0.104	0.163	0.35

Cu/SC/XLPE/SC/SCT/Lsh/PVC

IEC 60502-2

Lead sheathed, single core medium voltage power cable with copper conductor and XLPE insulation



18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 50 RM	8.0	1.6	2.1	37.0	3013
1x 70 RM	8.0	1.7	2.2	39.1	3492
1x 95 RM	8.0	1.7	2.2	40.8	3891
1x 120 RM	8.0	1.8	2.3	42.7	4413
1x 150 RM	8.0	1.8	2.3	44.1	4803
1x 185 RM	8.0	1.9	2.4	46.3	5472
1x 240 RM	8.0	1.9	2.5	48.9	6261
1x 300 RM	8.0	2.0	2.5	51.0	7165
1x 400 RM	8.0	2.1	2.6	54.6	8460
1x 500 RM	8.0	2.2	2.7	58.8	10040
1x 630 RM	8.0	2.3	2.9	62.4	11919
1x 800 RM	8.0	2.4	3.0	66.3	14098

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Lead Sheath

6-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/ tape screen & PE sheath.

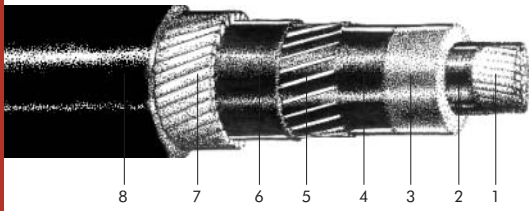
Electrical Data

Number of cores			AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
			Trefoil	Flat	Trefoil	Flat	
1	x	50 RM	0.494	0.494	0.158	0.238	0.14
1	x	70 RM	0.342	0.342	0.150.	0.228	0.15
1	x	95 RM	0.247	0.246	0.142	0.219	0.16
1	x	120 RM	0.196	0.196	0.137	0.211	0.18
1	x	150 RM	0.159	0.159	0.132	0.206	0.19
1	x	185 RM	0.1273	0.1270	0.128	0.200.	0.20
1	x	240 RM	0.0974	0.0970	0.122	0.192	0.22
1	x	300 RM	0.0782	0.0778	0.119	0.187	0.24
1	x	400 RM	0.0621	0.0614	0.114	0.180.	0.26
1	x	500 RM	0.0495	0.0485	0.111	0.174	0.30
1	x	630 RM	0.0397	0.0385	0.108	0.169	0.32
1	x	800 RM	0.0326	0.0312	0.105	0.164	0.348

AC ABHAR CABLE

18/30(36) kV

MEDIUM VOLTAGE CABLES



IEC 60502-2

Cu/SC/XLPE/SC/SCT/CWS/Bd/AWA/PVC

Wire armoured, wire screened, single core medium voltage power cable with copper conductor and XLPE insulation.

18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 50 RM/16	8.0	2.0	2.2	43.1	2164
1x 70 RM/16	8.0	2.0	2.3	44.9	2460
1x 95 RM/16	8.0	2.0	2.3	46.6	2793
1x 120 RM/16	8.0	2.0	2.4	48.4	3118
1x 150 RM/25	8.0	2.5	2.5	51.2	3730
1x 185 RM/25	8.0	2.5	2.5	52.9	4162
1x 240 RM/25	8.0	2.5	2.6	55.7	4885
1x 300 RM/25	8.0	2.5	2.7	58.2	5566
1x 400 RM/35	8.0	2.5	2.8	61.9	6659
1x 500 RM/35	8.0	2.5	2.9	65.6	7882
1x 630 RM/35	8.0	2.5	3.0	69.0	9416
1x 800 RM/35	8.0	2.5	3.1	73.7	11394

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

6-Extruded PVC Bedding 7-Aluminium Wire Armour 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, tape screen, tape armour & PE sheath.

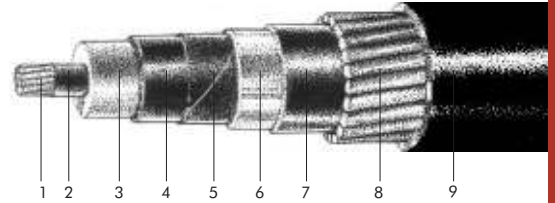
Electrical Data

Number of cores	AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
	Trefoil	Flat	Trefoil	Flat	
1 x 50 RM / 16	0.494	0.494	0.167	0.242	0.14
1 x 70 RM / 16	0.342	0.342	0.158	0.231	0.15
1 x 95 RM / 16	0.247	0.246	0.15	0.222	0.16
1 x 120 RM / 16	0.196	0.196	0.144	0.214	0.18
1 x 150 RM / 25	0.159	0.159	0.142	0.210	
1 x 185 RM / 25	0.1273	0.1270	0.136	0.203	0.20
1 x 240 RM / 25	0.0974	0.0970	0.131	0.196	0.22
1 x 300 RM / 25	0.0782	0.778	0.127	0.190	0.24
1 x 400 RM / 35	0.0620.	0.614	0.122	0.183	0.26
1 x 500 RM / 35	0.0494	0.0485	0.118	0.177	0.30
1 x 630 RM / 35	0.0396	0.0385	0.144	0.172	0.32
1 x 800 RM / 35	0.0326	0.0312	0.111	0.167	0.35

Cu/SC/XLPE/SC/SCT/LSH/Bd/AWA/PVC

IEC 60502-2

Wire armoured, lead sheathed, single core medium voltage power cable with copper conductor and XLPE insulation.



18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1x 50 RM	8.0	1.6	2.0	2.3	44.4	3809
1x 70 RM	8.0	1.7	2.5	2.4	47.7	4488
1x 95 RM	8.0	1.7	2.5	2.5	49.6	4951
1x 120 RM	8.0	1.8	2.5	2.5	51.3	5506
1x 150 RM	8.0	1.8	2.5	2.6	53.1	5981
1x 185 RM	8.0	1.9	2.5	2.6	55.0	6671
1x 240 RM	8.0	1.9	2.5	2.7	58.0	7524
1x 300 RM	8.0	2.0	2.5	2.8	60.6	8541
1x 400 RM	8.0	2.1	2.5	2.9	64.3	9924
1x 500 RM	8.0	2.2	2.5	3.0	68.4	11639
1x 630 RM	8.0	2.3	2.5	3.2	72.3	13642
1x 800 RM	8.0	2.4	3.2	3.3	77.6	16225

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Bedding Tape

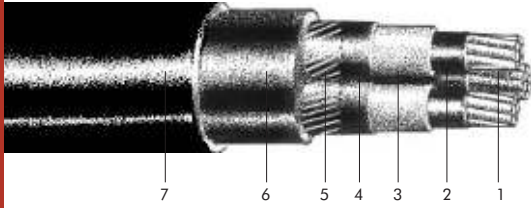
6-Lead Sheath 7-Extruded PVC Bedding 8-Aluminium Wire Armour 9-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/ tape screen & PE sheath.

Electrical Data

Number of cores				AC resistance (Ohm/km)		REACTANCE (Ohm/km)		CAPACITANCE (micro F/km)
				Trefoil	Flat	Trefoil	Flat	
1	x	50	RM	0.494	0.494	0.169	0.243	0.14
1	x	70	RM	0.342	0.342	0.163	0.233	0.15
1	x	95	RM	0.246	0.246	0.155	0.224	0.16
1	x	120	RM	0.196	0.196	0.148	0.216	0.18
1	x	150	RM	0.159	0.159	0.144	0.211	0.19
1	x	185	RM	0.1272	0.1270.	0.140.	0.205	0.20
1	x	240	RM	0.0973	0.0970.	0.133	0.197	0.22
1	x	300	RM	0.0782	0.0778	0.130.	0.192	0.24
1	x	400	RM	0.0620.	0.0614	0.124	0.184	0.26
1	x	500	RM	0.0493	0.0485	0.121	0.178	0.30
1	x	630	RM	0.0395	0.0385	0.117	0.173	0.32
1	x	800	RM	0.0324	0.0311	0.115	0.169	0.35



IEC 60502-2

Cu/SC/XLPE/SC/SCT/CWS/PVC

Individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.

18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 50 RM/16	8.0	3.1	77.3	6729
3x 75 RM/16	8.0	3.2	81.5	7874
3x 95 RM/16	8.0	3.3	85.4	9098
3x 120 RM/16	8.0	3.4	88.9	10240
3x 150 RM/25	8.0	3.6	92.4	11499
3x 185 RM/25	8.0	3.7	96.3	13045
3x 240 RM/25	8.0	3.8	101.7	15402
3x 300 RM/25	8.0	4.0	106.8	17886

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

6-Extruded PVC Inner Sheath 7-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper tape screen & PE sheath.

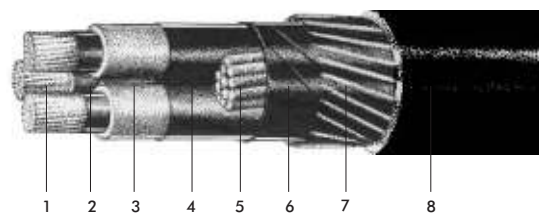
Electrical Data

Number of cores		AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3	x 50 RM / 16	0.494	0.145	0.14
3	x 70 RM / 16	0.342	0.137	0.15
3	x 95 RM / 16	0.247	0.13	0.16
3	x 120 RM / 16	0.196	0.124	0.18
3	x 150 RM / 25	0.159	0.12	0.19
3	x 185 RM / 25	0.1275	0.116	0.20
3	x 240 RM / 25	0.0977	0.11	0.22
3	x 300 RM / 25	0.0787	0.107	0.24

Cu/SC/XLPE/SC/SCYF/SCT/OCWS/PVC

IEC 60502-2

Overall wire screened, three core medium voltage cable with copper conductor and XLPE insulation.



18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 50 RM/16	8.0	3.1	74.4	6168
3x 75 RM/16	8.0	3.2	78.0	7180
3x 95 RM/16	8.0	3.3	82.0	8371
3x 120 RM/16	8.0	3.4	85.4	9482
3x 150 RM/25	8.0	3.5	88.8	10663
3x 185 RM/25	8.0	3.6	92.6	12180
3x 240 RM/25	8.0	3.8	98.3	14537
3x 300 RM/25	8.0	3.9	102.7	16795

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Yarn Filler
6-Semi-conductive Tape 7-Copper Wire Screen 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper tape screen & PE sheath.

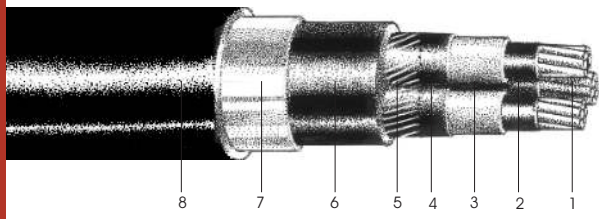
Electrical Data

Number of cores					AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3	x	50	RM	/ 16	0.494	0.142	0.14
3	x	70	RM	/ 16	0.342	0.134	0.15
3	x	95	RM	/ 16	0.247	0.127	0.16
3	x	120	RM	/ 16	0.196	0.121	0.18
3	x	150	RM	/ 25	0.159	0.118	0.19
3	x	185	RM	/ 25	0.1275	0.113	0.20
3	x	240	RM	/ 25	0.0978	0.108	0.22
3	x	300	RM	/ 25	0.0788	0.105	0.24

AC ABHAR
CABLE

18/30(36)kV

MEDIUM VOLTAGE CABLES



IEC 60502-2 *Cu/SC/XLPE/SC/SCT/ICWS/Bd/Lsh/PVC*

Lead sheathed, individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.

18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 50 RM/16	8.0	2.5	3.3	82.8	13043
3x 70 RM/16	8.0	2.6	3.4	87.2	14801
3x 95 RM/16	8.0	2.7	3.5	91.3	16634
3x 120 RM/16	8.0	2.8	3.6	94.5	18296
3x 150 RM/25	8.0	3.0	3.9	100.1	22009
3x 185 RM/25	8.0	3.1	4.1	104.4	24420
3x 240 RM/25	8.0	3.2	4.2	110.3	27868
3x 300 RM/25	8.0	3.4	4.3	117.6	32242

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen
6-Extruded PVC Bedding 7-Lead Sheath 8-PVC Overall Sheath

Maximum conductor temperature: 90°C
Also available with aluminium conductor & PE sheath.

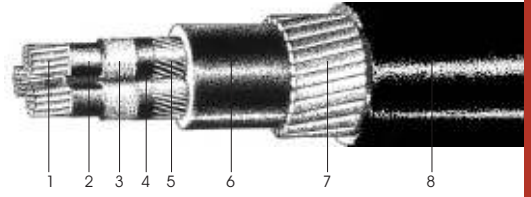
Electrical Data

Number of cores		AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3	x 50 RM / 16	0.494	0.145	0.14
3	x 70 RM / 16	0.342	0.137	0.15
3	x 95 RM / 16	0.247	0.13	0.16
3	x 120 RM / 16	0.196	0.124	0.18
3	x 150 RM / 25	0.159	0.12	0.19
3	x 185 RM / 25	0.1275	0.116	0.20
3	x 240 RM / 25	0.0977	0.11	0.22
3	x 300 RM / 25	0.0787	0.107	0.24



Cu/SC/XLPE/SC/SCT/ICWS/Bd/SWA/PVC IEC 60502-2

Wire armoured, individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.



18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Wire Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 50 RM/16	8.0	3.15	3.4	84.8	11146
3x 70 RM/16	8.0	3.15	3.5	88.6	12425
3x 95 RM/16	8.0	3.15	3.7	93.0	13910
3x 120 RM/16	8.0	3.15	3.8	96.7	15339
3x 150 RM/25	8.0	3.15	3.9	100.0	16730
3n 185 RM/25	8.0	3.15	4.0	104.1	18501
3x 240 RM/25	8.0	3.15	4.2	110.0	21317
3x 300 RM/25	8.0	3.15	4.3	114.7	23910

1-Stranded Circular Conductor 2-Semi- conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5- S.C Tape+Copper Wire Screen

6-Extruded PVC Bedding 7-Galvanized Steel Wire Armour 8-PVC Overall Sheath

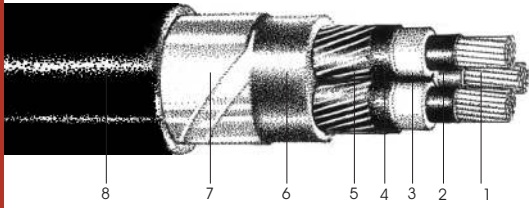
Maximum conductor temperature: 90°C

Also available with aluminium conductor, copper wire/tape common screen, galvanized steel tape armour & PE sheath.

Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 50 RM / 16	0.494	0.145	0.14
3 x 70 RM / 16	0.342	0.137	0.15
3 x 95 RM / 16	0.247	0.13	0.16
3 x 120 RM / 16	0.196	0.124	0.18
3 x 150 RM / 25	0.159	0.12	0.19
3 x 185 RM / 25	0.1275	0.116	0.20
3 x 240 RM / 25	0.0977	0.11	0.22
3 x 300 RM / 25	0.0787	0.107	0.24





IEC 60502-2 Cu/SC/XLPE/SC/SCT/ICWS/Bd/DTA/PVC

Tape armoured, individual wire screened, three core medium voltage power cable with copper conductor and XLPE insulation.

18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Tape Armour Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 50 RM/16	8.0	0.5	3.3	80.8	7788
3x 70 RM/16	8.0	0.5	3.4	84.5	8869
3x 95 RM/16	8.0	0.5	3.5	88.7	10181
3x 120 RM/16	8.0	0.8	3.7	94.2	12272
3x 150 RM/25	8.0	0.8	3.8	97.4	13549
3x 185 RM/25	8.0	0.8	3.9	101.6	15231
3x 240 RM/25	8.0	0.8	4.1	107.5	17806
3x 300 RM/25	8.0	0.8	4.2	112.1	20258

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-S.C Tape + Copper Wire Screen

6-Extruded PVC Bedding 7-Galvanized Steel Tape Armour 8-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, common wire screen & PE sheath.

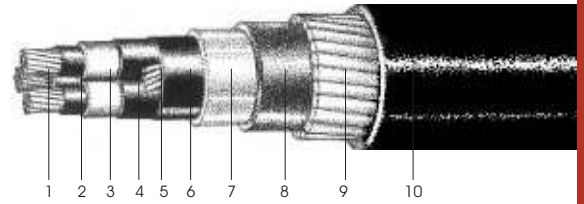
Electrical Data

Number of cores	AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3 x 50 RM / 16	0.494	0.145	0.14
3 x 70 RM / 16	0.342	0.137	0.15
3 x 95 RM / 16	0.247	0.13	0.16
3 x 120 RM / 16	0.196	0.124	0.18
3 x 150 RM / 25	0.159	0.12	0.19
3 x 185 RM / 25	0.1275	0.116	0.20
3 x 240 RM / 25	0.0977	0.11	0.22
3 x 300 RM / 25	0.0787	0.107	0.24



Cu/SC/XLPE/SC/SCYF/SCT/LSH/Bd/SWA/PVC IEC 60502-2

Wire armoured, lead sheathed, three core medium voltage power cable with copper conductor and XLPE insulation.



18/30 (36) kV

Number of Cores & Cross Section mm ²	Insulation Thickness mm	Lead Thickness mm	Wire Armour. Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
3x 50 RM	8.0	2.5	3.15	3.6	91.0	18014
3x 70 RM	8.0	2.6	3.15	3.8	95.8	20110
3x 95 RM	8.0	2.7	3.15	3.9	100.0	22224
3x 120 RM	8.0	2.8	3.15	4.0	103.8	24211
3x 150 RM	8.0	2.9	3.15	4.1	107.6	26334
3x 185 RM	8.0	3.0	3.15	4.5	108.5	29887
3x 240 RM	8.0	3.1	3.15	4.7	114.5	33715
3x 300 RM	8.0	3.3	3.15	4.9	122.1	38595

1-Stranded Circular Conductor 2-Semi-conductive Conductor Screen 3-XLPE Insulation 4-Semi-conductive Insulation Screen 5-Semi-conductive Yarn Filler

6-Semi-conductive Tape 7-Lead Sheath 8-Extruded PVC Bedding 9-Galvanized Steel Wire Armour 10-PVC Overall Sheath

Maximum conductor temperature: 90°C

Also available with aluminium conductor, galvanized steel tape armour & PE sheath.

Electrical Data

Number of cores				AC resistance (Ohm/km)	REACTANCE (Ohm/km)	CAPACITANCE (micro F/km)
3	x	50	RM	0.494	0.142	0.14
3	x	70	RM	0.342	0.134	0.15
3	x	95	RM	0.247	0.127	0.16
3	x	120	RM	0.196	0.121	0.18
3	x	150	RM	0.159	0.118	0.19
3	x	185	RM	0.1275	0.113	0.20
3	x	240	RM	0.0978	0.108	0.22
3	x	300	RM	0.0788	0.105	0.24

TECHNICAL DATA



IEC & AWC Abbreviations

Cu	Copper
Al	Aluminium
AA	Aluminium Alloy
TiCu	Tinned Copper
SiCu	Silver Coated copper
RM	Stranded Circular
SM	Shaped Stranded
SE	Shaped Solid
RE	Solid Circular
RF	Flexible Circular
RMS	Stranded Segmental (Milliken)
CTS	Copper Tape Screen
CWS	Copper Wire Screen
CuB	Copper Wire Braided Screen
ICTS	Individual Copper Tape Screen
ICWS	Individual Copper Wire Screen
ISCR	Individual Screen Formed by Polyester + Tinned Drain Wire + Aluminium Backed Polyester + Polyester
ISCRC	Individual Screen Formed by Polyester + Tinned Drain Wire + Copper Backed Polyester + Polyester
OSCR	Overall Screen Formed by Polyester + Tinned Drain Wire + Aluminium Backed Polyester
OSCRC	Overall Screen Formed by Polyester + Tinned Drain Wire + Copper Backed Polyester
TCB	Tinned Copper Wire Braided Screen
CW	Communication Wire
ATA	Double Aluminium Tape Armour
STA	Double Galv. Steel Tape Armour
AWA	Aluminium Wire Armour
AWAT	Aluminium Wire Armour + Counter Herlix
SWA	Galv. Steel Wire Armour
SWAT	Galv. Steel Wire Armour + Counter Helix
SSWA	Stainless Steel Wire Armour
DAWA	Double Aluminum Wire Armour
DSWA	Double Galv. Steel Wire Armour
TCWA	Tinned Copper Wire Armour
AWB	Aluminium Wire Braided
SWB	Galv. Steel Wire Braided
BWB	Bronze Wire Braided
SSWB	Stainless Steel Wire Braided
LSh	Lead Sheath
AIPE	Aluminium Copolymer Coated

Bd	Bedding
BT	Brass tape
BHT	Bituminized Hessian Tape
BPT	Bitumen Coated Paper Tape
BdT	Bedding Tape (PVC or PE)
BrT	Bronze Tape
MGT	Mica Glass Tape
PPT	Polypropylene Tape
SCT	Semi Conductive Tape
WBT	Water Blocking Tape
Pet	Polyester Tape (Mylar)
SCWBT	Semi-Conductive Water Blocking Tape
PPY	Polypropylene Yarn
WBY	Water Blocking Yarn
SCYF	Semi-conductive Yarn Filler
GC	Graphite Coating
GFB	Glass Fiber Braided
FPE	Foamed Polyethylene (Cellular)
TPU	Thermoplastic Polyurethane
SC	Ext. Polymer Semi Conductive
TPE	Thermoplastic Elastomer
PVC	Polyvinylchloride
XLPE	Cross Linked Polyethylene
SIR	Silicone Rubber
PE	Polyethylene
EVA	Ethylene Vinyl Acetate
XEVA	Cross Linked EVA
HDPE	High Density Polyethylene
HEPR	Hard Grade Ethylene Propylene Rubber
LDPE	Low Density Polyethylene
MDPE	Medium Density Polyethylene
LSFOH	Low Smoke Flame Retardant Zero Halogen
EPR	Ethylene Propylene Rubber
PVCE	High Temperature PVC (90°C)
PVCH	High temperature Sheathing Compound equal to IEC ST2 ,VDE YM5 (90°C)
APVC	Anti Termite PVC
APVCE	Anti Termite High Temperature PVC (90°C)
APVCH	Anti Termite & High Temperature Sheathing Compound equal to IEC ST2 ,VDE YM5 (90°C)
XPVC	Cross Linked PVC
OPVC	Oil, Acid & Hydrocarbon Resistance Sheathing Compound
OPVCH	Oil Resistant & High Temperature Sheathing Compound equal to IEC ST2 ,VDE YM5 (90°C)



VDE Abbreviations

N	DIN VDE standard type
(N)	With reference to DIN VDE standard
A	Aluminium conductor
-	Copper
Y	PVC
2X	Cross-linked PE(VPE)
C	Concentric Cu conductor,in longitudinal twist
CW	Concentric Cu conductor,corrugated
CE	Concentric Cu conductor for individual core
S	Cu shielding
SE	Cu screening per individual core in multi-core cables
H	Conductive layer
(F)	Longitudinally watertight shielding
B	Steel strip reinforcement
F	Flat wire,zinc-plated
G	Counterhelix consisting of zinc-plated steel strip
R	Round-section wire,zinc-plated
A	Protective cover consisting of fiber materials
K	Lead sheath
KL	Aluminium sheath
Y	PVC
2Y	PE
I	With protective conductor
O	Without protective conductor
r...	Round-section conductor
s...	Sector-section conductor
o...	Oval conductor
e...	Single wire conductor
m...	Multi-wire conductor
h...	Hollow conductor
N	Compacted conductor

FORMULAS

1- DC Resistance

$$R_{dc_{\theta}} = R_{dc_{20}} [1 + \alpha (\theta - 20)] \quad (\Omega / km)$$

$R_{dc_{20}}$: Resistance at 20°C according to IEC 60228 (Ω / km)

α : Temperature coefficient of resistance per degree at 20°C
(Copper = 3.93×10^{-3} , Aluminium = 4.04×10^{-3})

θ : Temperature ($^{\circ}C$)

2- AC Resistance

$$R_{AC_{\theta}} = R_{dc_{\theta}} (1 + Y_p + Y_s) (1 + \lambda_1 + \lambda_2) \quad (\Omega / km)$$

Y_p : Proximity effect

Y_s : Skin effect

λ_1 : Sheath loss

λ_2 : Armour loss

3- Inductance

$$L = K + 0.2Ln(2S/d) \quad (mH / km)$$

K : Constant relating to conductor structure

S : Axial cable spacing ($S = 1.26 \times \text{phase spacing}$ for flat and single core cables) (mm)

d : Conductor diameter (mm)

K	Strands
0	1
0.078	3
0.0642	7
0.0554	19
0.0528	37
0.0514	61 & over

4- Capacitance

$$C = \frac{\epsilon_r}{18Ln(D/d)} \quad (\mu F / km)$$

ϵ_r : Dielectric constant (XLPE=2.3)

D : Insulated diameter (mm)

d : Conductor diameter (mm)



FORMULAS

5- Reactance

$$X = \omega L 10^{-3} \quad (\Omega / km)$$

$$\omega = 2\pi f$$

L : Inductance (mH/km)

6- Impedance

$$Z = \sqrt{R_{ac}^2 + X^2} \quad (\Omega / km)$$

R_{ac} : AC resistance (Ω / km)

X : Reactance (Ω / km)

7- Short-circuit current

$$I_{sc} = \frac{\varepsilon K S}{\sqrt{t}} \sqrt{\ln\left(\frac{\beta + \theta_F}{\beta + \theta_I}\right)} \quad (A)$$

ε : Will be calculated acc. to IEC 60949

S : Cross sectional area (mm²)

t : Duration of short-circuit (Max. 5 sec.)

θ_F : Max. temperature at the short circuit condition (°C) (250°C for XLPE)

θ_I : Max. temperature at the normal operating (°C) (90°C for XLPE)

	Copper	Aluminium	Lead	Steel
K	226	148	41	78
β	234.5	228	230	202

FORMULAS

8- Electrical field strength

$$E_{\max} = \frac{U_0}{d \ln(D/d)} \quad (kV/mm) \quad \text{On Conductor}$$

$$E_{\min} = \frac{U_0}{D \ln(D/d)} \quad (kV/mm) \quad \text{On Insulation}$$

U_0 : Voltage (kV)

D : Insulated diameter (mm)

d : Conductor diameter (mm)

9- Charging Current

$$I = C\omega U_0 10^{-3} \quad (A/km)$$

$$\omega = 2\pi f$$

C : Capacitance ($\mu F/km$)

U_0 : Voltage (kV)

10- Dielectric loss

$$P = C\omega U_0^2 \tan \delta \quad (\text{watt}/km)$$

$$\omega = 2\pi f$$

C : Capacitance ($\mu F/km$)

U_0 : Voltage (KV)

$\tan \delta = 0.004$

FORMULAS

11- Sheath Loss

$$P_e = \frac{3I^2\omega^2(dm/2S)^2 10^{-8}}{R_s} \quad (\text{watt/km}) \text{ Eddy current losses}$$

$$P_c = \frac{I^2 X_m^2 R_s}{R_s^2 + X_m^2} \quad (\text{watt/km}) \text{ Circulating current losses}$$

$$X_m = \omega 0.2 L n(2S/d_m) 10^{-3}$$

$$\omega = 2\pi f$$

$$R_s : \text{Sheath resistance} \quad (\Omega/\text{km})$$

$$S : \text{Axial spacing} \quad (\text{mm})$$

$$I : \text{Current} \quad (A)$$

$$d_m : \text{Mean sheath diameter} \quad (\text{mm})$$

12- Insulation Resistance

$$R = \frac{\rho L n(D/d) 10^{-9}}{2\pi} \quad (M\Omega \cdot \text{km})$$

$$\rho : \text{Volume resistivity at } 20^\circ\text{C (XLPE}=10^{14}) \quad (\Omega \cdot \text{m})$$

$$D : \text{Insulated diameter (mm)}$$

$$d : \text{Conductor diameter (mm)}$$

13- Maximum Pulling Tension

Unarmoured :

$$T = K S \quad (\text{N}) \quad \begin{array}{l} K = 50 \text{ for copper} \\ K = 30 \text{ for aluminium} \end{array}$$

Armoured :

$$T = K'D^2 \quad (\text{N}) \quad \begin{array}{l} K' = 9 \text{ for wire armour} \\ K' = 3 \text{ for tape armour, lead sheath} \end{array}$$

$$S : \text{Conductor cross section} \quad (\text{mm}^2)$$

$$D : \text{Cable diameter} \quad (\text{mm})$$



Conductors DC Resistance:

1	2	3	4	5	6	7	8	9	10
Nominal cross-sectional area mm ²	Minimum number of wires in the conductor						Maximum resistance of conductor at 20°C		
	Circular		Circular compacted		Shaped		Annealed copper conductor		Aluminium or aluminium alloy conductor ^c ohm/km
	Cu	Al	Cu	Al	Cu	Al	Plain wires ohm/km	Metal-coated wires ohm/km	
0.5	7	-	-	-	-	-	36.5	36.7	-
0.75	7	-	-	-	-	-	24.5	24.8	-
1	7	-	-	-	-	-	18.1	18.2	-
1.5	7	-	6	-	-	-	12.1	12.2	-
2.5	7	-	6	-	-	-	7.41	7.56	-
4	7	-	6	-	-	-	4.61	4.70	-
6	7	-	6	-	-	-	3.08	3.11	-
10	7	7	6	6	-	-	1.83	1.84	3.08
16	7	7	6	6	-	-	1.15	1.16	1.91
25	7	7	6	6	6	6	0.727	0.734	1.20
35	7	7	6	6	6	6	0.524	0.529	0.868
50	19	19	6	6	6	6	0.387	0.391	0.641
70	19	19	12	12	12	12	0.268	0.27	0.443
95	19	19	15	15	15	15	0.193	0.195	0.32
120	37	37	18	15	18	15	0.153	0.154	0.253
150	37	37	18	15	18	15	0.124	0.126	0.206
185	37	37	30	30	30	30	0.0991	0.1	0.164
240	37	37	34	30	34	30	0.0754	0.0762	0.125
300	61	61	34	30	34	30	0.0601	0.0607	0.100
400	61	61	53	53	53	53	0.047	0.0475	0.0778
500	61	61	53	53	53	53	0.0366	0.0369	0.0605
630	91	91	53	53	53	53	0.0283	0.0286	0.0469
800	91	91	53	53	-	-	0.0221	0.0224	0.0367
1 000	91	91	53	53	-	-	0.0176	0.0177	0.0291
1 200	b						0.0151	0.0151	0.0247
1 400 ^a	b						0.0129	0.0129	0.0212
1 600	b						0.0113	0.0113	0.0186
1 800 ^a	b						0.0101	0.0101	0.0165
2 000	b						0.0090	0.0090	0.0149
2 500	b						0.0072	0.0072	0.0127

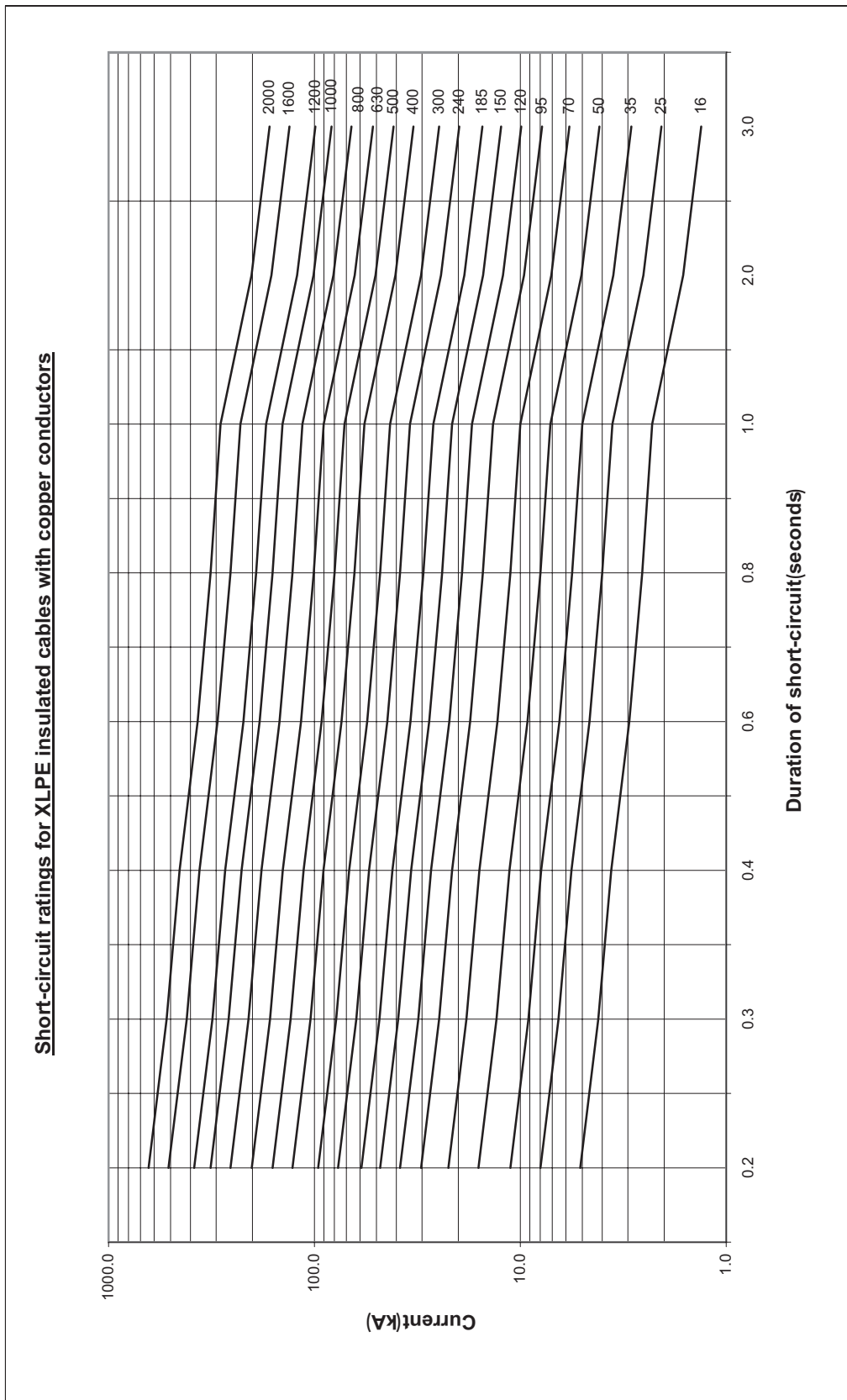
^a These sizes are non-preferred. Other non-preferred sizes are recognized for some specialized applications but are not within the scope of this standard .

^b The minimum number of wires for these sizes is not specified. These sizes may be constructed from 4.5 or 6 equal segments (Milliken).

^c For stranded aluminium alloy conductors having the same nominal cross-sectional area as an aluminium conductor the resistance value should be agreed between the manufacture and the purchaser.



Short-circuit ratings for XLPE insulated cables with copper conductors



Short-circuit ratings for XLPE insulated cables with aluminium conductors

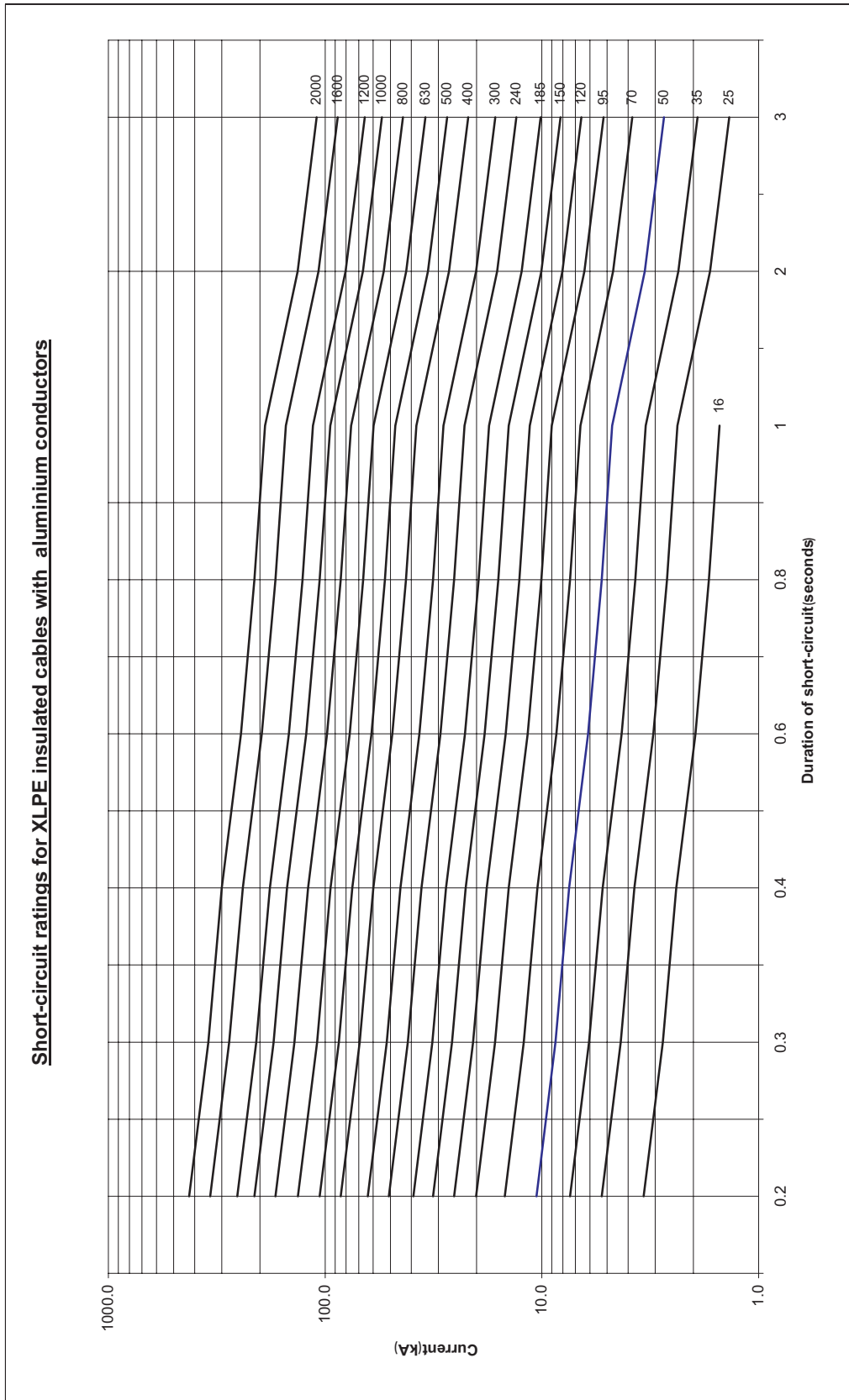


Table 1 - Nominal screen cross-sectional area

Nominal area of conductor , mm ²	16	25	35	50	70	95	120	150	185	240	300	400
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Nominal cross-sectional area of screen , per core, mm²

XLPE insulated cable	16	16	16	16	16	16	16	25	25	25	25	35
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Table 2 - Current ratings for single core cables with XLPE insulation
 Rated voltage 3,6/6 kV to 18/30 kV *
 Copper conductor







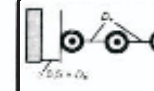
Nominal area of conductor	Buried direct in the ground		In single - way ducts		In air		
	Trefoil	Flat spaced	Trefoil ducts	Flat Touching ducts	Trefoil	Flat touching	Flat spaced
							
mm ²	A	A	A	A	A	A	A
16	109	113	103	104	125	128	150
25	140	144	132	133	163	167	196
35	166	172	157	159	198	203	238
50	196	203	186	188	238	243	286
70	239	246	227	229	296	303	356
95	285	293	271	274	361	369	434
120	323	332	308	311	417	426	500
150	361	366	343	347	473	481	559
185	406	410	387	391	543	550	637
240	469	470	447	453	641	647	745
300	526	524	504	510	735	739	846
400	590	572	564	571	845	837	938
Maximum conductor temperature				90 °C			
Ambient air temperature				30 °C			
Ground temperature				20 °C			
Depth of laying				0.8 m			
Thermal resistivity of solid				1,5 K.m/W			
Thermal resistivity of earthenware ducts				1,2 K.m/W			
Screens bonded at both ends.							
* Current rating calculated for cables having a rated voltage of 6/10 Kv							

Table 3 - Current ratings for single core cables with XLPE insulation
 Rated voltage 3,6/6 kV to 18/30 kV *
 Aluminium conductor

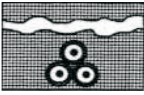
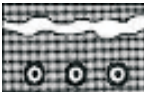

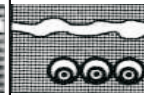
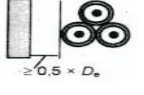


Nominal area of conductor	Buried direct in the ground		In single - way ducts		In air		
	Trefoil	Flat spaced	Trefoil ducts	Flat Touching ducts	Trefoil	Flat touching	Flat spaced
							
mm ²	A	A	A	A	A	A	
16	84	88	80	81	97	99	116
25	108	112	102	103	127	130	153
35	129	134	122	123	154	157	185
50	152	157	144	146	184	189	222
70	186	192	176	178	230	236	278
95	221	229	210	213	280	287	338
120	252	260	240	242	324	332	391
150	281	288	267	271	368	376	440
185	317	324	303	307	424	432	504
240	367	373	351	356	502	511	593
300	414	419	397	402	577	586	677
400	470	466	451	457	673	676	769
Maximum conductor temperature				90 °C			
Ambient air temperature				30 °C			
Ground temperature				20 °C			
Depth of laying				0.8 m			
Thermal resistivity of solid				1,5 K.m/W			
Thermal resistivity of earthenware ducts				1,2 K.m/W			
Screens bonded at both ends.							
* Current rating calculated for cables having a rated voltage of 6/10 kV							

Table 4 - Current ratings for single core cables with EPR insulation
 Rated voltage 3,6/6 kV to 18/30 kV *
 Copper conductor




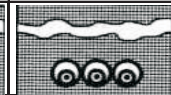


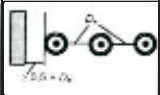
Nominal area of conductor	Buried direct in the ground		In single - way ducts		In air		
	Trefoil	Flat spaced	Trefoil ducts	Flat Touching ducts	Trefoil	Flat touching	Flat spaced
							
mm ²	A	A	A	A	A	A	
16	106	109	99	100	116	119	138
25	136	140	128	129	153	156	181
35	162	167	153	154	186	190	221
50	192	198	181	183	224	229	266
70	234	242	222	224	280	287	334
95	280	289	266	269	343	352	409
120	319	329	303	306	398	407	474
150	357	369	341	344	454	465	540
185	403	417	386	390	522	534	621
240	467	484	449	454	619	634	736
300	526	545	509	515	712	728	843
400	597	618	580	588	825	843	977
Maximum conductor temperature				90 °C			
Ambient air temperature				30 °C			
Ground temperature				20 °C			
Depth of laying				0.8 m			
Thermal resistivity of solid				1,5 K.m/W			
Thermal resistivity of earthenware ducts				1,2 K.m/W			
Screens bonded at both ends.							
* Current rating calculated for cables having a rated voltage of 6/10 kV							

Table 5 - Current ratings for single core cables with EPR insulation
 Rated voltage 3,6/6 kV to 18/30 kV *
 Aluminium conductor

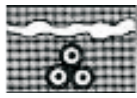
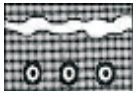


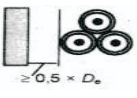

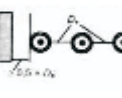
Nominal area of conductor	Buried direct in the ground		In single - way ducts		In air		
	Trefoil	Flat spaced	Trefoil ducts	Flat Touching ducts	Trefoil	Flat touching	Flat spaced
							
mm ²	A	A	A	A	A	A	A
16	82	84	77	78	90	92	107
25	105	109	99	100	119	121	141
35	126	130	118	120	144	147	171
50	149	153	140	142	174	178	207
70	182	188	172	174	218	223	259
95	217	224	206	208	266	273	317
120	247	256	235	238	309	317	368
150	277	287	264	267	352	361	419
185	314	325	300	303	406	417	484
240	364	377	350	354	483	495	575
300	411	426	397	401	556	570	659
400	471	487	456	462	651	667	770
Maximum conductor temperature				90 °C			
Ambient air temperature				30 °C			
Ground temperature				20 °C			
Depth of laying				0.8 m			
Thermal resistivity of solid				1,5 K.m/W			
Thermal resistivity of earthenware ducts				1,2 K.m/W			
Screens bonded at both ends.							
* Current rating calculated for cables having a rated voltage of 6/10 kV							

Table 6 - Current ratings for three-core XLPE insulated cables
 Rated voltage 3,6/6 kV to 18/30 kV *
 Copper conductor ,armoured and unarmoured

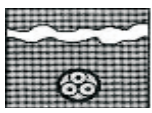


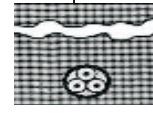

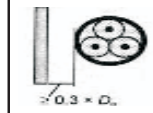
Nominal area of conductor	Unarmoured					
	Buried direct in ground	In a buried duct	In air	Buried direct in ground	In a buried duct	In air
						
mm ²	A	A	A	A	A	A
16	101	87	109	101	88	110
25	129	112	142	129	112	143
35	153	133	170	154	134	172
50	181	158	204	181	158	205
70	221	193	253	220	194	253
95	262	231	304	263	232	307
120	298	264	351	298	264	352
150	334	297	398	332	296	397
185	377	336	455	374	335	453
240	434	390	531	431	387	529
300	489	441	606	482	435	599
400	553	501	696	541	492	683
Maximum conductor temperature				90 °C		
Ambient air temperature				30 °C		
Ground temperature				20 °C		
Depth of laying				0.8 m		
Thermal resistivity of solid				1,5 K.m/W		
Thermal resistivity of earthenware ducts				1,2 K.m/W		
Screens bonded at both ends.						
* Current rating calculated for cables having a rated voltage of 6/10 kV						

Table 7 - Current ratings for three-core XLPE insulated cables
 Rated voltage 3,6/6 kV to 18/30 kV *
 Aluminium conductor,armoured and unarmoured







Nominal area of conductor	Unarmoured					
	Buried direct in ground	In a buried duct	In air	Buried direct in ground	In a buried duct	In air
						
mm ²	A	A	A	A	A	A
25	100	87	110	100	87	111
35	119	103	132	119	104	133
50	140	122	158	140	123	159
70	171	150	196	171	150	196
95	203	179	236	204	180	238
120	232	205	273	232	206	274
150	260	231	309	259	231	309
185	294	262	355	293	262	354
240	340	305	415	338	304	415
300	384	346	475	380	343	472
400	438	398	552	432	393	545
Maximum conductor temperature			90 °C			
Ambient air temperature			30 °C			
Ground temperature			20 °C			
Depth of laying			0.8 m			
Thermal resistivity of solid			1,5 K.m/W			
Thermal resistivity of earthenware ducts			1,2 K.m/W			
Screens bonded at both ends.						
* Current rating calculated for cables having a rated voltage of 6/10 kV						

Table 8 - Correction factors for ambient air temperatures other than 30°C

Maximum conductor temperature °C	Ambient air temperature °C							
	20	25	35	40	45	50	55	60
90	1,08	1,04	0,96	0,91	0,87	0,82	0,76	0,71

Table 9 - Correction factors for ambient ground temperatures other than 20°C

Maximum conductor temperature °C	Ambient ground temperature °C							
	10	15	25	30	35	40	45	50
90	1,07	1,04	0,96	0,93	0,89	0,85	0,80	0,76

Table 10 - Correction factors of depths of laying other than 0,8 m for direct buried cables

Depth of laying m	Single-core cables Nominal conductor size mm ²		Three-core cables
	≤ 185 mm ²	> 185 mm ²	
0,5	1,04	1,06	1,04
0,6	1,02	1,04	1,03
1	0,98	0,97	0,98
1,25	0,96	0,95	0,96
1,5	0,95	0,93	0,95
1,75	0,94	0,91	0,94
2	0,93	0,90	0,93
2,5	0,91	0,88	0,91
3	0,90	0,86	0,90

Table11-Correction factors for depths of laying
other than 0,8 m for cables in ducts

Depth of laying m	Single - core cables Nominal conductor size mm ²		Three - core cable
	≤ 185 mm ²	>185 mm ²	
0,5	1,04	1,05	1,03
0,6	1,02	1,03	1,02
1	0,98	0,97	0,99
1,25	0,96	0,95	0,97
1,5	0,95	0,93	0,96
1,75	0,94	0,92	0,95
2	0,93	0,91	0,94
2,5	0,91	0,89	0,93
3	0,90	0,88	0,92

Table12 - Correction factors for soil thermal resistivities
other than 1,5 K.m/W for direct buried single core cables

Nominal area of conductor mm ²	Values of solid thermal resistivity K.m/W						
	0,7	0,8	0,9	1	2	2,5	3
16	1,29	1,24	1,19	1,15	0,89	0,82	0,75
25	1,30	1,25	1,20	1,16	0,89	0,81	0,75
35	1,30	1,25	1,21	1,16	0,89	0,81	0,75
50	1,32	1,26	1,21	1,16	0,89	0,81	0,74
70	1,33	1,27	1,22	1,17	0,89	0,81	0,74
95	1,34	1,28	1,22	1,18	0,89	0,80	0,74
120	1,34	1,28	1,22	1,18	0,88	0,80	0,74
150	1,35	1,28	1,23	1,18	0,88	0,80	0,74
185	1,35	1,29	1,23	1,18	0,88	0,80	0,74
240	1,36	1,29	1,23	1,18	0,88	0,80	0,73
300	1,36	1,30	1,24	1,19	0,88	0,80	0,73
400	1,37	1,30	1,24	1,19	0,88	0,79	0,73

Table 13 - correction factors for soil thermal resistivities other than 1,5 K.m/W single core cables in buried ducts

Nominal area of conductor mm ²	Values of solid thermal resistivity K.m/W						
	0,7	0,8	0,9	1	2	2,5	3
	16	1,20	1,17	1,14	1,11	0,92	0,85
25	1,21	1,17	1,14	1,12	0,91	0,85	0,79
35	1,21	1,18	1,15	1,12	0,91	0,84	0,79
50	1,21	1,18	1,15	1,12	0,91	0,84	0,78
70	1,22	1,19	1,15	1,12	0,91	0,84	0,78
95	1,23	1,19	1,16	1,13	0,91	0,84	0,78
120	1,23	1,20	1,16	1,13	0,91	0,84	0,78
150	1,24	1,20	1,16	1,13	0,91	0,83	0,78
185	1,24	1,20	1,17	1,13	0,91	0,83	0,78
240	1,25	1,21	1,17	1,14	0,90	0,83	0,77
300	1,25	1,21	1,17	1,14	0,90	0,83	0,77
400	1,25	1,21	1,17	1,14	0,90	0,83	0,77

Table 14 - correction factors for soil thermal resistivities other than 1,5 K.m/W for direct buried three-core cables

Nominal area of conductor mm ²	Values of solid thermal resistivity K.m/W						
	0,7	0,8	0,9	1	2	2,5	3
	16	1,23	1,19	1,16	1,13	0,91	0,84
25	1,24	1,20	1,16	1,13	0,91	0,84	0,78
35	1,25	1,21	1,17	1,13	0,91	0,83	0,78
50	1,25	1,21	1,17	1,14	0,91	0,83	0,77
70	1,26	1,21	1,18	1,14	0,90	0,83	0,77
95	1,26	1,22	1,18	1,14	0,90	0,83	0,77
120	1,26	1,22	1,18	1,14	0,90	0,83	0,77
150	1,27	1,22	1,18	1,15	0,90	0,83	0,77
185	1,27	1,23	1,18	1,15	0,90	0,83	0,77
240	1,28	1,23	1,19	1,15	0,90	0,83	0,77
300	1,28	1,23	1,19	1,15	0,90	0,82	0,77
400	1,28	1,23	1,19	1,15	0,90	0,82	0,76



Table 15 - correction factors for soil thermal resistivities
other than 1,5 K.m/W single core cables in buried ducts

Nominal area of conductor mm ²	Values of solid thermal resistivity K.m/W						
	0,7	0,8	0,9	1	2	2,5	3
	16	1.12	1.11	1.09	1.08	0.94	0.89
25	1.14	1.12	1.10	1.08	0.94	0.89	0.84
35	1.14	1.12	1.10	1.08	0.94	0.88	0.84
50	1.14	1.12	1.10	1.08	0.94	0.88	0.84
70	1.15	1.13	1.11	1.09	0.94	0.88	0.83
95	1.15	1.13	1.11	1.09	0.94	0.88	0.83
120	1.15	1.13	1.11	1.09	0.93	0.88	0.83
150	1.16	1.13	1.11	1.09	0.93	0.88	0.83
185	1.16	1.14	1.11	1.09	0.93	0.87	0.83
240	1.16	1.14	1.12	1.10	0.93	0.87	0.82
300	1.17	1.14	1.12	1.10	0.93	0.87	0.82
400	1.17	1.14	1.12	1.10	0.92	0.86	0.81

Table 16- correction factors for groups of three core cables
in horizontal formation laid direct in the ground

Number of cables in group	Spacing between cable centres mm				
	Touching	200	400	600	800
	2	0.80	0.86	0.90	0.92
3	0.69	0.77	0.82	0.86	0.89
4	0.62	0.72	0.79	0.83	0.87
5	0.57	0.68	0.76	0.81	0.85
6	0.54	0.65	0.74	0.80	0.84
7	0.51	0.63	0.72	0.78	0.83
8	0.49	0.61	0.71	0.78	
9	0.47	0.60	0.70	0.77	
10	0.46	0.59	0.69		
11	0.45	0.57	0.69		
12	0.43	0.56	0.68		

Table17 - correction factors for groups of three phase circuits
of single core cables laid direct in the ground

Number of cables in group	Spacing between duct centres mm				
	Touching	200	400	600	800
2	0,73	0,83	0,88	0,90	0,92
3	0,60	0,73	0,79	0,83	0,86
4	0,54	0,68	0,75	0,80	0,84
5	0,49	0,63	0,72	0,78	0,82
6	0,46	0,61	0,70	0,76	0,81
7	0,43	0,58	0,68	0,75	0,80
8	0,41	0,57	0,67	0,74	—
9	0,39	0,55	0,66	0,73	—
10	0,37	0,54	0,65	—	—
11	0,36	0,53	0,64	—	—
12	0,35	0,52	0,64	—	—

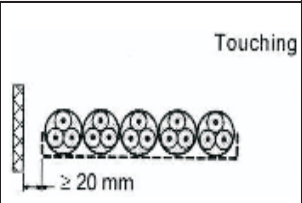
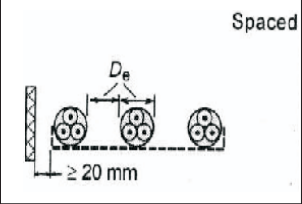
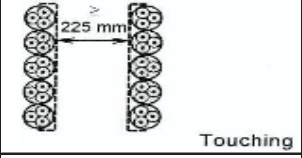
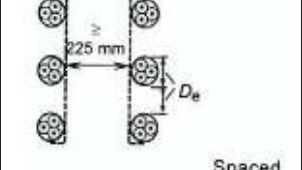
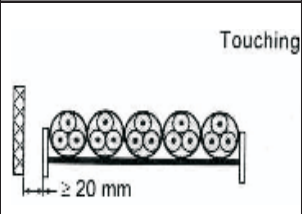
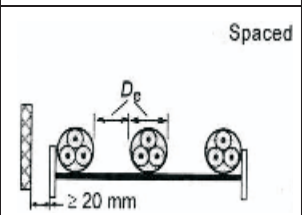
Table 18 - Correction factors for groups of three core cables
in single way ducts in horizontal formation

Number of cables in group	Spacing between cable centres mm				
	Touching	200	400	600	800
2	0,85	0,88	0,92	0,94	0,95
3	0,75	0,80	0,85	0,88	0,91
4	0,69	0,75	0,82	0,86	0,89
5	0,65	0,72	0,79	0,84	0,87
6	0,62	0,69	0,77	0,83	0,87
7	0,59	0,67	0,76	0,82	0,86
8	0,57	0,65	0,75	0,81	—
9	0,55	0,64	0,74	0,80	—
10	0,54	0,63	0,73	—	—
11	0,52	0,62	0,73	—	—
12	0,51	0,61	0,72	—	—

Table19 - Correction factors for groups of three phase circuits
of single core cables in single way ducts

Number of cables in group	Spacing between duct group centres mm				
	Touching	200	400	600	800
2	0,78	0,85	0,89	0,91	0,93
3	0,66	0,75	0,81	0,85	0,88
4	0,59	0,70	0,77	0,82	0,86
5	0,55	,066	0,74	0,80	0,84
6	0,51	0,64	0,72	0,78	0,83
7	0,48	0,61	0,71	0,77	0,82
8	0,46	0,60	0,70	0,76	—
9	0,44	0,58	0,69	0,76	—
10	0,43	0,57	0,68	—	—
11	0,42	0,56	0,67	—	—
12	0,40	0,55	0,67	—	—

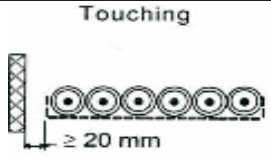
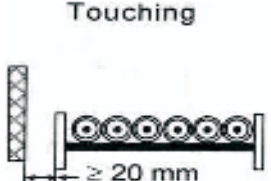
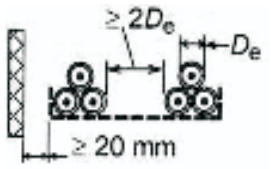
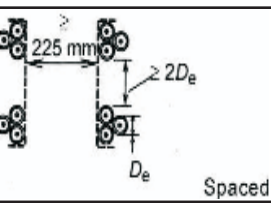
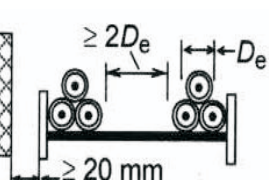
Table 20 - Reduction factors for groups of more than one multi core cable in air
To be applied to the current carrying capacity for one multi core cable in free air

Method of installation		Number of trays	Number of cables					
			1	2	3	4	6	9
Cables on Perforated trays	 <p style="text-align: center;">Touching</p>	1	1,00	0,88	0,82	0,79	0,76	0,73
		2	1,00	0,87	0,80	0,77	0,73	0,68
		3	1,00	0,86	0,79	0,76	0,71	0,66
	 <p style="text-align: center;">Spaced</p>	1	1,00	1,00	0,98	0,95	0,91	—
		2	1,00	0,99	0,96	0,92	0,87	—
		3	1,00	0,98	0,95	0,91	0,85	—
Cables on vertical perforated trays	 <p style="text-align: center;">Touching</p>	1	1,00	0,88	0,82	0,78	0,73	0,72
		2	1,00	0,88	0,81	0,76	0,71	0,70
	 <p style="text-align: center;">Spaced</p>	1	1,00	0,91	0,89	0,88	0,87	—
		2	1,00	0,91	0,88	0,87	0,85	—
Cables on ladder supports cleats etc.	 <p style="text-align: center;">Touching</p>	1	1,00	0,87	0,82	0,80	0,79	0,78
		2	1,00	0,86	0,80	0,78	0,76	0,73
		3	1,00	0,85	0,79	0,76	0,73	0,70
	 <p style="text-align: center;">Spaced</p>	1	1,00	1,00	1,00	1,00	1,00	—
		2	1,00	0,99	0,98	0,97	0,96	—
		3	1,00	0,98	0,97	0,96	0,93	—

NOTE 1 Values given are averages for the cable types and range of conductor sizes considered. The spread of values is generally less than 5 %

NOTE 2 Factors apply to single layer groups of cables as shown above and do not apply when cables are installed in more than one layer touching each other. Values for such installations may be significantly lower and must be determined by an appropriate method.

Table 21 - Reduction factors for groups of more than one circuit of single core cables (Note 2)
To be applied to the current -carrying capacity for one circuit of single core cables in free air

Method of installation		Number of trays	Number of three-phase circuits (Note 5)			Use as a multiplier to rating for
			1	2	3	
Perforated trays (Note 3)		1	0,98	0,91	0,87	Three cables in horizontal formation
		2	0,96	0,87	0,81	
		3	0,95	0,85	0,78	
Ladder Supports, cleats etc. (Note 3)		1	1,00	0,97	0,96	Three cables in horizontal formation
		2	0,98	0,93	0,89	
		3	0,97	0,90	0,86	
Perforated trays (Note 3)		1	1,00	0,98	0,96	Three cables in trefoil formation
		2	0,97	0,93	0,89	
		3	0,96	0,92	0,86	
Vertical perforated trays (Note 4)		1	1,00	0,91	0,89	
		2	1,00	0,90	0,86	
Ladder Supports, cleats etc. (Note 3)		1	1,00	1,00	1,00	
		2	0,97	0,95	0,93	
		3	0,96	0,94	0,90	

NOTE 1 Values given are average for the cable types and range of conductor sizes considered. The spread of values is generally less than 5 %

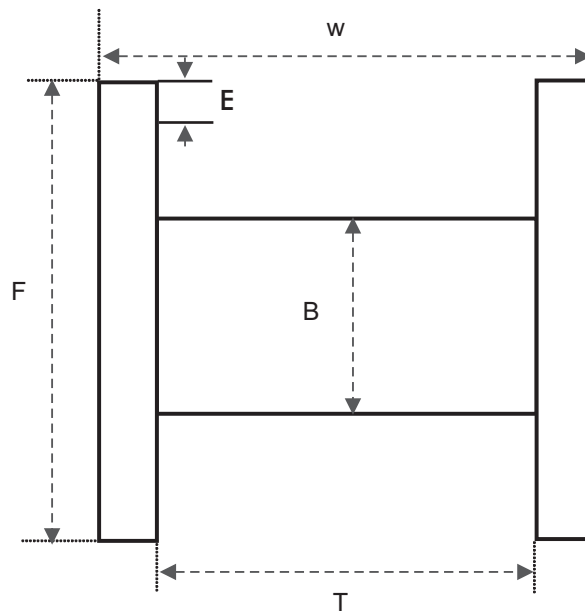
NOTE 2 Factors are given for single layers of cables (or trefoil groups) as shown in the table and do not apply when cables are installed in more than one layer touching each other .Values for such installations may be significantly lower and should be determined by an appropriate method.

NOTE 3 Values are given for vertical spacings between trays of 300 mm .For closer spacing .The factors should be reduced.

Max Cable length in meters on standard drums														
Drum Sizes														
Cable Dia.mm	6	8	10	12	14	16	18	20	22	24	26	30	Cable Dia.mm	
6	1326	3961											6	
7	975	2910											7	
8	746	2228	4391										8	
9	590	1760	3470										9	
10	478	1426	2810	4566									10	
11	395	1178	2323	3774									11	
12	332	990	1952	3171	4912								12	
13	283	844	1663	2702	4185								13	
14		727	1434	2330	3609	4934							14	
15		634	1249	2029	3144	4298							15	
16		557	1098	1784	2763	3777							16	
17		493	972	1580	2448	3346	4858						17	
18		440	867	1409	2183	2985	4333	4643					18	
19		395	778	1265	1959	2679	3889	4167	4722				19	
20		356	703	1142	1768	2417	3510	3760	4262				20	
21		323	637	1035	1604	2193	3183	3411	3866				21	
22		295	581	943	1461	1998	2901	3108	3522	4815			22	
23		270	531	863	1337	1828	2654	2843	3223	4406			23	
24			488	793	1228	1679	2437	2611	2960	4046			24	
25			450	731	1132	1547	2246	2407	2728	3729			25	
26			416	675	1046	1430	2077	2225	2522	3448			26	
27			386	626	970	1326	1926	2063	2338	3197			27	
28			358	582	902	1233	1791	1919	2174	2973			28	
29			334	543	841	1150	1669	1789	2027	2771	4826		29	
30			312	507	786	1074	1560	1671	1894	2590	4510		30	
31			292	475	736	1006	1461	1565	1774	2425	4224		31	
32			274	446	691	944	1371	1469	1665	2276	3964		32	
33			258	419	650	888	1289	1381	1565	2140	3727	4999	33	
34				395	612	836	1214	1301	1475	2016	3511	4709	34	
35				373	577	789	1146	1228	1392	1903	3313	4444	35	
36				352	546	746	1083	1161	1315	1798	3132	4200	36	
37				334	517	706	1026	1099	1245	1702	2965	3976	37	
38				316	490	670	972	1042	1181	1614	2811	3770	38	
39				300	465	636	923	989	1121	1532	2669	3579	39	
40				285	442	604	877	940	1065	1457	2537	3402	40	
41				272	421	575	835	895	1014	1386	2415	3238	41	
42				259	401	548	796	853	966	1321	2301	3086	42	
43					383	523	759	814	922	1260	2195	2944	43	
44					365	499	725	777	881	1204	2097	2812	44	
45					349	478	693	743	842	1151	2004	2688	45	
46					334	457	663	711	806	1101	1918	2573	46	
47					320	438	636	681	772	1055	1837	2464	47	
48					307	420	609	653	740	1012	1762	2363	48	
49					295	403	585	626	710	971	1691	2267	49	
50					283	387	562	602	682	932	1624	2178	50	
51					272	372	540	578	655	896	1561	2093	51	
52					262	358	519	556	630	862	1501	2013	52	
53					252	344	500	535	607	830	1445	1938	53	
54						332	481	516	585	799	1392	1867	54	
55						320	464	497	564	770	1342	1800	55	
56						308	448	480	544	743	1294	1736	56	
57						298	432	463	525	717	1249	1676	57	
58						287	417	447	507	693	1207	1618	58	
59						278	403	432	490	670	1166	1564	59	
60						269	390	418	474	647	1127	1512	60	
61						260	377	404	458	626	1091	1463	61	
62							252	365	391	443	606	1056	1416	62
63								354	379	430	587	1023	1372	63
64								343	367	416	569	991	1329	64
65								332	356	403	552	961	1288	65
66								322	345	391	535	932	1250	66
67								313	335	380	519	904	1213	67
68								304	325	369	504	878	1177	68
69								295	316	358	490	853	1143	69
70								287	307	348	476	828	1111	70
71								278	298	338	462	805	1080	71
72								271	290	329	450	783	1050	72
73								263	282	320	437	762	1022	73
74								256	275	311	426	741	994	74
75								250	267	303	414	722	968	75
76									260	295	403	703	942	76
77									254	288	393	685	918	77
78										280	383	667	895	78
79										273	373	650	872	79
80										266	364	634	851	80
81										260	355	619	830	81
82										254	347	604	810	82
83											338	589	790	83
84											330	575	772	84
85											323	562	753	85
86											315	549	736	86
87											308	536	719	87
88											301	524	703	88
89											294	512	687	89
90											288	501	672	90
91											281	490	657	91
92											275	480	643	92
93											269	469	629	93
94											264	459	616	94
95											258	450	603	95
96											253	440	591	96
97												431	579	97
98												423	567	98
99												414	555	99
100												406	544	100



Drum size	Flange Dia. F	Barrel Dia. B	Traverse T	Width overall W	Drum weight Kg
6	600	300	400	430	20
8	800	350	520	600	30
10	1000	450	620	700	50
12	1200	600	720	820	70
14	1400	700	790	920	125
16	1600	900	900	1028	175
18	1800	1100	1120	1248	290
20	2000	1200	1120	1248	330
22	2200	1400	1120	1248	450
24	2400	1600	1370	1570	595
26	2600	1600	1700	1900	645
30	3000	2000	1900	2100	770



$$L_T = \frac{\pi NP (B + PD)}{1000}$$

$$P = \frac{F - B - 2E}{2D}$$

$$N = 0.95 \frac{T}{D}$$

L_T = Length of Cable (m)

F = Flange Dia. (mm)

B = Barrel Dia. (mm)

D = Cable Dia. (mm)

T = Traverse (mm)

E = Empty Space (mm)

