



Dynamic Cables Limited



Govt. Recognized STAR Export House
ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 Certified



MD's Message

We believe that foresightedness and commitment are the stepping stones of the success. Relentless efforts, preparedness and strategic execution of innovations have not only been mere tools of our success, but an inspiration to set higher goals always.

As a result of our company's commitment and conviction in last three decades, today our company has strong technical and financial fundamentals acting as the growth drivers coupled with the confidence of our Banks, Investors, Suppliers and our Customers in company's vision. Today our company is firmly positioned with right product mix offering for Pan India as well as Export Markets.

We believe in creating value proposition for all our customers by virtue of product robustness, endurance, trust, integrity and expertise in manufacturing. Our biggest asset has always been our highly motivated team of trained human resources driven my moral compass and backed by a very able team of administrators.

Looking Forward, I'm confident that with our versatile, adaptable and technology led efforts, we will keep meeting the exacting standards of our clients and achieve the goal of 300 % growth in both Top line and Bottom line in coming years.

Thanks.
Ashish Mangal
MD



PLANT 1
JAIPUR



PLANT 2
JAIPUR



PLANT 3
REENGUS



Dynamic Cables - Brief

- A Mangal Group Enterprise -



Dynamic Cables Ltd., Jaipur, Rajasthan India is a trusted and reliable name in the area of design, manufacturing, testing, supplying and exporting different types and sizes of cables and conductors for primary and high voltage. The company meets to the requirements of transmission lines, substations & distribution networks in India & Overseas.

With permanent client base and expanding markets in India and overseas over 30 years, the Company has today three state of the art manufacturing units with ultra-modern plant, machinery, in-house testing facilities, power back up, logistic facilities, raw material storage etc. to meet any manufacturing and delivery requirements of our clients. Company has skilled and experienced manpower in different disciplines supported with five marketing offices in Delhi, Mumbai, Baroda, Hyderabad and Kolkata and a Marketing and Export Department at headquarters to serve Indian and overseas clients. In some overseas countries we have local agents for immediate support, liaisoning and after sales service etc.

Company certifications include **ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 & CE Compliance.**

Company design, manufacture & supply of MV & LV XLPE Power Cables (up to 66kV): Size Up to 1000 sq. mm, MV & LV Aerial Bundled Cables (up to 36kV): Size Up to 400 sq. mm, LV PVC Power: Single Core Size Up to 1000 sq. mm & Multi Core Size Up to 400 sq. mm, LV PVC/XLPE Control Cables : Up to 61

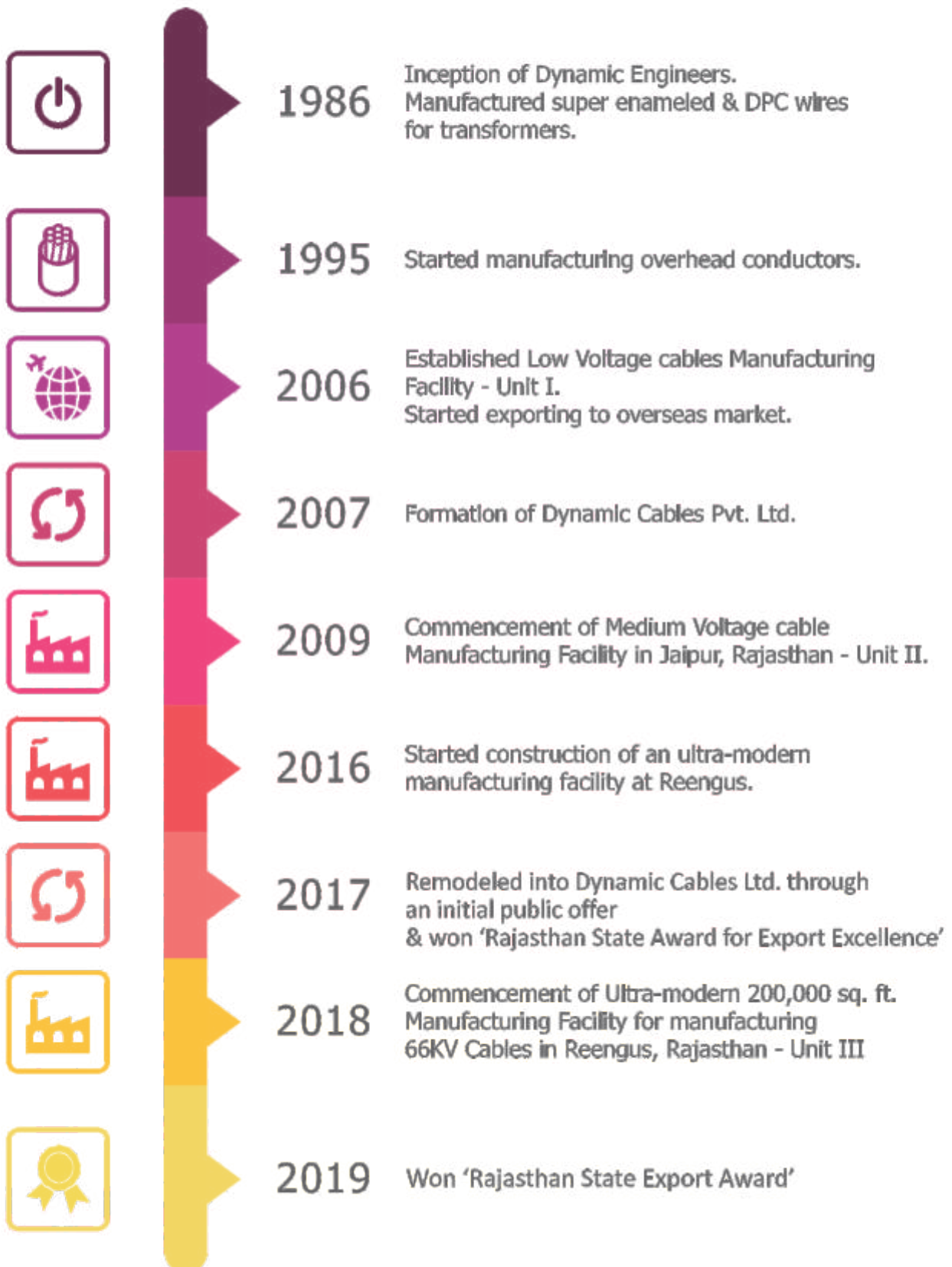
Cores, Concentric Cables, Communication Cables, AIRDAC Cables, Bare/ Insulated Copper Conductors, FRLS/ FR/ LSZH Cable, Solar Cables, ACSR/AAA / AA Conductors (up to 91 strands) Bare/ Insulated: Up to 1000 sq. mm, Railway Signaling, Power & Quad cables, Covered Conductor and Earth wires & stay wires.

Apart from serving clients all over India, Company has permanent and ever growing overseas client base in countries such as Afghanistan, Syria, Jordan, Senegal, Gambia, Guinea, Liberia, Ghana, Nigeria, Togo, Benin, Ethiopia, Kenya, Uganda, Congo, Tanzania, Rwanda, Mozambique, Mauritius, Burkina Faso, Gabon, Malawi, Iraq, Mauritania, Libya, Yemen, Zambia, Laos, Nepal & Bhutan

Company's Bankers are Bank of Baroda, VKI Area, Jaipur. Company has sufficient credit limits to meet guarantee, warranty, and working capital requirements in execution of high value orders.

Our Company VISION is 'To become a preferred global brand for cables and conductors while leading the way for socially conscious businesses where customers are the pivot.', our mission statement expresses our desire 'To build and unite a team of individuals that are motivated and stimulate innovation resulting in technological upgradation and improved products while complying with the business ethics.'

Group History



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Type Test Certificates

CENTRAL POWER RESEARCH INSTITUTE



CPRI

TEST REPORT	CPRI
CPRI/CAB/19/0114	Dated: 20.03.2019
Test Report Number	Name and Address of the Customer
M/s Dynamic Cables Ltd	M/s Dynamic Cables Ltd A-129, A-129A, A-130, SKS Industrial Area, Roerigus, Teh. Shree Madhopur, Sikeer-332404 Rajasthan, India
Name and Address of the Manufacturer	Particulars of sample Tested
M/s Dynamic Cables Ltd A-129, A-129A, A-130, SKS Industrial Area, Roerigus, Teh. Shree Madhopur, Sikeer-332404 Rajasthan, India E.3511 KV, 3C x 300 sq.mm XLPE Insulated Cable (AZXFY)	Conductor: Aluminum Size: 300 sq.mm Insulation: XLPE No. of cores: Three Armour: Strip Inner sheath: PVC ST-2 Outer sheath: PVC ST-2 Drum No: A-1492 The Cable was embossed as "DYNAMIC CABLES 6.35/11KV ELECTRIC 3C X300 SQMM AZXFY TH-XLPE BRPL MAY 2019 ISI CML 840015408 BATCH/LOT: NO. 06 P.O. NO. HND01/23004/21 DT 10.10.2018."
Condition of sample on receipt	Type
Good	AZXFY
Designation	Serial Number
NI	NI
Number of Samples tested	Date(s) of test(s)
One	11.03.2019 to 19.03.2019
CPRI sample Code Number	Particulars of tests conducted
NOACAB19S0114	As per clause 19.1 of IS: 7098 (Part 2) 2011, Amend. 1 March 2010.
Test in accordance with Standard	Specification
NI	NI
Customer's requirement	Deviation, if any
NI	NI
Name of the witnessing persons	Customer's representative
Other than Customer's representative	NI
Test subcontracted with address of the laboratory	Document constituting this report (in words)
None	Twelve
Number of sheets	Number of photographs
Twelve	NI
Number of graphs	Number of photos
NI	One
Number of test circuit diagrams	Number of drawings
NI	NI
Test Engineer	Head of division
(Dr. Neha Arshian)	(S. Bhattacharya)
Approved by	Approved by
(Signature)	(Signature)

Test Report No: R-CR/CPRI/NOACAB/19/0114 Dated: 20.03.2019

CABLES LABORATORY
CENTRAL POWER RESEARCH INSTITUTE
TESTING LABORATORY NO. 24, INSTITUTIONAL AREA
SECTOR 8, NOIDA - 201 302 (U.P.)
Telephone: 0120-2468202 / Fax: 0120-2468184

CENTRAL POWER RESEARCH INSTITUTE



CPRI

TEST REPORT	CPRI
CPRI/CAB/19/0033	Dated: 29.03.2019
Test Report Number	Name and Address of the Customer
M/s Dynamic Cable Ltd F-250, Road no-13, VPO, Area, Jaipur-302013	M/s Dynamic Cable Ltd H-551A, H552A, Road no-8, VKI, Area, Jaipur-302013
Name and Address of the Manufacturer	Particulars of sample Tested
M/s Dynamic Cable Ltd H-551A, H552A, Road no-8, VKI, Area, Jaipur-302013 7933 KV (E), 3C X 300 Sqmm, HT XLPE Aluminium Conductor, XLPE Insulated & pvc Sheathed Cable	Conductor: Aluminum Size: 300 sq.mm Insulation: XLPE No. of cores: Three Armour: G3 (White) Inner sheath: PVC Type-ST-2 Outer sheath: PVC Type-ST-2 + FRLSH The Cable was embossed as "AC 1933KV ELECTRIC 3CX300SQMM FRLS AZXFY 2017 Sealing. The sample was seal w/ paper seal with the signature of Assst. chief Engineer, (Electrical) PWD Mumbai
Condition of sample on receipt	Type
New	AZXFY
Designation	Serial Number
NI	NI
Number of Samples tested	Date(s) of test(s)
One	12.03.2019 to 20.03.2019
CPRI sample Code Number	Particulars of tests conducted
NOACAB19S0033	As per IS 7098 (Part-2) 2011, Amendment No 1 March 2010.
Test in accordance with Standard	Specification
NI	NI
Customer's requirement	Deviation, if any
NI	NI
Name of the witnessing persons	Customer's representative
Other than Customer's representative	NI
Test subcontracted with address of the laboratory	Document constituting this report (in words)
None	Twelve
Number of sheets	Number of photographs
Twelve	NI
Number of graphs	Number of photos
NI	One
Number of test circuit diagrams	Number of drawings
NI	NI
Test Engineer	Head of division
(M.K. Arshian)	(S. Bhattacharya)
Approved by	Approved by
(Signature)	(Signature)

Test Report No: R-CR/CPRI/NOACAB/19/0033 Dated: 29.03.2019

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TESTING LABORATORY NO. 24, INSTITUTIONAL AREA
SECTOR 8, NOIDA - 201 302 (U.P.)
Telephone: 0120-2468202 / Fax: 0120-2468184

Type Test Certificates



CENTRAL POWER RESEARCH INSTITUTE



TEST REPORT	
Test Report Number Name and Address of the Customer	CPRI/TLCL2017040 M/s. Dynamic Cables, P. Ltd H-581A-H-592A, Road No.6, VKI Area, Jaipur-302013
Name and Address of the Manufacturer	Letter No. DCPU/18-1/POUOT/324 dated 05.05.2017 M/s. Dynamic Cables, P. Ltd H-581A-H-592A, Road No.6, VKI Area, Jaipur-302013
Particulars of Sample Tested	1.1KV, 3CX150+1CX150+1X120+1C X 16 mm ² XLPE ALU CABLE Phase Conductor 150mm ² Aluminium Insulation XLPE Black No. of cores Three cores, one neutral one messenger conductor 125mm ² bare stranded aluminium Street Light conductor 16 mm ² Aluminium Dium No. BY-14
Condition of sample on receipt	Good. The sample was sealed with QSS hologram by BSES
Type	Aerial Bunched Cable
Designation	NI
Serial Number	NI
Number of Samples tested	One only
Date(s) of test(s)	18.02.2017 to 18.06.2017
CPRI sample Code Number	016
Particulars of tests conducted	CPRI/TLCL2017044
Test in accordance with Standard/ Specification	As per clause 10.1 of IS: 14255/1994 (IA: 2005) IS 398 (Part-4) IS 994
Sampling Plan	Not applicable
Customer's requirement	NI
Deviation, if any	NI
Name of the witnessing persons	NI
Customer's representative	NI
Other than Customer's representative	NI
Test subcontracted with address of the laboratory	None
Document constituting this report (in words)	None
Number of sheets	Five
Number of oscillograms	NI
Number of graphs	NI
Number of photos	One
Number of test circuit diagrams	NI
Number of drawings	NI
(Dr. Nola Acharya) Test Engineer	 (S. Bhattacharya) UNIT HEAD

CABLES LABORATORY
CENTRAL POWER RESEARCH INSTITUTE, P.O. Box 20, Sector 10, Gurgaon, Haryana-122015
REGIONAL TESTING LABORATORY, NO. 24, INSTITUTIONAL AREA, SECTOR 63, NOIDA-201 301 (UP)
Telephone: 0120-240283, Fax: 0120-240284

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TEST REPORT	
Test Report Number Name and Address of the Customer	CPRI/DAHV180151 M/s. Dynamic Cable Ltd F-260, Road No. 13, VKI Area, Jaipur-302013
Name and Address of the Manufacturer	Letter No. DCP/18-1/QUOT/751 dated 03.11.2018 M/s. Dynamic Cable Ltd A-125 A-125A, A-130, SRS Industrial Area, Reengus, The SRI Madhopur, Distt. - Sikar, (Rajasthan)-332404. 6.35/11KV, 3CX150+150sqmm HT, Aerial Bunched Cable
Particulars of sample Tested	Conductor Aluminium Size 150 sq mm Insulation XLPE No. of cores Three Outer sheath PE BT-7 Black Messenger Aluminium-Alloy Size 150 sqmm Dium No. 804-18368
Condition of sample on receipt	Impregnated, DC 11KV ELECTRIC 3CX150+150SQMM TR- XLPE-S BRPL OCT 2018 LOT NO/BATCH NO.PD.NO. MSDD12308972
Type	Good
Designation	Aerial Bunched Cable
Serial Number	NI
Number of Samples tested	One
Date(s) of test(s)	16.11.2018 to 05.12.2018.
CPRI sample Code Number	NOACAB1850151
Particulars of tests conducted	Type Test
Test in accordance with Standard/ Specification	As per IS: 7088 (Part-2), 2011, Amendment No 1 March 2015 and IS 994 (Part-4), 1994
Sampling Plan	Not Applicable
Customer's requirement	NI
Deviation, if any	NI
Name of the witnessing persons	NI
Customer's representative	NI
Other than Customer's representative	NI
Test subcontracted with address of the laboratory	None
Document constituting this report (in words)	Test
Number of sheets	Two
Number of oscillograms	NI
Number of graphs	NI
Number of photos	One
Number of test circuit diagrams	NI
Number of drawings	NI
(M.K. Jaiswal) Test Engineer	 (S. Bhattacharya) Head of division Approved by

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Technical Information (General)

Dynamic Cables is willing to advice and assist on all matters concerning its product line.

QUALITY IS OUR MAIN TARGET

Dynamic Cables has emerged out to be one of the leading LV, MV & HV Power Cables Manufacturers from India. We are working in different axes to completely fulfill customers satisfaction which is the milestone of our business, such axes are:

1. Product quality complying with the Indian and International standards.
2. At Dynamic Cables Ltd. **product reliability** starts at the time of product design to fit the intended application and environmental conditions, and continues till the selection of raw materials from only the highest class suppliers with internationally trusted reputation. Our state of art testing equipment and the strict quality procedures ensure product quality and integrity so we can guarantee that our cables are defect free and suitable for the intended application through the cable service lifetime.
3. We promise high performance of the product and service through cooperation between **experienced staff from Germany and local experts**, who are aware of the local market requirements and the highest international standards of cables manufacturing. Such cooperation in know-how is invested to provide our customers with the best service and support.
4. Our quality management system conforms to the **ISO 9001:2015** International Management Quality System Standard with scope of design and manufacturing of electrical power cables and conductors.
5. Dynamic Cables frequently tests its products at internationally reputable labs; diversity of products have been tested and confirmed compliance to the international standards at CPRI, ERDA & TAG corporation.
6. Dynamic Cables Company has **CE Certification** for its entire product range.

Standards Compliance:



Products tested from globally recognized NABL Accredited Laboratories:





Product Range

S.NO	TYPE	MFG.RANGE	RELEVANT STANDARDS
1.	66KV HV Power cables	Upto 1000 sq. mm	IEC 60840 & equivalent
2.	MV & LV Aerial Bunched Cables	Multicore upto 400mm ² upto and Including 36 KV	IEC 60502-2, IEC 60502-1, BS 6622, NFC 33-209
3.	MV & LV XLPE Power Cables	Armoured & Unarmoured Upto and including 36 KV Single Core upto 1000mm ² Multicore upto 400mm ²	IEC 60502-2, IEC 60502-1 BS 6622
4.	LV PVC Power Cables	Armoured & Unarmoured Single core upto 1000mm ² multicore upto 400mm ²	IEC 60502-1, BS 5467, IEC 60227 BS 6346
5.	LV PVC & XLPE Control Cables	Armoured & Unarmoured Upto 61 Cores x 4 mm ²	IEC 60502-1, IEC 60227 BS 5467, BS 6004
6.	ACSR Conductor	91 strands upto 1000 mm ²	BS 215, ASTM B232 CSA C49-1, DIN 48204 NFC 34120
7.	AAA Conductor	91 strands upto 1000 mm ²	BS 3242, ASTM B399 CSA C49, DIN 48201 NFC 34-125
8.	AA Conductor	91 strands upto 1000 mm ²	BS 215, ASTM B231, CSA C49, DIN 48201 NFC 34-120
9.	Bare Copper Conductor	Upto 1000 sq.mm	IEC 60228 BS 215 BS 7884, DIN 48201
10.	Concentric Cables	Upto 25 sq.mm	IEC 60502, BS 60228
11.	Airdac Cables	Upto 25 sq.mm	IEC 60502, SANS 1507

Standards Related to Power Cables

IEC Standard

S/N	No. of IEC	Subject
1.	60028	International Standard of Resistance for Copper
2.	60060-1	High-voltage Test Techniques
3.	60104	Aluminium-Magnesium-Silicon Alloy Wire for Overhead Line Conductors
4.	60121	Recommendation for commercial annealed aluminium electrical conductor wire
5.	60137	Insulated bushings for alternating voltage above 1000 V
6.	60173	Colours of the cores of flexible cables and cores
7.	60183	Guide to the selection of high voltage cables
8.	60227	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V
9.	60228	Conductors of insulated cables
10.	60229	Tests on cable over-sheaths which have a special protection function and are applied by extrusion
11.	60230	Impulse tests on cables and their accessories
12.	60270	Partial discharge measurements
13.	60287	Current rating equations (100% load factor) and calculation of losses
14.	60331	Tests for electric cables under fire conditions circuit integrity
15.	60332	Test on electric cables under fire conditions
16.	60502	Cables for rated voltages of 0.6 kV (Um=1 kV) up to and including 30 kV (Um=36 kV)
17.	60719	Calculation of the lower and upper limits for the average outer dimensions of cables with circular copper conductors and of rated voltages up to and including 450/750 V.
18.	60724	Guide to the short-circuit temperature limits of electric cables with a rated voltage not exceeding 0.6/1 kV.
19.	60811	Common test methods for insulating and sheathing materials of electric cables
20.	60840	Test method and requirements Power cables with extruded insulating and their accessories for rated voltages above 30 kV (Um=36kV) up to 150 kV (Um=170 kV)
21.	60853	Calculation of the cyclic and emergency current rating of cables.
22.	60885	Electrical test for electric cables

S/N	No. of IEC	Subject
23.	60888	Zinc-Coated steel wires for stranded conductors
24.	60889	Hard drawn aluminum wire for overhead line conductors
25.	60949	Calculation of thermally permissible short-circuit current, taking into account non-adiabatic heating effects.
26.	60986	Guide to the short-circuit temperature limits of electric cables with a rated voltage from 1.8/3 (3.6) kV to 18/30 (36) kV
27.	61089	Round wire concentric lay overhead electrical stranded conductors
28.	61232	Aluminum - clad steel wires for electrical purposes
29.	61597	Overhead electrical conductors - calculation methods for stranded bare conductors
30.	61443	Short circuit temperature limits of electric cables with rated voltages above 30 kV ($U_m = 36$ kV)

HD Standard

S/N	No. of HD	Subject
1.	HD 21.1 S4	Cables of rated voltages up to and including 450/750 v and having thermoplastic insulation
2.	HD 21.3 S3	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V
3.	HD 603	Electric Power distribution, electric cables, insulated cable, polyvinyl chloride. Specification, dimension, test, marking
4.	HD 620	Distribution cables with extruded insulation for rated voltages from 3.6/6 (7.2) kV to 20.8/36 (42) kV
5.	HD 626	Overhead distribution cables of rated voltage U0/U (Um): 0.6/1 (1.2) kV



BS Standard

S/N	No. of HD	Subject
1.	BS 215-1	Aluminum conductors and Aluminum conductors, steel-reinforced for overhead power transmission. Part1: Aluminum Stranded conductors.
2.	BS 215-2	Aluminum conductors and Aluminum conductors, steel-reinforced for overhead power transmission Part2: aluminum stranded conductors, steel reinforced .
3.	BS 2627	Wrought aluminum for electrical purposes Wire.
4.	BS 5099	Spark testing of electric cables.
5.	BS 5467	600/1000 V and 1900/3300 V armoured electric cables having thermosetting insulation
6.	BS 6004	Electric cables - PVC insulation, non-armoured cables for voltages up to and including 450/750 V for electric power, lighting and internal wiring.
7.	BS 6007	Electric cables - single core unsheathed heat resisting cables for voltages up to and including 450/750V for internal wiring
8.	BS 6346	600/100 V and 1900/3300 V armoured electric cables having PVC insulation
9.	BS 6360	Conductors in insulated cables and cords
10.	BS 6387	Performance requirements for cables required to maintain circuit integrity underfire conditions
11.	BS 6485	PVC - covered conductors for overhead power lines.
12.	BS 6500	Electric cables - Flexible cords rated up to 300/500 V, for use with appliances and equipment intended for domestic, office and similar environments.
13.	BS 6622	Cables with extruded cross-linked polyethylene or ethylene propylene rubber insulation for rated voltages from 3.8/6./ kV up to 19/33 kV
14.	BS 7655	Insulation and sheathing materials for cables
15.	BS 7884	Copper and copper-cadmium stranded conductors for overhead electric traction and power transmission systems.
16.	BS 7889	Electric cables - Thermosetting insulated, unarmoured cables for voltage of 600/1000 V.
17.	BS 7919	Electric cables - Flexible cables rated up to 450/750 V, for use with appliances and equipment intended for industrial and similar environments.

Derating Factors

Table 2

Ground Temperature Derating Factor

Ground Temperature °C	15	20	25	30	35	40	45	50	55
PVC cables rated 70 °C	1.25	1.19	1.13	1.07	1.00	0.93	0.85	0.76	0.65
XLPE cables rated 90 °C	1.16	1.13	1.09	1.04	1.00	0.95	0.90	0.85	0.80

Table 3

Air Temperature Derating Factor

Air temperature °C	20	25	30	35	40	45	50	55
PVC cables rated 70 °C	1.29	1.22	1.15	1.08	1.00	0.95	0.82	0.71
XLPE cables rated 90 °C	1.18	1.14	1.10	1.05	1.00	0.90	0.89	0.84

Table 4

Burial Depth Derating Factor

Depth of Laying mt.	Cables Cross Section		
	Up to 70 mm ²	95 up to 240 mm ²	300 mm ² & above
0.50	1.00	1.00	1.00
0.60	0.99	0.98	0.97
0.80	0.97	0.96	0.94
1.00	0.95	0.93	0.92
1.25	0.94	0.92	0.89
1.50	0.93	0.90	0.87
1.75	0.92	0.89	0.86
2.00	0.91	0.88	0.85

Table 5

Soil Thermal Resistivity Derating Factor

Soil Thermal Resistivity in °C. cm/Watt	80	90	100	120	150	200	250	300
Rating Factor	1.17	1.12	1.07	1.0	0.91	0.80	0.73	0.67

Table 6

PVC Rated Temperature Derating Factor

Type of PVC Rated Temperature °C	70	85
Rating Factor	1.00	1.195

Table 7

Trefoil or Flat Formation Derating Factors for Three Single Core Cables Laid Direct in Ground

Number of Circuit	Trefoil formation			Flat formation			
	Touching		Spacing = 0.15 M	Spacing = 0.30 M		Spacing = 0.30 M	
nr	Trefoil	Flat	Trefoil	Flat	Trefoil	Flat	Flat
2	0.77	0.80	0.82	0.85	0.88	0.91	
3	0.66	0.69	0.73	0.76	0.80	0.83	
4	0.60	0.63	0.68	0.71	0.74	0.77	
5	0.56	0.59	0.64	0.67	0.72	0.75	
6	0.53	0.57	0.61	0.64	0.70	0.73	

*L = Spacing



Table 8
Trefoil Formation Derating Factors for Multi-Core Core Cables Laid Direct in Ground

Number of Circuit	Touching		Spacing = 0.15 M		Spacing = 0.30 M	
	Trefoil Formation		Trefoil Formation		Flat Formation	
	Trefoil	Flat	Trefoil	Flat	Trefoil	Flat
2	0.81	0.81	0.87	0.87	0.91	0.91
3	0.69	0.70	0.76	0.78	0.82	0.84
4	0.62	0.63	0.72	0.74	0.77	0.81
5	0.58	0.60	0.66	0.70	0.73	0.78
6	0.54	0.56	0.63	0.67	0.70	0.76

*L = Spacing

Table 9
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



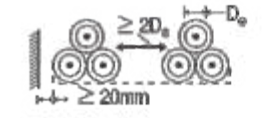
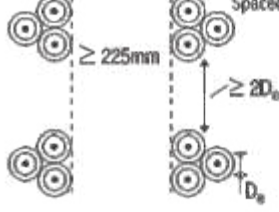
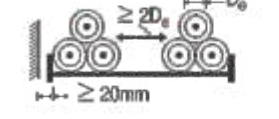
Number of Trays	Number of Cables						Method of Installation
	1	2	3	4	6	9	
1	1.00	0.88	0.82	0.79	0.76	0.73	
2	1.00	0.87	0.80	0.77	0.73	0.68	
3	1.00	0.86	0.79	0.76	0.71	0.66	
1	1.00	1.00	0.98	0.95	0.91	-	
2	1.00	0.99	0.96	0.92	0.87	-	
3	1.00	0.98	0.95	0.91	0.85	-	
1	1.00	0.88	0.82	0.78	0.73	0.72	
2	1.00	0.88	0.81	0.76	0.71	0.70	
3	1.00	0.85	0.79	0.76	0.73	0.70	
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	
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.
- Note 3** Values are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. For closer spacing, the factors should be reduced.
- Note 4** Values are given for horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing the factors should be reduced.

Derating Factors

Table 10

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

Number of Trays	Number of Cables			Use as a multiplier to rating for	Method of installation
	1	2	3		
1	0.98	0.91	0.87	Three cables in horizontal formation	Perforated trays (Note 3) 
2	0.96	0.87	0.81		
3	0.95	0.85	0.78		
1	1.00	0.97	0.96	Three cables in horizontal formation	Ladder supports, cleats etc. (Note 3) 
2	0.98	0.93	0.89		
3	0.97	0.90	0.86		
1	1.00	0.98	0.96	Three cables in trefoil formation	Perforated Trays (Note 3) 
2	0.97	0.93	0.89		
3	0.96	0.92	0.86		
1	1.00	0.91	0.89	Three cables in trefoil formation	Vertical Perforated Trays (Note 4) 
2	1.00	0.90	0.86		
3	1.00	1.00	1.00		
1	0.97	0.95	0.93	Three cables in trefoil formation	Ladder supports, cleats etc. (Note 3) 
2	0.96	0.94	0.90		

- Note 1** Values given are averages for the cables 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.
- Note 4** Values are given for horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing the factors should be reduced.
- Note 5** For circuits having more than one cable in parallel per phase, each three phase set of conductors should be considered as a circuit for the purpose of this table.



Short Circuit Current

Table 11

Max. Short Circuit Temperature for Cable Components

Material	Item	Temp. °C
Insulation	PVC Insulation	140 for CSA . > 300 mm ² 160 for C.S.A. ≤ 300 mm
	XLPE insulation	250
Jacket	PVC sheathing	200
	LLDPE sheathing	150
	HDPE sheathing	180
Metal	Lead sheath	170
	Lead sheath - alloy	200*
	Copper	250
	Aluminium	250

* Temp = 210 °C for cables with rated voltages above 30kV (U_m36 kV)

Table 12

kA Short Circuit Current - Copper Conductor - PVC Insulated

C.S.A. mm ²	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	5.8	4.1	3.4	2.9	2.6	1.8	1.3	1.1	0.9	0.8
25	9.1	6.4	5.2	4.5	4.1	2.9	2.0	1.7	1.4	1.3
35	12.7	9.0	7.3	6.4	5.7	4.0	2.8	2.3	2.0	1.8
50	18.2	12.9	10.5	9.1	8.1	5.8	4.1	3.3	2.9	2.6
70	25.5	18.0	14.7	12.7	11.4	8.1	5.7	4.6	4.0	3.6
95	34.5	24.4	19.9	17.3	15.5	10.9	7.7	6.3	5.5	4.9
120	43.6	30.9	25.2	21.8	19.5	13.8	9.8	8.0	6.9	6.2
150	54.5	38.6	31.5	27.3	24.4	17.3	12.2	10.0	8.6	7.7
185	67.3	47.6	38.8	33.6	30.1	21.3	15.0	12.3	10.6	9.5
240	87.3	61.7	50.4	43.6	39.0	27.6	19.5	15.9	13.8	12.3
300	109.1	77.1	63.0	54.5	48.8	34.5	24.4	19.9	17.3	15.4
400	130.0	91.9	75.1	65.0	58.2	41.1	29.1	23.7	20.6	18.4
500	162.5	114.9	93.8	81.3	72.7	51.4	36.3	29.7	25.7	23.0
630	204.8	144.8	118.2	102.4	91.6	64.8	45.8	37.4	32.4	29.0

Short Circuit Current

Table 13

kA Short Circuit Current - Aluminium Conductor- PVC insulated

C.S.A. mm ²	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	3.8	2.7	2.2	1.9	1.7	1.2	0.9	0.7	0.6	0.5
25	6.0	4.2	3.5	3.0	2.7	1.9	1.3	1.1	1.0	0.8
35	8.4	5.9	4.9	4.2	3.8	2.7	1.9	1.5	1.3	1.2
50	12.0	8.5	6.9	6.0	5.4	3.8	2.7	2.2	1.9	1.7
70	16.8	11.9	9.7	8.4	7.5	5.3	3.8	3.1	2.7	2.4
95	22.8	16.1	13.2	11.4	10.2	7.2	5.1	4.2	3.6	3.2
120	28.8	20.4	16.7	14.4	12.9	9.1	6.4	5.3	4.6	4.1
150	36.0	25.5	20.8	18.0	16.1	11.4	8.1	6.6	5.7	5.1
185	44.5	31.4	25.7	22.2	19.9	14.1	9.9	8.1	7.0	6.3
240	57.7	40.8	33.3	28.8	25.8	18.2	12.9	10.5	9.1	8.2
300	72.1	51.0	41.6	36.0	32.2	22.8	16.1	13.2	11.4	10.2
400	86.0	60.8	49.7	43.0	38.5	27.2	19.2	15.7	13.6	12.2
500	107.5	76.0	62.1	53.8	48.1	34.0	24.0	19.6	17.0	15.2
630	135.5	95.8	78.2	67.7	60.6	42.8	30.3	24.7	21.4	19.2

Table 14

kA Short Circuit Current - Copper Conductor - XLPE Insulated

C.S.A mm ²	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	7.2	5.1	4.2	3.6	3.2	2.3	1.6	1.3	1.1	1.02
25	11.3	8.0	6.5	5.7	5.1	3.6	2.5	2.1	1.8	1.60
35	15.8	11.2	9.1	7.9	7.1	5.0	3.5	2.9	2.5	2.24
50	22.6	16.0	13.1	11.3	10.1	7.2	5.1	4.1	3.6	3.20
70	31.7	22.4	18.3	15.8	14.2	10.0	7.1	5.8	5.0	4.5
95	43.0	30.4	24.8	21.5	19.2	13.6	9.6	7.8	6.8	6.1
120	54.3	38.4	31.3	27.1	24.3	17.2	12.1	9.9	8.6	7.7
150	67.8	48.0	39.2	33.9	30.3	21.5	15.2	12.4	10.7	9.6
185	83.7	59.2	48.3	41.8	37.4	26.5	18.7	15.3	13.2	11.8
240	108.5	76.7	62.7	54.3	48.5	34.3	24.3	19.8	17.2	15.3
300	135.7	95.9	78.3	67.8	60.7	42.9	30.3	24.8	21.5	19.2
400	180.9	127.9	104.4	90.4	80.9	57.2	40.4	33.0	28.6	25.6
500	226.1	159.9	130.5	113.1	101.1	71.5	50.6	41.3	35.8	32.0
630	284.9	201.4	164.5	142.4	127.4	90.1	63.7	52.0	45.0	40.3
800	361.8	255.8	208.9	180.9	161.8	114.4	80.9	66.0	57.2	51.2
1000	452.2	319.8	261.1	226.1	202.2	143.0	101.1	82.6	71.5	64.0
1200	542.6	383.7	313.3	271.3	242.7	171.6	121.3	99.1	85.8	76.7
1600	723.5	511.6	417.7	361.8	323.6	228.8	161.8	132.1	114.4	102.3
2000	904.4	639.5	522.2	452.2	404.5	286	202.2	165.1	143	127.9
2500	1130.5	799.4	652.7	565.3	505.6	357.5	252.8	206.4	178.8	159.9



Short Circuit Current

Table 15

kA short circuit current - Aluminium Conductor - XLPE Insulated

C.S.A. mm ²	Duration Sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	4.7	3.4	2.7	2.4	2.1	1.5	1.1	0.9	0.75	0.67
25	7.4	5.2	4.3	3.7	3.3	2.3	1.7	1.4	1.2	1.0
35	10.4	7.3	6.0	5.2	4.6	3.3	2.3	1.9	1.6	1.5
50	14.8	10.5	8.6	7.4	6.6	4.7	3.3	2.7	2.3	2.1
70	20.7	14.7	12.0	10.4	9.3	6.6	4.6	3.8	3.3	2.9
95	28.1	19.9	16.3	14.1	12.6	8.9	6.3	5.1	4.5	4.0
120	35.6	25.1	20.5	17.8	15.9	11.2	8.0	6.5	5.6	5.0
150	44.4	31.4	25.7	22.2	19.9	14.1	9.9	8.1	7.0	6.3
185	54.8	38.8	31.6	27.4	24.5	17.3	12.3	10.0	8.7	7.8
240	71.1	50.3	41.1	35.6	31.8	22.5	15.9	13.0	11.2	10.1
300	88.9	62.9	51.3	44.4	39.8	28.1	19.9	16.2	14.1	12.6
400	118.5	83.8	68.4	59.3	53.0	37.5	26.5	21.6	18.7	16.8
500	148.2	104.8	85.5	74.1	66.3	46.9	33.1	27.0	23.4	21.0
630	186.7	132.0	107.8	93.3	83.5	59.0	41.7	34.1	29.5	26.4
800	237.0	167.6	136.9	118.5	106.0	75.0	53.0	43.3	37.5	33.5
1000	296.3	209.5	171.1	148.2	132.5	93.7	66.3	54.1	46.9	41.9
1200	355.6	251.4	205.3	177.8	159.0	112.4	79.5	64.9	56.2	50.3
1600	474.1	335.2	273.7	237	212	149.9	106	86.6	75	67
2000	592.6	419	342.1	296.3	265	187.4	132.5	108.2	93.7	83.8
2500	741.2	524.1	427.9	370.6	331.5	234.4	165.7	135.3	117.2	104.8

Table 16

kA Short Circuit Current - Copper Screen

C.S.A. mm ²	Duration Sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	7.5	5.3	4.3	3.7	3.3	2.4	1.7	1.4	1.2	1.1
25	11.7	8.3	6.8	5.9	5.2	3.7	2.6	2.1	1.9	1.7
35	16.4	11.6	9.5	8.3	7.3	5.2	3.7	3.0	2.6	2.3

Conductor temperature before short circuit = 90 °C

Maximum conductor temperature during short circuit = 250 °C

Maximum screen temperature before short circuit = 80 °C

Overhead Conductors

Product Types

1. Bare hard drawn Copper
2. All Aluminium Conductor (A.A.C.)
3. All Aluminium alloy Conductor (A.A.A.C.)
4. Aluminium conductor steel reinforced (A.C.S.R.)

Cable Construction

Conductor

Copper, Aluminium or Aluminium alloy conductors consist of wires concentrically applied in successive layers in opposite direction. In case of A.C.S.R. conductor a core of solid or standard galvanized steel is applied first.





Bare Soft and Hard Drawn Copper Stranded

Copper Conductors

Description

1. Plain bare soft drawn Copper conductors as per IEC 60228 class 2.
2. Plain bare hard drawn Copper conductors as per DIN 48201.

Application

Soft Bare Copper conductors are used for grounding electrical systems, where high conductivity and flexibility are required. Hard drawn Copper conductors are used in overhead electrical distribution networks.



Nominal Cross Sectional Area	Number and Nominal Diameter of Wires No x f (mm)	Max. DC. resistance at 20°C ohm/km	Approx. Overall Diameter mm	Approx. Weight kg/km
a - Bare Soft Drawn				
10	7X 1.43	1.8300	3.7	86.5
16	7 X 1.75	1.1500	4.7	137
25	7 x2.18	0.7270	5.8	217
35	7 x 2.65	0.5240	6.9	298
50	19 x 1.86	0.3870	8.2	410
70	19 x 2.16	0.2680	10.1	595
95	19 x 2.65	0.1930	11.3	820
120	19 x 3.05	0.1530	12.7	1040
150	19 x 3.38	0.1240	14.1	1277
185	37 x 2.63	0.0991	15.8	1610
240	34 x 3.23	0.0754	18.2	2120
300	61 x 2.64	0.0601	20.6	2630
400	61 x 2.98	0.0470	23.2	3390
500	61 x 3.33	0.0366	26.6	4420
b - Bare Hard Drawn				
10	7x 1.35	1.8290	4.1	90
16	7 x 1.70	1.1540	5.1	143
25	7 x2.10	0.7563	6.3	218
35	7 x 2.50	0.5337	7.5	310
50	7 x 3.00	0.3706	9.0	446
50	19 x 1.80	0.3819	9.0	437
70	19 x2.10	0.2806	10.5	596
95	19 x2.50	0.1980	12.5	845
120	19 x 2.80	0.1578	14.0	1060
150	37 x2.25	0.1264	15.8	1337
185	37 x2.50	0.1024	17.5	1649
240	61x 2.25	0.07528	20.3	2209
300	61 x 2.50	0.06097	22.5	2725
400	61 x 2.89	0.0456	26.0	3640
500	61 x 3.23	0.0365	29.1	4545

The above data is approximate and subjected to manufacturing tolerance.

Overhead Conductors

All Aluminium Conductors (A.A.C.)



Description

Hard drawn Aluminium wires, stranded in successive layers, in opposite direction to form the Aluminium stranded A.A.C. conductor. As per BS EN 50182 or IEC 61089.

Application

All Aluminium bare conductors are used for aerial distribution lines having relatively short spans, aerial feeders and bus bars of substations.

Nominal Cross Sectional Area mm ²	Number and Nominal Diameter of Wires No x \varnothing (mm)	Max. DC. Resistance at 20°C ohm/km	Rated Strength kN	Approx. Overall Diameter mm	Approx. Weight kg/km
a- According to BS EN 50182 - Germany					
16	7X 1.70	1.7986	3.02	5.10	43.4
25	7 X 2.10	1.1787	4.36	6.30	66.3
35	7 x 2.50	0.8317	6.01	7.50	93.9
50	7 x 3.00	0.5776	8.41	9.00	135.2
	19 X 1.80	0.5944	8.94	9.00	132.9
70	19 x 2.10	0.4367	11.85	10.5	180.9
95	19 x 2.50	0.3081	16.32	12.5	256.3
120	19 x 2.80	0.2456	19.89	14.0	321.5
150	37 x 2.25	0.1960	26.48	15.8	405.7
185	37 x 2.50	0.1588	31.78	17.5	500.9
240	61 x 2.25	0.1193	43.66	20.3	671.1
300	61 x 2.50	0.0966	52.40	22.5	828.5
400	61 x 2.89	0.0723	68.02	26.0	1107.1
500	61 x 3.23	0.0579	82.47	29.1	1382.9
625	91 x 2.96	0.0464	106.45	32.6	1739.7
800	91 x 3.35	0.0362	132.34	36.9	2228.3
1000	91 x 3.74	0.0291	159.95	41.1	2777.3

The above data is approximate and subjected to manufacturing tolerance.



Overhead Conductors

All Aluminium Conductors (A.A.C.)



Name	Nominal Cross Sectional Area mm ²	Number and Nominal Diameters of Wires No x \varnothing (mm)	Max. D.C. Resistance at 20°C ohm/km	Rated Strength kN	Approx. Overall Diameter mm	Approx. Weight kg/km
b-According to BS EN 50182-United Kingdom						
MIDGE	23.3	7x2.06	1.2249	4.20	6.18	63.8
GNAT	26.9	7x2.21	1.0643	4.83	6.63	73.4
MOSQUITO	36.9	7x2.59	0.7749	6.27	7.77	100.8
LADYBIRD	42.8	7x2.79	0.6678	7.28	8.37	117.0
ANT	52.8	7x3.10	0.5409	8.72	9.30	144.4
FLY	63.6	7x3.40	0.4497	10.49	10.2	173.7
BLUEBOTTLE	73.6	7x3.66	0.3880	11.78	11.0	201.3
EARWIG	78.6	7x3.78	0.3638	12.57	11.3	214.7
GRASSHOPPER	84.1	7x3.91	0.3400	13.45	11.7	229.7
CLEGG	95.6	7x4.17	0.2989	15.30	12.5	261.3
WASP	106.0	7x4.39	0.2697	16.95	13.2	289.6
BEETLE	106.4	19x2.67	0.2701	18.08	13.4	292.4
BEE	132.0	7x4.90	0.2165	21.12	14.7	360.8
HORNET	157.6	19x3.25	0.1823	26.01	16.3	433.2
CATERPILLAR	185.9	19x3.53	0.1546	29.75	17.7	511.1
CHAFER	213.2	19x3.78	0.1348	34.12	18.9	586.0
SPIDER	237.6	19x3.99	0.1210	38.01	20.0	652.9
COCKROACH	265.7	19x4.22	0.1081	42.52	21.1	730.4
BUTTERFLY	322.7	19x4.65	0.0891	51.63	23.3	886.8
MOTH	373.1	19x5.00	0.0770	59.69	25.0	1025.3
DRONE	372.4	37x3.58	0.0774	59.59	25.1	1027.1
CENTIPEDE	415.2	37x3.78	0.0695	66.43	26.5	1145.1
MAYBUG	486.1	37x4.09	0.0593	77.78	28.6	1340.6
SCORPION	529.8	37x4.27	0.0544	84.77	29.9	1461.2
CICADA	628.3	37x4.65	0.0459	100.54	32.6	1732.9

The above data is approximate and subjected to manufacturing tolerance.

Overhead Conductors

All Aluminium Alloy Conductors (A.A.A.C.)



Description

All Aluminium Alloy (ALMELEC) conductors, stranded in successive layers to form the stranded A.A.A.C. conductor. As per IEC 61089 or BS EN 50182 or ASTM B 399.

Application

A.A.A.C. are mainly used for overhead lines, in transmission and distribution electrical networks, having relatively long spans. They are also used a messenger to support overhead electrical cables.

Nominal Cross Sectional Area mm ²	Number and Nominal Diameters of Wires No x \varnothing (mm)	Max. D.C. Resistance at 20°C ohm/km	Rated Strength kN	Approx. Overall Diameter mm	Approx. Weight kg/km
a-According to BS EN 50182-Germany					
16	7x1.70	2.0701	4.69	5.10	43.4
25	7x2.10	1.3566	7.15	6.30	66.2
35	7x2.50	0.9572	10.14	7.50	93.8
50	7x3.00	0.6647	14.60	9.00	135.1
50	19x1.80	0.6841	14.26	9.00	132.7
70	19x2.10	0.5026	19.41	10.50	180.7
95	19x2.50	0.3546	27.51	12.50	256.0
120	19x2.80	0.2827	34.51	14.00	321.2
150	37x2.25	0.2256	43.40	15.80	405.3
185	37x2.50	0.1827	53.58	17.50	500.3
240	61x2.25	0.1373	71.55	20.30	670.3
300	61x2.50	0.1112	88.33	22.50	827.5
400	61x2.89	0.0832	118.04	26.00	1105.9
500	61x3.23	0.0666	147.45	29.10	1381.4
625	91x2.96	0.0534	184.73	32.60	1737.7
800	91x3.35	0.0417	236.62	36.90	2225.8
1000	91x3.74	0.0334	294.91	41.10	2774.3

The above data is approximate and subjected to manufacturing tolerance.



All Aluminium Alloy Conductors (A.A.A.C.)



Name	Nominal Cross Sectional Area mm ²	Number and Nominal Diameters of Wires No x \varnothing (mm)	Max. D.C. Resistance at 20°C ohm/km	Rated Strength kN	Approx. Overall Diameter mm	Approx. Weight kg/km
b-According to BS EN 50182-United Kingdom						
BOX	18.8	7x1.85	1.7480	5.55	5.55	51.4
ACACIA	23.8	7x2.08	1.3828	7.02	6.24	64.9
ALMOND	30.1	7x2.34	1.0926	8.88	7.02	82.2
CEDAR	35.5	7x2.54	0.9273	10.46	7.62	96.8
DEODAR	42.2	7x2.77	0.7797	12.44	8.31	115.2
FIR	47.8	7x2.95	0.6875	14.11	8.85	130.6
HAZEL	59.9	7x3.30	0.5494	17.66	9.90	163.4
PINE	71.6	7x3.61	0.4591	21.14	10.8	195.6
HOLLY	84.1	7x3.91	0.3913	24.79	11.7	229.5
WILLOW	89.7	7x4.04	0.3665	26.47	12.1	245.0
OAK	118.9	7x4.65	0.2767	35.07	14.0	324.5
MULBERRY	150.9	19x3.18	0.2192	44.52	15.9	414.3
ASH	180.7	19x3.48	0.1830	53.31	17.4	496.1
ELM	211.0	19x3.76	0.1568	62.24	18.8	579.2
POPULAR	239.4	37x2.87	0.1387	70.61	20.1	659.4
SYCAMORE	303.2	37x3.23	0.1095	89.40	22.6	835.2
UPAS	362.1	37x3.53	0.0917	106.82	24.7	997.5
YEW	479.0	37x4.06	0.0693	141.31	28.4	1319.6
TOTARA	498.1	37x4.14	0.0666	146.93	29.0	1372.1
RUBUS	586.9	61x3.50	0.0567	173.13	31.5	1622.0
SORBUS	659.4	61x3.71	0.0505	194.53	33.4	1822.5
ARAUCARIA	821.1	61x4.14	0.0406	242.24	37.3	2269.4
REDWOOD	996.2	61x4.56	0.0334	293.88	41.0	2753.2

The above data is approximate and subjected to manufacturing tolerance.

Overhead Conductors

Aluminium Conductor Steel Reinforced (A.C.S.R.)



Description

An outer layer of Aluminium conductor concentrically stranded over the central core of galvanized solid or stranded steel wires to form Aluminium steel reinforced conductor. As per BS EN 50182 or ASTM B 232 or IEC 61089.

Application

A.C.S.R. conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Nominal Cross Sectional Area	Number and Nominal Diameters of Wires		Max. D.C. Resistance at 20°C	Rated Strength	Approx. Overall Diameter	Approx. Weight
	Aluminium	Steel				
mm ²	No x \varnothing (mm)	No x \varnothing (mm)	ohm/km	kN	mm	kg/km
a-According to BS EN 50182-Germany						
16/2.5	6x1.80	1x1.80	1.8769	5.80	5.4	61.6
25/4	6x2.25	1x2.25	1.2012	8.95	6.75	96.3
35/6	6x2.70	1x2.70	0.8342	12.37	8.1	138.7
50/8	6x3.20	1x3.20	0.5939	16.81	9.6	194.8
70/12	26x1.85	7x1.44	0.4132	26.27	11.7	282.2
95/15	26x2.15	7x1.67	0.3060	34.93	13.6	380.6
120/20	26x2.44	7x1.90	0.2376	44.50	15.5	491.0
150/25	26x2.70	7x2.10	0.1940	53.67	17.1	600.8
185/30	26/3.00	7x2.33	0.1571	65.27	19.0	741.0
210/35	26x3.20	7x2.49	0.1381	73.36	20.3	844.1
240/40	26x3.45	7x2.68	0.1188	85.12	21.8	980.1
380/50	54x3.00	7x3.00	0.0758	121.30	27.0	1442.5
490/65	54x3.40	7x3.40	0.0590	150.81	30.6	1852.9

The above data is approximate and subjected to manufacturing tolerance.

Contd.



Aluminium Conductor Steel Reinforced (A.C.S.R.)



Name	Nominal Cross Sectional Area mm ²	Number and Nominal Diameters of Wires		Max. D.C. Resistance at 20°C ohm/km	Rated Strength kN	Approx. Overall Diameter mm	Approx. Weight kg/km
		Aluminium No x \varnothing (mm)	Steel No x \varnothing (mm)				
b-According to BS EN 50182-Germany							
MOLE	12.4	6x1.50	1x1.50	2.7027	4.14	4.50	42.8
SQUIRREL	24.5	6x2.11	1x2.11	1.3659	7.87	6.33	84.7
GOPHER	30.6	6x2.36	1x2.36	1.0919	9.58	7.08	106.0
WEASEL	36.9	6x2.59	1x2.59	0.9065	11.38	7.77	127.6
FOX	42.8	6x2.79	1x2.79	0.7812	13.21	8.37	148.1
FERRET	49.5	6x3.00	1x3.00	0.6757	15.27	9.00	171.2
RABBIT	61.7	6x3.35	1x3.35	0.5419	18.42	10.1	213.5
MINK	73.6	6x3.66	1x3.66	0.4540	21.67	11.0	254.9
SKUNK	100.1	12x2.59	7x2.59	0.4568	52.79	13.0	463.0
BEAVER	87.5	6x3.99	1x3.99	0.3820	25.76	12.0	302.9
HORSE	116.2	12x2.79	7x2.79	0.3936	61.26	14.0	537.3
RACCOON	92.0	6x4.09	1x4.09	0.3635	27.06	12.3	318.3
OTTER	97.9	6x4.22	1x4.22	0.3415	28.81	12.7	338.8
CAT	111.3	6x4.50	1x4.50	0.3003	32.76	13.5	385.3
HARE	122.5	6x4.72	1x4.72	0.2730	36.04	14.2	423.8
DOG	118.5	6x4.72	7x1.57	0.2733	32.65	14.2	394.0
COYOTE	151.8	26x2.54	7x1.91	0.2192	45.86	15.9	520.7
COUGAR	138.8	18x3.05	1x3.05	0.2188	29.74	15.3	418.8
TIGER	161.9	30x2.36	7x2.36	0.2202	57.87	16.5	602.2
WOLF	194.9	30x2.59	7x2.59	0.1829	68.91	18.1	725.3
DINGO	167.5	18x3.35	1x3.35	0.1814	35.87	16.8	505.2
LYNX	226.2	30x2.79	7x2.79	0.1576	79.97	19.5	841.6
CARACAL	194.5	18x3.61	1x3.61	0.1562	40.74	18.1	586.7
PANTHER	261.5	30x3.00	7x3.00	0.1363	92.46	21.0	973.1
JAGUAR	222.3	18x3.86	1x3.86	0.1366	46.57	19.3	670.8
LION	293.9	30x3.18	7x3.18	0.1213	100.47	22.3	1093.4
BEAR	326.1	30x3.35	7x3.35	0.1093	111.50	23.5	1213.4
GOAT	400.0	30x3.71	7x3.71	0.0891	135.13	26.0	1488.2
SHEEP	462.6	30x3.99	7x3.99	0.0771	156.30	27.9	1721.3
ANTELOPE	422.6	54x2.97	7x2.97	0.0773	118.88	26.7	1413.8
BISON	431.2	54x3.00	7x3.00	0.0758	121.30	27.0	1442.5
DEER	529.8	30x4.27	7x4.27	0.0673	179.00	29.9	1971.4
ZEBRA	484.5	54x3.18	7x3.18	0.0674	131.92	28.6	1620.8
ELK	588.5	30x4.50	7x4.50	0.0606	198.80	31.5	2189.5
CAMEL	538.7	54x3.35	7x3.35	0.0608	146.40	30.2	1798.8
MOOSE	597.0	54x3.53	7x3.53	0.0547	159.92	31.8	1997.3

The above data is approximate and subjected to manufacturing tolerance.

Contd.

Overhead Conductors

Aluminium Conductor Steel Reinforced (A.C.S.R.)



Name	Nominal Cross Sectional Area mm ²	Number and Nominal Diameters of Wires		Calculated D.C. Resistance at 20°C ohm/km	Calculated Rated Tensile Strength kN	Approx. Overall Diameter mm	Approx. Weight	
		Aluminium No x ∅ (mm)	Steel No x ∅ (mm)				Aluminium kg/km	Steel kg/km
c-According to BS EN 50182-Germany								
GROUSE	40.5	8x2.54	1x4.24	0.7112	23.1	9.3	112	110
PETREL	51.6	12x2.34	7x2.34	0.5614	46.2	11.7	143	235
MINORCA	56.1	12x2.44	7x2.44	0.5163	50.2	12.2	156	256
LEGHORN	68.2	12x2.69	7x2.69	0.4248	60.7	13.5	189	311
GUINEA	80.4	12x2.92	7x2.92	0.3605	71.1	14.6	223	367
DOTTEREL	89.4	12x3.08	7x3.08	0.3240	76.7	15.4	248	409
DORKING	96.5	12x3.20	7x3.20	0.3002	82.8	16.0	268	441
BRAHMA	102.8	16x2.86	19x2.48	0.2819	126.5	18.1	285	722
COCHIN	107.1	12x3.37	7x3.37	0.2707	91.8	16.9	297	488
TURKEY	13.3	6x1.68	1x1.68	2.1570	5.3	5.0	36	17
SWAN	21.2	6x2.12	1x2.12	1.3545	8.3	6.4	58	27
SWANATE	21.1	7x1.96	1x2.61	1.3583	10.5	6.5	58	42
SPARROW	33.6	6x2.67	1x2.67	0.8530	12.7	8.0	92	44
SPARATE	33.5	7x2.47	1x3.30	0.8553	16.1	8.3	92	67
ROBIN	42.4	6x3.00	1x3.00	0.6764	15.8	9.0	117	55
RAVEN	53.5	6x3.37	1x3.37	0.5364	19.5	10.1	147	69
QUAIL	67.4	6x3.78	1x3.78	0.4255	23.6	11.4	185	87
PIGEON	85.1	6x4.25	1x4.25	0.3370	29.5	12.7	233	110
PENGUIN	107.2	6x4.77	1x4.77	0.2676	37.1	14.3	294	139
WAXWING	135.0	18x3.09	1x3.09	0.2133	30.3	15.5	373	59
PARTRIDGE	134.9	26x2.57	7x2.00	0.2142	50.2	16.3	373	172
OSTRICH	152.2	26x2.73	7x2.12	0.1906	56.6	17.3	421	193
MERLIN	170.2	18x3.47	1x3.47	0.1692	38.2	17.4	470	74
LINNET	170.6	26x2.89	7x2.25	0.1699	62.8	18.3	472	217
ORIOLE	170.5	30x2.69	7x2.69	0.1704	77.4	18.8	473	311
CHICKADEE	200.9	18x3.77	1x3.77	0.1432	44.3	18.9	555	87
BRANT	201.6	24x3.27	7x2.18	0.1437	64.7	19.6	558	204
IBIS	201.3	26x3.14	7x2.44	0.1438	72.1	19.9	558	256
LARK	200.9	30x2.92	7x2.92	0.1442	88.7	20.5	559	367
PELICAN	242.3	18x4.14	1x4.14	0.1193	52.3	20.7	667	105
FLICKLER	241.6	24x3.58	7x2.39	0.1199	76.8	21.5	670	245
HAWK	241.7	26x3.44	7x2.67	0.1199	86.4	21.8	670	308
HEN	241.3	30x3.20	7x3.20	0.1202	105.9	22.4	672	440
OSPREY	282.5	18x4.47	1x4.47	0.1022	61.0	22.3	777	122
PARAKEET	282.3	24x3.87	7x2.58	0.1026	88.3	23.2	782	285
DOVE	282.6	26x3.72	7x2.89	0.1025	101.1	23.5	781	359
EAGLE	282.1	30x3.46	7x3.46	0.1030	122.9	24.2	783	514
PEACOCK	306.1	24x4.03	7x2.69	0.0945	95.9	24.2	850	311
SQUAB	305.8	26x3.87	7x3.01	0.0945	108.1	24.5	849	390
WOOD DUCK	307.1	30x3.61	7x3.61	0.0947	129.0	25.3	851	559
TEAL	307.1	30x3.61	19x2.16	0.0947	133.4	25.3	851	547
SWIFT	323.0	36x3.38	1x3.38	0.0893	60.7	23.7	888	70
KINGBIRD	323.0	18x4.78	1x4.78	0.0894	69.7	23.9	889	139
ROOK	323.1	24x4.14	7x2.76	0.0899	101.0	24.8	893	326

The above data is approximate and subjected to manufacturing tolerance.

Contd.



Aluminium Conductor Steel Reinforced (A.C.S.R.)



Name	Nominal Cross Sectional Area mm ²	Number and Nominal Diameters of Wires		Calculated D.C. Resistance at 20°C ohm/km	Calculated Rated Tensile Strength kN	Approx. Overall Diameter mm	Approx. Weight	
		Aluminium No x Æ (mm)	Steel No x Æ (mm)				Aluminium kg/km	Steel kg/km
c-According to ASTM B 232								
GROSBEAK	321.8	26x3.97	7x3.09	0.0900	111.9	25.2	893	409
SCOTER	322.6	30x3.70	7x3.70	0.0900	135.5	25.9	895	588
EGRET	322.6	30x3.70	19x2.22	0.0900	140.6	25.9	895	575
FLAMINGO	337.3	24x4.23	7x2.82	0.0859	105.5	25.4	936	342
GANNET	338.3	26x4.07	7x3.16	0.0857	117.3	25.8	936	429
STILT	363.3	24x4.39	7x2.92	0.0798	113.3	26.3	1005	367
STARLING	361.9	26x4.21	7x3.28	0.0800	126.0	26.7	1004	461
REDWING	362.1	30x3.92	19x2.35	0.0801	154.0	27.5	1006	646
CUCKOO	402.3	24x4.62	7x3.08	0.0720	124.5	27.7	1116	408
DRAKE	402.6	26x4.44	7x3.45	0.0720	139.7	28.1	1117	511
TERN	403.8	45x3.38	7x2.25	0.0720	97.5	27.0	1115	217
COOT	401.9	36x3.77	1x3.77	0.0717	74.7	26.4	1111	87
CONDOR	402.3	54x3.08	7x3.08	0.0720	124.3	27.7	1115	407
MALLARD	403.8	30x4.14	19x2.48	0.0721	171.2	29.0	1119	718
RUDDY	455.5	45x3.59	7x2.40	0.0636	109.4	28.7	1263	246
CANARY	456.3	54x3.28	7x3.28	0.0635	141.0	29.5	1263	461
RAIL	483.8	45x3.70	7x2.47	0.0599	116.1	29.6	1339	261
CATBIRD	484.6	36x4.14	1x4.14	0.0595	87.9	29.0	1335	105
CARDINAL	484.5	54x3.38	7x3.38	0.0599	149.7	30.4	1338	490
ORTLAN	523.9	45x3.85	7x2.57	0.0553	123.3	30.8	1450	283
TANAGER	522.8	36x4.30	1x4.30	0.0551	94.8	30.1	1444	113
CURLEW	522.5	54x3.51	7x3.51	0.0553	161.8	31.6	1450	529
BLUEJAY	565.5	45x4.00	7x2.66	0.0513	132.7	32.0	1562	304
FINCH	565.0	54x3.65	19x2.19	0.0516	174.6	32.8	1571	558
BUNTING	605.8	45x4.14	7x2.76	0.0479	142.4	33.1	1674	326
GRAKCLE	602.8	54x3.77	19x2.27	0.0483	186.9	34.0	1681	599
BITTERN	644.4	45x4.27	7x2.85	0.0450	151.6	34.2	1786	348
PHEASANT	645.1	54x3.90	19x2.34	0.0452	194.1	35.1	1795	639
SKYLARK	643.3	36x4.77	1x4.77	0.0448	116.7	33.4	1777	140
DIPPER	684.2	45x4.40	7x2.93	0.0423	160.7	35.2	1897	370
MARTIN	685.4	54x4.02	19x2.41	0.0425	206.1	36.2	1906	679
BOBOLINK	725.2	45x4.53	7x3.02	0.0399	170.5	36.3	2010	392
PLOVER	726.9	54x4.14	19x2.48	0.0401	218.4	37.2	2019	719
NUTHATCH	746.2	45x4.65	7x3.10	0.0379	177.6	37.2	2120	413
PARROT	766.1	54x4.25	19x2.55	0.0380	230.5	38.2	2129	758
LAPWING	807.5	45x4.77	7x3.18	0.0359	187.4	38.2	2232	435
FALCON	806.2	54x4.36	19x2.62	0.0361	243.0	39.2	2242	799

The above data is approximate and subjected to manufacturing tolerance.

Concentric Cables

**Single Core or Multi Core Copper or Aluminium Conductor
XLPE/PVC Insulated, Concentric Conductor and PVC/Polyethylene Sheathed**

Description



The insulated neutrals and bare earth wires are laid in a concentric layer around the insulated phase conductor with PVC string separators separating the neutral and earths. This is then bound with a clear polyester tape and then PVC/Polyethylene sheathed.

Cables are produced according to IEC 60502, BS 60228 or Equivalent Standard

CONSTRUCTION

Conductor- Copper/Aluminium conductor

Insulation- XLPE (Cross-Linked Polyethylene)/ PVC (Polyvinyl Chloride)

Inner Sheath- PVC (Polyvinyl Chloride) of Black Colour In case of Multi Core

Laid Up- In case of Multi Core

Concentric Conductor- Single layer of plain copper/aluminium wires

Sheath- PVC (Polyvinyl Chloride)/ Polyethylene of Black Colour

Application

Used by distribution network operators (DNO's) when providing the final connection to domestic properties. Also suitable for sub main distribution and particularly used within high-rise buildings and street lighting systems

Nominal Cross Sectional Area	Max. D.C Resistance at 20°C		Max A.C Resistance at 90°C		Current Rating Laid in Air at Ambient Temperature 30°C	
	ALU	CU	ALU	CU	ALU	CU
mm ²	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km	A	A
4	-	4.61	-	5.88	-	39
6	-	3.08	-	3.93	-	49
10	3.08	1.83	3.95	2.33	53	67
16	1.91	1.15	2.45	1.47	72	92
25	1.20	0.727	1.54	0.927	94	123

The above data is approximate and subjected to manufacturing tolerance.





Airdac Cable

**Single Core or Multi Core Copper Conductor
XLPE Insulated, Concentric Conductor, Pilot Core, Nylon Ripcord and Polyethylene Sheathed**



Description

Circular stranded hard drawn copper phase conductor, XLPE insulated with concentrically arranged identified neutral and bare earth conductors. Polyethylene sheathed 600/1000V service connection cable. Nylon ripcord laid under sheath

Cables are produced according to SANS 1507 and NRS 063, IEC 60502 or Equivalent Standard

Application

Airdac Cables have been used by most municipalities, contractors and Utilities for the national supply of electrical power to domestic and rural housing projects where conventional and split prepayment meters are being used .

Nominal Cross Sectional Area of Phase	Nominal Cross Sectional Area of Earth Wire	Nominal Cross Sectional Area of Neutral Size	Max. D.C Resistance of Phase at 20°C	Current Rating Laid in Air at Ambient Temperature 30°C
mm ²	mm ²	mm ²	Ohm/Km	A
10	7.5	10	1.83	50
16	10	16	1.15	70

The above data is approximate and subjected to manufacturing tolerance.





Aerial View of Plant-2 situated at Jaipur

Low Voltage Cables

Operating Voltage (Up to 0.6 / 1 kV)

Cable Construction

- 1. Conductor**
Copper or Aluminium conductors, solid, stranded or flexible with round or sectoral shaped conductors.
- 2. Insulation**
An extruded layer of PVC or XLPE is applied over the conductor. PVC insulated cable are suitable for maximum conductor operating temperature of 70°C or 85°C and 90 °C for XLPE.
- 3. Assembly**
In case of multicore cables cores are assembled together using non hygroscopic filler (if needed) to fill space between cores, wrapped with suitable binder tape to form a round cable.
- 4. Bedding**
In case of armoured cables an extruded layer of PVC is applied as bedding.
- 5. Armouring**
 - a. Steel Tape: Double layers of steel tapes are applied helically.
 - b. Steel Wire: Galvanized steel wires are applied helically.
- 6. Sheath**
An extruded layer of PVC is applied as an outer sheath or according to the client special requirements.

Option

Lead sheath: Upon request a layer of lead is extruded over the bedding layer.

Armouring of single core cable

1. Armouring by non-magnetic material either Aluminium Tape or Aluminium Wire armouring to reduce the magnetic losses.
2. If it is required for single core cable to be armoured by steel wire armouring the magnetic circuit around the single core cable should be interrupted by inserting insulated copper wires between the steel wires as shown in the figure.



Armouring of Single Core Cable

450 / 750 V

Single Core Cables with Solid or Stranded Copper Conductors and PVC Insulated



Description

Soft annealed solid or stranded Copper conductors insulated with PVC compound rated 70 °C or 90 °C according to IEC 60227 & BS 6004.

Application

For indoor fixed installations in dry locations, laid in conduits, as well as in steel support brackets.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating in Air		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Free A	In Pipes A		
1.5	12.1000	14.6000	17	13	2.8	20
1.5	12.1000	14.6000	17	13	3.0	21
2	9.1500	10.9000	19	15	3.2	27
2	9.1500	10.9000	19	15	3.4	28
2.5	7.4100	8.8900	24	19	3.4	31
2.5	7.4100	8.8900	24	19	3.6	33
3	6.1000	7.4100	27	21	3.6	37
3	6.1000	7.4100	27	21	3.8	39
4	4.6100	5.5100	32	23	3.9	47
4	4.6100	5.5100	32	23	4.2	50
6	3.0800	3.6800	40	29	4.4	68
6	3.0800	3.6800	40	29	4.7	71
10	1.8300	2.1700	57	41	6.1	117
16	1.1500	1.3700	76	54	7.1	177
25	0.7270	0.8600	103	70	8.8	278
35	0.5240	0.6300	128	87	9.9	371
50	0.3870	0.4600	156	106	11.8	514
70	0.2680	0.3200	200	131	13.5	711
95	0.1930	0.2300	251	166	15.7	967
120	0.1530	0.1900	293	190	17.4	1240
150	0.1240	0.1500	335	219	19.4	1500
185	0.0991	0.1200	390	250	21.5	1852
240	0.0754	0.0920	471	300	24.7	2457
300	0.0601	0.0750	540	340	27.2	2977

The above data is approximate and subjected to manufacturing tolerance



450 / 750 V

Single Core Cables with Flexible Copper Conductors and PVC Insulated



Description

Soft annealed Copper fine wires bunched together in subunits or stranded bunched groups into a main units, which forms the flexible conductor insulated with soft PVC 70 °C or 90 °C Compound.

Cable are produced according to IEC 60227 or BS 6004.

Application

For indoor fixed installations in dry locations, where particular flexibility is required. For electrical panels connection or for electrical apparatus they can be laid in groups around steel sheets.

Nominal Cross Sectional Area mm ²	Maximum Diameter of Wire mm	Max. Conductor Resistance		Current Rating in Air		Approx. Overall Diameter mm	Approx. Weight kg/km
		DC at 20 °C ohm/km	AC at 70 °C ohm/km	Free A	In Pipes A		
1.5	0.26	13.3000	15.9500	17	13	3.0	21
2.5	0.26	7.9800	9.5600	24	19	3.7	34
4	0.31	4.9500	5.9300	32	23	4.5	50
6	0.31	3.3000	3.9500	40	29	5.1	71
10	0.41	1.9100	2.2900	57	41	6.9	120
16	0.41	1.2100	1.4500	76	54	7.6	179
25	0.41	0.7800	0.9400	103	70	9.5	276
35	0.41	0.5540	0.6630	128	87	11.0	375
50	0.41	0.3860	0.4620	156	106	12.6	542
70	0.51	0.2720	0.3260	200	131	14.6	733
95	0.51	0.2060	0.2470	251	166	16.8	957
120	0.51	0.1610	0.1930	293	190	18.9	1243
150	0.51	0.1290	0.1550	335	219	21.2	1548
185	0.51	0.1060	0.1270	390	250	23.4	1895
240	0.51	0.0801	0.0960	471	300	26.7	2400

The above data is approximate and subjected to manufacturing tolerance



0.6/1 (1.2) kV

Single Core Cables, with Stranded Circular Copper Conductors, PVC Insulated and PVC Sheathed



Description

Soft annealed stranded Copper or Aluminium conductor. Insulated with PVC compound rated 70 °C and sheathed with PVC Compound layer.

Cables are produced according to IEC 60502

Application

For outdoor and indoor installations in damp and wet locations. They are normally used for power distribution in urban network, industrial plants, as well as in thermopower and hydropower stations.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating						Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid in Ground			Laid in Free Air				
			⊙⊙⊙	⊙⊙	⊙	⊙	⊙⊙⊙	⊙⊙		
			A	A	A	A	A	A		
a - Copper Conductors										
4	4.6100	5.5100	42	40	32	37	33	29	7.0	86
6	3.0800	3.6800	52	50	40	48	42	38	7.9	115
10	1.8300	2.1700	70	67	52	66	58	51	8.9	165
16	1.1500	1.3700	90	85	65	80	75	65	9.9	231
25	0.7270	0.8600	115	110	85	105	95	90	11.6	343
35	0.5240	0.6300	135	130	105	130	125	110	12.7	445
50	0.3870	0.4600	160	155	125	160	150	135	14.6	600
70	0.2680	0.3200	200	190	155	200	190	170	16.3	805
95	0.1930	0.2300	235	225	185	250	240	210	18.7	1085
120	0.1530	0.1900	270	255	210	285	275	245	20.4	1350
150	0.1240	0.1500	300	285	235	330	320	280	22.6	1654
185	0.0991	0.1200	345	325	270	380	370	320	24.9	2030
240	0.0754	0.0920	400	375	310	480	460	385	28.3	2675
300	0.0601	0.0750	450	420	350	550	530	450	31.1	3280
400	0.0470	0.0590	515	475	390	630	615	520	35.3	4350
500	0.0366	0.0480	580	525	435	720	700	600	38.8	5355
630	0.0283	0.0390	660	590	495	830	810	680	42.7	6685
800	0.0221	0.0290	740	650	555	940	920	775	47.2	8600
1000	0.0176	0.0250	820	710	605	1030	1010	860	52.0	10500

The above data is approximate and subjected to manufacturing tolerance



0.6/1 (1.2) kV

Single Core Cables, with Stranded Circular Aluminium Conductors, PVC Insulated and PVC Sheathed



Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating						Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid in Ground			Laid in Free Air				
			⦿⦿⦿	⦿⦿	⦿	⦿	⦿⦿	⦿⦿		

b - Aluminium Conductors

16	1.9100	2.2900	65	63	50	65	60	45	9.9	132
25	1.2000	1.4400	85	83	65	85	80	65	11.6	185
35	0.8680	1.0400	105	102	80	105	100	85	12.6	250
50	0.6410	0.7700	125	120	95	125	120	105	14.6	295
70	0.4430	0.5330	155	145	120	165	155	125	16.3	375
95	0.3200	0.3850	185	175	135	205	195	160	18.7	500
120	0.2530	0.3050	210	200	165	235	225	185	20.4	605
150	0.2060	0.2480	235	225	180	265	255	210	22.6	725
185	0.1640	0.1980	265	255	205	310	300	245	24.8	900
240	0.1250	0.1510	310	295	240	365	355	290	28.3	1150
300	0.1000	0.1220	355	335	270	420	405	335	31.1	1420
400	0.0778	0.0954	410	380	310	500	480	390	35.3	1750
500	0.0605	0.0751	465	430	355	580	560	460	38.8	2220
630	0.0469	0.0595	535	490	405	680	660	535	42.7	2750
800	0.0367	0.0470	600	530	450	765	745	620	47.2	3450
1000	0.0291	0.0370	665	585	495	840	820	690	52.0	4230

The above data is approximate and subjected to manufacturing tolerance.



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, PVC Insulated and PVC Sheathed



Description

Multicore cables of stranded Copper conductors are insulated with PVC compound rated 70°C, assembled together, covered with overall jacket of PVC compound. Cables are produced according to IEC 60502

Application

For outdoor and indoor installations in damp and wet locations

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
1.5	12.1000	14.600	24	19	20	10.1	120
2.5	7.4100	8.870	30	25	28	10.9	145
4	4.6100	5.540	40	32	39	12.9	205
6	3.0800	3.690	50	40	50	13.9	255
10	1.8300	2.190	65	55	66	15.0	425
16	1.1500	1.390	85	65	88	17.0	580
25	0.7270	0.870	110	85	116	20.0	845
35	0.5240	0.628	130	105	143	22.2	1090
Three Core Cables							
1.5	12.1000	14.600	21	18	18	10.6	145
2.5	7.4100	8.870	27	23	22	11.5	190
4	4.6100	5.540	35	30	31	13.6	270
6	3.0800	3.690	45	36	39	14.7	340
10	1.8300	2.190	60	48	53	16.4	485
16	1.1500	1.390	75	60	72	18.6	685
25	0.7270	0.870	100	80	94	21.8	995
35	0.5240	0.628	120	95	110	24.2	1300
Four Core Cables							
1.5	12.1000	14.6000	21	18	18	11.4	180
2.5	7.4100	8.8700	27	23	22	12.4	230
4	4.6100	5.5400	35	30	31	14.8	335
6	3.0800	3.6900	45	36	39	16.0	425
10	1.8300	2.1900	60	48	53	17.9	635
16	1.1500	1.3900	75	60	72	20.3	880
25	0.7270	0.8700	100	80	94	23.9	1295
35	0.5240	0.6280	120	95	110	26.6	1700
50	0.3870	0.4640	145	115	138	29.3	2225
70	0.2680	0.3220	175	145	171	32.9	3065
95	0.1930	0.2320	210	165	209	37.8	4175
120	0.1530	0.1850	240	195	242	41.2	5205
150	0.1240	0.1510	270	220	275	45.9	6400
185	0.0991	0.1210	300	245	314	50.7	7960
240	0.0754	0.0840	345	290	374	57.0	10330
300	0.0601	0.0770	390	320	440	63.3	12915
400	0.047	0.0606	453	376	507	70.1	16500
500	0.0366	0.0491	510	429	566	77.6	21085



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, PVC Insulated and PVC Sheathed



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx. Weight
M	N	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A	mm	kg/km
Three & Half Core Cables								
35	16	0.5240/1.1500	0.6280/1.3900	120	95	110	25.0	1505
50	25	0.3870/0.7270	0.4640/0.8700	145	115	138	28.1	2115
70	35	0.2680/0.5240	0.3220/0.6280	175	145	171	31.4	2725
95	50	0.1930/0.3870	0.2320/0.4640	210	165	209	36.1	3690
120	70	0.1530/0.2680	0.1850/0.3220	240	195	242	39.5	4675
150	70	0.1240/0.2680	0.1510/0.3220	270	220	275	43.5	5580
185	95	0.0991/0.1930	0.1210/0.2320	300	245	314	48.2	7025
240	120	0.0754/0.1530	0.0840/0.1850	345	290	374	54.2	9060
300	150	0.0601/0.1240	0.0770/0.1510	390	320	440	60.0	11280
400	185	0.0470/0.0991	0.0606/0.1210	453	376	507	66.0	15270
500	240	0.0366/0.0754	0.0491/0.0840	510	429	566	73.3	19205

The above data is approximate and subjected to manufacturing tolerance



0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminium Conductors, PVC Insulated and PVC Sheathed



Description

Multicore Cables of stranded Aluminium conductors are insulated with PVC compound rated 70 °C, assembled together, covered with overall jacket of PVC compound

Cables are produced according to IEC 60502

Application

For outdoor and indoor installations in damp and wet locations.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
10 rm	3.080	3.300	46	39	46	15.0	295
16 rm	1.910	2.290	60	46	62	17.0	385
25 rm	1.200	1.440	77	60	81	20.0	540
35 rm	0.868	1.040	103	83	114	22.2	670
Three Core Cables							
10 rm	3.080	3.300	42	34	37	16.4	305
16 rm	1.910	2.290	53	42	50	18.6	400
25 rm	1.200	1.440	70	56	66	21.8	550
35 rm	0.868	1.040	95	75	88	24.2	680
Four Core Cables							
10 rm	3.0800	3.3000	42	34	37	17.9	395
16 rm	1.9100	2.2900	53	42	50	20.3	495
25 rm	1.2000	1.4400	70	56	66	23.9	700
35 rm	0.8680	1.0400	95	75	88	26.6	870
50 sm	0.6410	0.7710	115	85	105	29.3	1060
70 sm	0.4430	0.5330	135	110	132	32.9	1380
95 sm	0.3200	0.3850	165	130	160	37.8	1865
120 sm	0.2530	0.3050	185	150	187	41.2	2300
150 sm	0.2060	0.2490	210	170	215	45.9	2760
185 sm	0.1640	0.1990	235	195	248	50.7	3400
240 sm	0.1250	0.1510	275	225	292	57.0	4345
300 sm	0.1000	0.1230	310	260	347	63.3	5400
400 sm	0.0778	0.0962	361	300	405	70.1	6890
500 sm	0.0605	0.0761	413	348	459	77.6	8500

The above data is approximate and subjected to manufacturing tolerance



0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminium Conductors, PVC Insulated and PVC Sheathed



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
		DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
M	N							

Three & Half Core Cables

35	16	0.8680/1.9100	1.0430/2.2900	95	75	88	25.0	720
50	25	0.6410/1.2000	0.7710/1.4400	115	85	105	28.1	970
70	35	0.4430/0.8680	0.5330/1.0400	135	110	132	31.4	1240
95	50	0.3200/0.6410	0.3850/0.7710	165	130	160	36.1	1660
120	70	0.2530/0.4430	0.3050/0.5330	185	150	187	39.5	2040
150	70	0.2060/0.4430	0.2490/0.5330	210	170	215	43.5	2435
185	95	0.1640/0.3200	0.1990/0.3850	235	195	248	48.2	3025
240	120	0.1250/0.2530	0.1510/0.3050	275	225	292	54.2	3830
300	150	0.1000/0.2060	0.1230/0.2490	310	260	347	60.0	4720
400	185	0.0778/0.1640	0.0962/0.1990	361	300	405	66.0	5980
500	240	0.0605/0.1250	0.0761/0.1510	413	348	459	73.3	7460

The above data is approximate and subjected to manufacturing tolerance



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, PVC Insulated Steel Tape Armoured and PVC Sheathed



Description

Multicore Cables of stranded Copper conductors are insulated with PVC compound rated 70 °C, assembled together, armoured with steel tape and covered with overall jacket of PVC compound

Cables are produced according to IEC 60502

Application

For outdoor installations in damp and wet locations, where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Director in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
6	3.0800	3.6900	50	40	50	16.9	460
10	1.8300	2.1900	65	55	66	17.0	560
16	1.1500	1.3900	85	65	88	19.0	740
25	0.7270	0.8700	110	85	116	22.0	1030
35	0.5240	0.6280	130	105	143	24.2	1295
Three Core Cables							
4	4.6100	5.5400	35	30	31	16.4	440
6	3.0800	3.6900	45	36	39	17.5	525
10	1.8300	2.1900	60	48	53	18.4	640
16	1.1500	1.3900	75	60	72	20.6	860
25	0.7270	0.8700	100	80	94	23.8	1200
35	0.5240	0.6280	120	95	110	26.2	1530
Four Core Cables							
4	4.6100	5.5400	35	30	31	17.6	520
6	3.0800	3.6900	45	36	39	18.8	630
10	1.8300	2.1900	60	48	53	19.9	805
16	1.1500	1.3900	75	60	72	22.3	1070
25	0.7270	0.8700	100	80	94	25.9	1520
35	0.5240	0.6280	120	95	110	28.6	1950
50	0.3870	0.4640	145	115	138	32.7	2640
70	0.2680	0.3220	175	145	171	37.5	3915
95	0.1930	0.2320	210	165	209	42.4	5140
120	0.1530	0.1850	240	195	242	46.2	6310
150	0.1240	0.1510	270	220	275	50.9	7615
185	0.0991	0.1210	300	245	314	56.1	9365
240	0.0754	0.0840	345	290	374	62.6	12790
300	0.0601	0.0770	390	320	440	68.7	14645
400	0.0470	0.0606	444	373	500	74.9	18510
500	0.0366	0.0491	499	425	556	83.8	23700



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, PVC Insulated Steel Tape Armoured and PVC Sheathed



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Overall Diameter mm	Approx Weight kg/km
		DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
M	N							
		Three & Half Core Cables						
35	16	0.5240/1.1500	0.6280/1.3900	120	95	110	27.0	1740
50	25	0.3870/0.7270	0.4640/0.8700	145	115	138	30.9	2365
70	35	0.2680/0.5240	0.3220/0.6280	175	145	171	34.6	3155
95	50	0.1930/0.3870	0.2320/0.4640	210	165	209	40.7	4625
120	70	0.1530/0.2680	0.1850/0.3220	240	195	242	44.5	5730
150	70	0.1240/0.2680	0.1510/0.3220	270	220	275	48.5	6740
185	95	0.0991/0.1930	0.1210/0.2320	300	245	314	53.2	8300
240	120	0.0754/0.1530	0.0840/0.1850	345	290	374	59.6	10550
300	150	0.0601/0.1240	0.0770/0.1510	390	320	440	65.4	12920
400	185	0.0470/0.0991	0.0606/0.1210	444	373	500	70.8	16360
500	240	0.0366/0.0754	0.0491/0.0840	499	425	556	79.5	21000

The above data is approximate and subjected to manufacturing tolerance



FOLLOW THE PROCESS, QUALITY WILL FOLLOW

0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminium Conductors, PVC Insulated Steel Tape Armoured and PVC Sheathed



Description

Multicore Cables of stranded Aluminium conductors are insulated with PVC compound rated 70 °C, assembled together, armoured with steel tape and covered with overall jacket of PVC compound

Cables are produced according to IEC 60502

Application

For outdoor installations in damp and wet locations, where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
10	3.080	3.300	46	39	46	17.0	435
16	1.910	2.290	60	46	62	19.0	545
25	1.200	1.440	77	60	81	22.0	730
35	0.868	1.040	103	83	115	24.2	880
Three Core Cables							
10	3.080	3.300	42	34	37	18.4	460
16	1.910	2.290	53	42	50	20.6	570
25	1.200	1.440	70	56	66	23.8	750
35	0.868	1.040	95	75	88	26.2	905
Four Core Cables							
10	3.0800	3.3000	42	34	37	19.9	560
16	1.9100	2.2900	53	42	50	22.3	680
25	1.2000	1.4400	70	56	66	25.9	920
35	0.8680	1.0430	95	75	88	28.6	1120
50	0.6410	0.7710	115	85	105	32.7	1475
70	0.4430	0.5530	135	110	132	37.5	2225
95	0.3200	0.3850	165	130	160	42.4	2830
120	0.2530	0.3050	185	150	187	46.2	3360
150	0.2060	0.2490	210	170	215	50.9	3975
185	0.1640	0.1990	235	195	248	56.1	4815
240	0.1250	0.1510	275	225	292	62.6	5925
300	0.1000	0.1230	310	260	347	68.7	7125
400	0.0778	0.0962	355	298	399	74.9	8950
500	0.0605	0.0761	406	346	452	83.8	11390



0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminium Conductors, PVC Insulated Steel Tape Armoured and PVC Sheathed



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
		DC at 20 °C	AC at 70 °C	Laid Direct in Ground	Laid in Ducts	Laid in Free Air		
M	N	ohm/km	ohm/km	A	A	A		
Three & Half Core Cables								
35	16	0.8680/1.9100	1.0430/2.2900	95	75	88	27.0	1020
50	25	0.6410/1.2000	0.7710/1.4400	115	85	105	30.9	1330
70	35	0.4430/0.8680	0.5330/1.0400	135	110	132	34.6	1675
95	50	0.3200/0.6410	0.3850/0.7710	165	130	160	40.7	2585
120	70	0.2530/0.4430	0.3050/0.5330	185	150	187	44.5	3100
150	70	0.2060/0.4430	0.2490/0.5330	210	170	215	48.5	3590
185	95	0.1640/0.3200	0.1990/0.3850	235	195	248	53.2	4300
240	120	0.1250/0.2530	0.1510/0.3050	275	225	292	59.6	5325
300	150	0.1000/0.2060	0.1230/0.2490	310	260	347	65.4	6365
400	185	0.0778/0.1640	0.0962/0.1990	355	298	399	70.8	8000
500	240	0.0605/0.1250	0.0761/0.1510	406	346	452	79.5	10250

The above data is approximate and subjected to manufacturing tolerance.



FOLLOW THE PROCESS, QUALITY WILL FOLLOW

0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, PVC Insulated, Steel Wire Armoured and PVC Sheathed



Description

Multicore Cables of stranded Copper conductors are insulated with PVC compound rated 70 °C, assembled together armoured with steel wires and covered with overall jacket of PVC compound

Cables are produced according to IEC 60502 or BS 6346

Application

For outdoor installations in damp and wet locations, where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
4	4.6100	5.5400	40	32	39	17.8	645
6	3.0800	3.6900	50	40	50	18.8	735
10	1.8300	2.1900	65	55	66	19.2	815
16	1.1500	1.3900	85	65	88	21.2	1030
25	0.7270	0.8700	110	85	116	25.3	1535
35	0.5240	0.6280	130	105	143	27.5	1790
Three Core Cables							
4	4.6100	5.5400	35	30	31	18.5	730
6	3.0800	3.6900	45	36	39	19.6	835
10	1.8300	2.1900	60	48	53	20.6	920
16	1.1500	1.3900	75	60	72	22.8	1175
25	0.7270	0.8700	100	80	94	27.1	1765
35	0.5240	0.6280	120	100	110	29.5	2145
Four Core Cables							
4	4.6100	5.5400	37	29	29	19.7	840
6	3.0800	3.6900	47	37	37	20.9	965
10	1.8300	2.1900	63	50	50	22.1	1115
16	1.1500	1.3900	79	68	68	25.6	1590
25	0.7270	0.8700	105	89	89	29.2	2125
35	0.5240	0.6280	120	95	116	32.1	2635
50	0.3870	0.4640	145	115	143	37.1	3870
70	0.2680	0.3220	175	145	176	40.7	4900
95	0.1930	0.2320	210	165	215	46.6	6665
120	0.1530	0.1850	240	195	248	50.6	7990
150	0.1240	0.1510	270	220	281	55.1	9445
185	0.0991	0.1210	300	245	319	60.5	11425
240	0.0754	0.0840	345	290	380	66.8	14205
300	0.0601	0.0770	390	320	446	72.9	17870
400	0.0470	0.0606	427	361	490	80.0	21275
500	0.0366	0.0491	472	403	536	87.7	26595



0.6/1 (1.2) kV

**Multicore Cables, with Stranded Copper Conductors
PVC Insulated, Steel Wire Armoured and PVC Sheathed**



Nominal CrossDC at Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Approx. Diameter	Weight
M	N	AC at 20 °C ohm/km	Laid Direct 70 °C ohm/km	Laid in in Ground A	Laid in Ducts A	Overall Free Air A	mm	kg/km
Three & Half Core Cables								
35	16	0.5240/1.1500	0.6280/1.3900	120	95	116	28.7	2310
50	25	0.3870/0.7270	0.4640/0.8700	145	115	143	35.5	3550
70	35	0.2680/0.5240	0.3220/0.6280	175	145	176	39.2	4480
95	50	0.1930/0.3870	0.2320/0.4640	210	165	215	42.6	5475
120	70	0.1530/0.2680	0.1850/0.3220	240	195	248	48.9	7385
150	70	0.1240/0.2680	0.1510/0.3220	270	220	281	52.7	8505
185	95	0.0991/0.1930	0.1210/0.2320	300	245	319	57.6	10260
240	120	0.0754/0.1530	0.0840/0.1850	345	290	380	64.0	12755
300	150	0.0601/0.1240	0.0770/0.1510	390	320	446	69.8	15330
400	185	0.0470/0.0991	0.0606/0.1210	427	361	490	75.9	19260
500	240	0.0366/0.0754	0.0491/0.0840	472	403	536	83.4	23630

The above data is approximate and subjected to manufacturing tolerance



FOLLOW THE PROCESS, QUALITY WILL FOLLOW

0.6/1 (1.2) kV

**Multicore Cables, with stranded Aluminium Conductors
PVC Insulated Steel Wire Armoured and PVC Sheathed**



Description

Multicore Cables of stranded Aluminium conductors are insulated with PVC compound rated 70 °C, assembled together, armoured with steel wires and covered with overall jacket of PVC compound.

Cables are produced according to IEC 60502 or BS 6346.

Application

For outdoor installations in damp wet locations, where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
10	3.0800	3.3000	46	39	46	19.2	695
16	1.9100	2.2900	60	46	62	21.2	835
25	1.2000	1.4400	77	60	81	25.3	1235
35	0.8680	1.0400	103	83	115	27.5	1370
Three Core Cables							
10	3.0800	3.3000	42	34	37	20.6	740
16	1.9100	2.2900	53	42	50	22.8	885
25	1.2000	1.4400	70	56	66	27.1	1315
35	0.8680	1.0400	95	75	88	29.5	1525
Four Core Cables							
10	3.0800	3.3000	42	34	37	22.1	870
16	1.9100	2.2900	53	42	50	25.6	1205
25	1.2000	1.4400	70	56	66	29.2	1525
35	0.8680	1.0430	95	75	88	32.1	1805
50	0.6410	0.7710	115	85	105	37.1	3040
70	0.4430	0.5530	135	110	138	40.7	3750
95	0.3200	0.3850	165	130	165	46.6	4730
120	0.2530	0.3050	185	150	193	50.6	5570
150	0.2060	0.2490	210	170	220	55.1	6430
185	0.1640	0.1990	235	195	253	60.5	7790
240	0.1250	0.1510	275	225	297	66.8	9180
300	0.1000	0.1230	310	260	352	72.9	10590
400	0.0778	0.0962	348	294	397	80.0	11715
500	0.0605	0.0761	392	335	443	87.7	14005

The above data is approximate and subjected to manufacturing tolerance



0.6/1 (1.2) kV

**Multicore Cables, with stranded Aluminium Conductors
PVC Insulated, Steel Wire Armoured and PVC Sheathed**



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
		DC at 20 °C ohm/km	AC at 70 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
M	N							

Three & Half Core Cables

35	16	0.8680/1.9100	1.0430/2.2900	95	75	94	28.7	1585
50	25	0.6410/1.2000	0.7710/1.4400	115	85	110	35.5	2300
70	35	0.4430/0.8680	0.5330/1.0400	135	110	138	39.2	2820
95	50	0.3200/0.6410	0.3850/0.7710	165	130	165	42.6	3410
120	70	0.2530/0.4430	0.3050/0.5330	185	150	193	48.9	4370
150	70	0.2060/0.4430	0.2490/0.5330	210	170	220	52.7	5080
185	95	0.1640/0.3200	0.1990/0.3850	235	195	253	57.6	5950
240	120	0.1250/0.2530	0.1510/0.3050	275	225	297	64.0	7230
300	150	0.1000/0.2060	0.1230/0.2490	310	260	352	69.8	8540
400	185	0.0778/0.1640	0.0962/0.1990	348	294	397	75.9	10870
500	240	0.0605/0.1250	0.0761/0.1510	392	335	443	83.4	12650

The above data is approximate and subjected to manufacturing tolerance.



FOLLOW THE PROCESS, QUALITY WILL FOLLOW

0.6/1 (1.2) kV

Single Core Cables, with stranded Circular Copper Conductors, XLPE Insulated and PVC Sheathed



Description

Soft annealed stranded Copper or Aluminium conductor, Insulated with XLPE compound covered with a layer of PVC Compound to form the overall jacket.

Cables are according to IEC 60502 or BS 7889

Application

For outdoor and indoor installations in damp and wet locations. They are normally used for power distribution in urban networks, in industrial plants, as well as in Thermopower and Hydropower Stations.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating						Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid in Ground			Laid in Free Air				
			 A	 A	 A	 A	 A	 A		
a - Copper Conductors										
4	4.6100	5.8800	55	51	40	53	47	40	6.8	80
6	3.0800	3.9300	68	65	53	65	59	53	7.3	102
10	1.8300	2.3300	98	86	68	84	79	68	8.3	150
16	1.1500	1.4700	116	111	87	116	110	95	9.3	210
25	0.7270	0.9270	150	142	110	143	137	121	11.0	315
35	0.5240	0.6690	179	172	137	179	173	152	12.1	410
50	0.3870	0.4940	210	200	163	221	210	184	13.8	555
70	0.2680	0.3430	263	247	200	278	268	236	15.7	760
95	0.1930	0.2480	310	294	242	347	336	289	17.7	1015
120	0.1530	0.1970	357	336	273	404	394	341	19.6	1280
150	0.1240	0.1600	394	373	310	457	446	389	21.8	1570
185	0.0991	0.1290	452	425	352	530	520	441	23.9	1920
240	0.0754	0.0990	520	488	404	651	641	536	27.1	2530
300	0.0601	0.0810	588	546	457	824	756	620	29.7	3105
400	0.0470	0.0638	672	620	515	893	872	714	33.9	4135
500	0.0366	0.0517	761	693	572	1008	987	814	37.4	5110
630	0.0283	0.0425	872	777	651	1155	1134	956	41.9	6455
800	0.0221	0.0292	957	861	735	1313	1292	1092	46.8	8260
1000	0.0176	0.0234	1082	935	798	1449	1428	1208	51.5	10075



0.6/1 (1.2) kV

Single Core Cables, with stranded Circular Aluminium Conductors XLPE Insulated and PVC Sheathed.



Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating						Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid in Ground			Laid in Free Air				
b - Aluminium Conductors										
16	1.9100	2.4500	89	87	66	89	84	63	9.3	115
25	1.2000	1.5400	113	110	84	116	110	95	11.0	165
35	0.8680	1.1130	137	131	105	142	137	121	12.1	205
50	0.6410	0.8220	163	155	121	173	168	147	13.8	260
70	0.4430	0.5690	200	189	152	221	215	179	15.7	340
95	0.3200	0.4110	236	226	179	284	273	215	17.7	450
120	0.2530	0.3250	278	263	215	326	315	242	19.6	550
150	0.2060	0.2650	310	294	236	373	362	299	21.8	670
185	0.1640	0.2120	352	336	267	436	420	336	23.9	830
240	0.1250	0.1630	410	389	315	515	499	399	27.1	1050
300	0.1000	0.1310	467	436	357	578	567	462	29.7	1300
400	0.0778	0.1000	541	504	410	693	677	541	33.9	1610
500	0.0605	0.0870	609	567	467	809	788	630	37.4	2000
630	0.0469	0.0620	698	646	536	945	924	746	41.9	2520
800	0.0367	0.0560	788	704	599	1071	1050	851	46.8	3150
1000	0.0291	0.0470	872	767	651	1176	1155	966	51.5	3870

The above data is approximate and subjected to manufacturing tolerance.



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, XLPE Insulated and PVC Sheathed



Description

Multicore Cables of stranded Copper conductors are insulated with XLPE compound, assembled together and covered with an overall jacket of PVC compound

Cables are produced according to IEC 60502

Application

For outdoor and indoor installations in damp and wet locations. They are normally used for power distribution in urban networks, in industrial plants, as well as in Thermopower and Hydropower Stations.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
1.5	12.1000	15.4000	30	25	25	9.6	105
2.5	7.4100	9.4500	37	32	34	10.5	135
4	4.6100	5.8800	50	40	46	11.7	175
6	3.0800	3.9300	63	52	60	12.7	225
10	1.8300	2.3300	82	69	79	13.8	360
16	1.1500	1.4700	106	83	105	15.8	505
25	0.7270	0.9270	139	107	139	18.8	750
35	0.5240	0.6690	166	134	166	21.0	980
Three Core Cables							
1.5	12.1000	15.4000	26	23	22	10.1	130
2.5	7.4100	9.4500	35	29	32	11.0	165
4	4.6100	5.8800	45	36	41	12.3	225
6	3.0800	3.9300	57	45	50	13.4	295
10	1.8300	2.3300	75	60	68	15.1	430
16	1.1500	1.4700	97	75	89	17.3	620
25	0.7270	0.9270	128	102	120	20.5	910
35	0.5240	0.6690	155	120	145	22.9	1205



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, XLPE Insulated and PVC Sheathed



Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km	
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid direct in Ground A	Laid in Ducts A	Laid in Free Air A			
Four Core Cables								
1.5	12.1000	15.4000	26	23	22	10.6	150	
2.5	7.4100	9.4500	35	29	32	11.9	205	
4	4.6100	5.8800	45	36	41	13.4	280	
6	3.0800	3.9300	57	45	50	14.6	365	
10	1.8300	2.3300	75	60	68	16.4	565	
16	1.1500	1.4700	97	75	89	18.9	795	
25	0.7270	0.9270	128	102	120	22.5	1185	
35	0.5240	0.6690	155	120	145	25.2	1575	
50	0.3870	0.4940	185	145	179	27.1	2060	
70	0.2680	0.3430	220	180	225	31.4	2905	
95	0.1930	0.2480	265	210	268	35.1	3910	
120	0.1530	0.1970	305	245	310	39.2	4915	
150	0.1240	0.1600	335	275	352	43.7	6035	
185	0.0991	0.1290	375	310	404	48.7	7540	
240	0.0754	0.0990	435	365	483	54.5	9785	
300	0.0601	0.0810	490	405	562	60.1	12190	
400	0.0470	0.06420	579	476	660	66.9	15540	
500	0.0366	0.05190	653	546	762	74.4	20075	
Three & Half Core Cables								
M	N							
35	16	0.5240/1.1500	0.6690/1.4700	155	120	142	23.6	1390
50	25	0.3870/0.7270	0.4940/0.9270	185	145	179	25.9	1835
70	35	0.2680/0.5240	0.3430/0.6690	220	180	215	29.7	2540
95	50	0.1930/0.3870	0.2480/0.4940	265	210	268	33.6	3435
120	70	0.1530/0.2680	0.1970/0.3430	305	245	310	37.5	4400
150	70	0.1240/0.2680	0.1600/0.3430	335	275	352	41.3	5255
185	95	0.0991/0.1930	0.1290/0.2480	375	310	404	46.2	6640
240	120	0.0754/0.1530	0.0990/0.1970	435	365	483	51.5	8555
300	150	0.0601/0.1240	0.0810/0.1600	490	405	562	56.8	10640
400	185	0.0470/0.0991	0.0642/0.1290	579	476	660	62.8	14436
500	240	0.0366/0.0754	0.0519/0.0990	653	546	762	70.1	18291

The above data is approximate and subjected to manufacturing tolerance.

0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminium Conductors, XLPE Insulated and PVC Sheathed



Description

Multicore Cables of Stranded Aluminium conductors are insulated with XLPE compound, assembled together and covered with an overall jacket of PVC compound

Cables are produced according to IEC 60502

Application

For outdoor and indoor installations in damp and wet locations. They are normally used for power distribution in urban networks, in industrial plants, as well as in Thermopower and Hydropower Stations.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
10	3.0800	3.9500	57	48	55	13.8	235
16	1.9100	2.4500	74	58	73	15.8	310
25	1.2000	1.5400	97	75	97	18.8	450
35	0.8680	1.1130	128	106	120	21.0	565
Three Core Cables							
10	3.0800	3.9500	52	42	48	15.1	250
16	1.9100	2.4500	68	52	62	17.3	330
25	1.2000	1.5400	90	71	84	20.5	460
35	0.8680	1.1130	120	95	105	22.9	580
Four Core Cables							
10	3.0800	3.9500	52	42	48	16.4	320
16	1.9100	2.4500	68	52	62	18.9	405
25	1.2000	1.5400	90	71	84	22.5	585
35	0.8680	1.1130	120	95	110	25.2	745
50	0.6410	0.8220	145	110	136	26.5	905
70	0.4430	0.5690	175	140	168	30.8	1260
95	0.3200	0.4110	210	165	205	33.5	1565
120	0.2530	0.3250	235	190	236	37.6	1950
150	0.2060	0.2650	265	215	278	42.1	2405
185	0.1640	0.2120	290	240	315	47.1	2930
240	0.1250	0.1630	340	280	378	52.9	3725
300	0.1000	0.1310	390	325	446	58.5	4625
400	0.0778	0.1025	461	379	526	66.9	5975
500	0.0605	0.0809	527	441	615	74.4	7485

The above data is approximate and subjected to manufacturing tolerance.



0.6/1 (1.2) kV



**Multicore Cables, with Stranded Aluminium
Conductors, PVC Insulated Steel Wire Armoured and PVC Sheathed**

Nominal CrossDC at Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Approx. Diameter	Weight
		AC at 20 °C	Laid Direct 90 °C	Laid in in Ground	Laid in Ducts	Overall Free Air		
M	N	ohm/km	ohm/km	A	A	A	mm	kg/km
Three & Half Core Cables								
35	16	0.8680/1.9100	1.1130/2.4500	120	95	110	23.6	670
50	25	0.6410/1.2000	0.8220/1.5400	145	110	136	25.3	830
70	35	0.4430/0.8680	0.5690/1.1130	175	140	168	29.1	1120
95	50	0.3200/0.6410	0.4110/0.8220	210	165	205	33.0	1415
120	70	0.2530/0.4430	0.3250/0.5690	235	190	236	35.9	1770
150	70	0.2060/0.4430	0.2650/0.5690	265	215	278	39.7	2120
185	95	0.1640/0.3200	0.2120/0.4110	290	240	315	44.6	2590
240	120	0.1250/0.2530	0.1630/0.3250	340	280	378	49.9	3260
300	150	0.1000/0.2060	0.1310/0.2650	390	325	446	55.2	4065
400	185	0.0778/0.1640	0.1025/0.2120	461	379	526	62.8	5255
500	240	0.0605/0.1250	0.0809/0.1630	527	441	615	70.1	6545

The above data is approximate and subjected to manufacturing tolerance



FOLLOW THE PROCESS, QUALITY WILL FOLLOW

0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

Multicore cables of stranded Copper conductors are insulated with XLPE compound, assembled together, armoured with steel tape and covered with an overall jacket of PVC compound. Cables are produced according to IEC 60502.

Application

For outdoor installations in damp wet locations where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
6	3.0800	3.9300	62	51	59	15.5	405
10	1.8300	2.3300	81	68	78	15.6	490
16	1.1500	1.4700	105	82	103	17.8	655
25	0.7270	0.9270	138	106	137	20.8	935
35	0.5240	0.6690	164	132	164	23.0	1185
Three Core Cables							
6	3.01800	3.9300	56	44	49	16.2	465
10	1.8300	2.3300	74	59	67	17.1	575
16	1.1500	1.4700	96	74	88	19.3	790
25	0.7270	0.9270	127	100	120	22.5	1105
35	0.5240	0.6690	153	119	143	24.9	1420
Four Core Cables							
6	3.0800	3.9300	56	44	49	17.4	555
10	1.8300	2.3300	74	59	67	18.4	720
16	1.1500	1.4700	96	74	88	20.9	975
25	0.7270	0.9270	127	100	120	24.5	1385
35	0.5240	0.6690	153	119	143	27.2	1775
50	0.3870	0.4940	185	145	178	30.1	2415
70	0.2680	0.3430	220	180	215	34.6	3335
95	0.1930	0.2480	265	210	268	39.7	4815
120	0.1530	0.1970	305	245	310	43.8	5910
150	0.1240	0.1600	335	275	352	48.7	7195
185	0.0991	0.1290	375	310	404	53.7	8830
240	0.0754	0.0990	435	365	483	60.0	11285
300	0.0601	0.0810	490	405	562	65.5	13835
400	0.0470	0.0642	567	472	645	71.7	17515
500	0.0366	0.0519	614	524	746	80.6	22885



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
		DC at 20 °C	AC at 90 °C	Laid Direct in Ground	Laid in Ducts	Laid in Free Air		
M	N	ohm/km	ohm/km	A	A	A		

Three & Half Core Cables

35	16	0.5240/1.1500	0.6690/1.4700	153	119	143	25.6	1615
50	25	0.3870/0.7270	0.4940/0.9270	185	145	178	28.7	2160
70	35	0.2680/0.5240	0.3430/0.6690	220	180	215	33.1	2960
95	50	0.1930/0.3870	0.2480/0.4940	265	210	268	38.0	4280
120	70	0.1530/0.2680	0.1970/0.3430	305	245	310	42.1	5365
150	70	0.1240/0.2680	0.1600/0.3430	335	275	352	46.3	6355
185	95	0.0991/0.1930	0.1290/0.2480	375	310	404	51.2	7865
240	120	0.0754/0.1530	0.0990/0.1970	435	365	483	57.1	10000
300	150	0.0601/0.1240	0.0810/0.1600	490	405	562	62.2	12205
400	185	0.0470/0.0991	0.0642/0.1290	567	472	645	67.8	15505
500	240	0.0366/0.0754	0.0519/0.0990	614	524	746	75.3	19515

The above data is approximate and subjected to manufacturing tolerance



FOLLOW THE PROCESS, QUALITY WILL FOLLOW

0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminium Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

Multicore cables of stranded Aluminium conductors are insulated with XLPE compound, assembled together armoured with steel tape and covered with an overall jacket of PVC compound. Cables are produced according to IEC 60502.

Application

For outdoor installations in damp wet locations where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
10	3.0800	3.9500	56	47	55	15.8	370
16	1.9100	2.4500	73	57	72	17.8	460
25	1.2000	1.5400	96	74	96	20.8	630
35	0.8680	1.1130	129	105	126	23.0	770
Three Core Cables							
10	3.0800	3.9500	52	41	47	17.1	390
16	1.9100	2.4500	67	52	62	19.3	495
25	1.2000	1.5400	89	70	84	22.5	650
35	0.8680	1.1130	120	95	110	24.9	795
Four Core Cables							
10	3.0800	3.9500	52	41	47	18.4	475
16	1.9100	2.4500	67	52	62	20.9	585
25	1.2000	1.5400	89	70	84	24.5	780
35	0.8680	1.1130	120	95	110	27.2	940
50	0.6410	0.8220	145	110	136	30.1	1300
70	0.4430	0.5690	175	140	168	34.6	1750
95	0.3200	0.4110	210	165	205	39.7	2540
120	0.2520	0.3250	235	190	236	43.8	3020
150	0.2060	0.2650	265	215	278	48.7	3670
185	0.1640	0.2120	290	240	315	53.7	4380
240	0.1250	0.1630	340	280	378	60.0	4430
300	0.1000	0.1310	390	325	446	65.5	6510
400	0.0778	0.1025	453	377	515	71.7	7950
500	0.0605	0.0809	498	425	604	80.6	10295

The above data is approximate and subjected to manufacturing tolerance.



0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminium Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
		DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
M	N							
Three & Half Core Cables								
35	16	0.8680/1.9100	1.1130/2.4500	120	95	110	25.6	890
50	25	0.6410/1.2000	0.8220/1.5400	145	110	136	28.7	1200
70	35	0.4430/0.8680	0.5690/1.1130	175	140	168	33.1	1550
95	50	0.3200/0.6410	0.4110/0.8220	210	165	205	38.0	1970
120	70	0.2530/0.4430	0.3250/0.5690	235	190	236	42.1	2710
150	70	0.2060/0.4430	0.2650/0.5690	265	215	278	46.3	3290
185	95	0.1640/0.3200	0.2120/0.4110	290	240	315	51.2	3980
240	120	0.1250/0.2530	0.1630/0.3250	340	280	378	57.1	4910
300	150	0.1000/0.2060	0.1310/0.2650	390	325	446	62.2	5920
400	185	0.0778/0.1640	0.1025/0.2120	453	377	515	67.6	7110
500	240	0.0605/0.1250	0.0809/0.1630	498	425	604	74.9	8515

The above data is approximate and subjected to manufacturing tolerance



FOLLOW THE PROCESS, QUALITY WILL FOLLOW

0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

- Multicore cables of stranded Copper conductors are insulated with XLPE compound, assembled together, armoured with steel wires and covered with an overall jacket of PVC compound.
- Cables are produced according to IEC 60502 or BS 5467

Application

- For outdoor installations in damp wet locations where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
4	4.6100	5.8800	51	41	47	16.6	580
6	3.0800	3.9300	64	53	61	17.6	660
10	1.8300	2.3300	83	70	80	18.0	730
16	1.1500	1.4700	107	84	106	20.0	925
25	0.7270	0.9270	140	108	140	24.1	1410
35	0.5240	0.6690	168	135	168	26.3	1715
Three Core Cables							
4	4.6100	5.8800	46	37	42	17.2	650
6	3.0800	3.9300	58	46	51	18.3	755
10	1.8300	2.3300	76	61	69	19.3	825
16	1.1500	1.4700	98	76	90	21.5	1070
25	0.7270	0.9270	130	103	120	25.8	1620
35	0.5240	0.6690	158	122	147	28.2	1990
Four Core Cables							
4	4.6100	5.8800	46	37	42	18.3	740
6	3.0800	3.9300	58	46	51	19.5	860
10	1.8300	2.3300	76	61	69	20.6	990
16	1.1500	1.4700	98	76	90	24.2	1450
25	0.7270	0.9270	130	103	122	27.8	1975
35	0.5240	0.6690	158	122	147	30.7	2465
50	0.3870	0.4940	185	145	184	33.1	3200
70	0.2680	0.3430	220	180	220	39.2	4645
95	0.1930	0.2480	265	210	273	42.9	5870
120	0.1530	0.1970	305	245	315	48.4	7555
150	0.1240	0.1600	335	275	375	53.1	8985
185	0.0991	0.1290	375	310	410	57.9	10760
240	0.0754	0.0990	435	365	488	64.1	13480
300	0.0601	0.0810	490	405	562	69.7	16215
400	0.0470	0.0642	547	459	634	76.8	20190
500	0.0366	0.0519	605	514	716	84.5	25375

The above data is approximate and subjected to manufacturing tolerance.



0.6/1 (1.2) kV

Multicore Cables, with Stranded Copper Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Nominal Cross Sectional Area mm ²		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km
		DC at 20 °C	AC at 90 °C	Laid Direct in Ground	Laid in Ducts	Laid in Free Air		
M	N	ohm/km	ohm/km	A	A	A		

Three & Half Core Cables

35	16	0.5240/1.1500	0.6690/1.4700	158	122	147	28.9	2210
50	25	0.3870/0.7270	0.4940/0.9270	185	145	184	31.3	2860
70	35	0.2680/0.5240	0.3430/0.6690	220	180	220	37.5	4240
95	50	0.1930/0.3870	0.2480/0.4940	265	210	273	41.2	5290
120	70	0.1530/0.2680	0.1970/0.3430	305	245	315	45.3	6475
150	70	0.1240/0.2680	0.1600/0.3430	335	275	375	50.5	8055
185	95	0.0991/0.1930	0.1290/0.2480	375	310	410	55.4	9735
240	120	0.0754/0.1530	0.0990/0.1970	435	365	488	60.3	11780
300	150	0.0601/0.1240	0.0810/0.1600	490	405	562	66.4	14435
400	185	0.0470/0.0991	0.0642/0.1290	547	459	634	72.7	18500
500	240	0.0366/0.0754	0.0519/0.0990	605	514	716	80.2	22575

The above data is approximate and subjected to manufacturing tolerance



0.6/1 (1.2) kV

Multicore Cables, with Stranded, Aluminium Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

- Multicore cables of stranded Aluminium conductors are insulated with XLPE compound, assembled together, armoured with steel wire and covered with an overall jacket of PVC compound.
- Cables are produced according to IEC 60502 or BS 5467

Application

- For outdoor installations in damp wet locations where mechanical damages are expected to occur.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Overall Diameter mm	Approx. Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A		
Two Core Cables							
10	3.0800	3.9500	56	47	60	18.0	610
16	1.9100	2.4500	73	57	79	20.0	735
25	1.2000	1.5400	96	74	101	24.1	1110
35	0.8680	1.1130	129	105	131	26.3	1300
Three Core Cables							
10	3.0800	3.9500	52	41	52	19.3	645
16	1.9100	2.4500	67	52	67	21.5	780
25	1.2000	1.5400	89	70	89	25.8	1170
35	0.8680	1.1130	120	95	115	28.2	1365
Four Core Cables							
10	3.0800	3.9500	52	41	52	20.6	750
16	1.9100	2.4500	67	52	67	24.2	1060
25	1.2000	1.5400	89	70	89	27.8	1370
35	0.8680	1.1130	120	95	115	30.7	1635
50	0.6410	0.8220	145	110	141	33.1	2330
70	0.4430	0.5690	175	140	173	39.2	2760
95	0.3200	0.4110	210	165	210	42.9	3340
120	0.2520	0.3250	235	190	241	48.4	4320
150	0.2060	0.2650	265	215	283	53.1	5080
185	0.1640	0.2120	290	240	320	57.9	5990
240	0.1250	0.1630	340	280	383	64.1	7220
300	0.1000	0.1310	390	325	451	69.7	8440
400	0.0778	0.1025	444	373	513	76.8	10630
500	0.0605	0.0809	500	426	591	84.5	12785

The above data is approximate and subjected to manufacturing tolerance.



Multicore Cables, with Stranded Aluminium Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter mm	Approx. Weight kg/km	
	DC at 20 °C ohm/km	AC at 90 °C ohm/km	Laid Direct in Ground A	Laid in Ducts A	Laid in Free Air A			
Three & Half Core Cables								
35	16	0.8680/1.9100	1.1130/2.4500	120	95	115	28.9	1490
50	25	0.6410/1.2000	0.8220/1.5400	145	110	141	31.3	1870
70	35	0.4430/0.8680	0.5690/1.1130	175	140	173	37.5	2600
95	50	0.3200/0.6410	0.4110/0.8220	210	165	210	41.2	3090
120	70	0.2530/0.4430	0.3250/0.5690	235	190	241	45.3	3690
150	70	0.2060/0.4430	0.2650/0.5690	265	215	283	50.5	4700
185	95	0.1640/0.3200	0.2120/0.4110	290	240	320	55.4	5550
240	120	0.1250/0.2530	0.1630/0.3250	340	280	383	60.3	6560
300	150	0.1000/0.2060	0.1310/0.2650	390	325	451	66.4	7820
400	185	0.0778/0.1640	0.1025/0.2120	444	373	513	72.7	9845
500	240	0.0605/0.1250	0.0809/0.1630	500	426	591	80.2	11620

The above data is approximate and subjected to manufacturing tolerance



Medium Voltage Cable

Operating Voltage

(from 6/10 kV up to 18/30 kV)

Cable Construction

1. Conductor

Stranded, round and compacted Copper or Aluminium conductors, according to IEC 60228-class 2.

2. Conductor Screen

An extruded layer of semi conducting material applied over the conductor as voltage stress control layer with thickness as specified in IEC 60502.

3. Insulation

An extruded layer of cross linked polyethylene (XLPE) is applied over the inner semi conductor with thickness as specified in IEC 60502.

4. Insulation Screen

An extruded layer of strippable or firmly bonded to the insulation. Conductor screen, XLPE insulation and insulation screen are applied at the same time using triple head extruder.

5. Metallic Screen

- Copper Tape: an annealed Copper tape is applied helically with a suitable overlap.
- Copper Wire: helically applied and binded with a Copper tape to achieve electrical contact.

6. Assembly

In case of three core cables, cores are assembled together with suitable lay length, non-hygroscopic filler is applied during assembly to fill spaces between cores then wrapped with suitable binder tape.

7. Bedding

In case of armoured cables an extruded layer of PVC or MDPE or LLDPE is applied as bedding.

8. Armouring

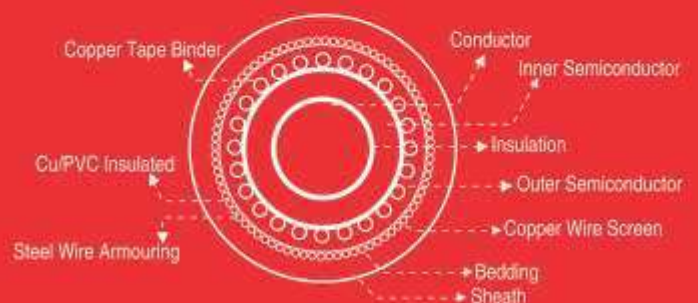
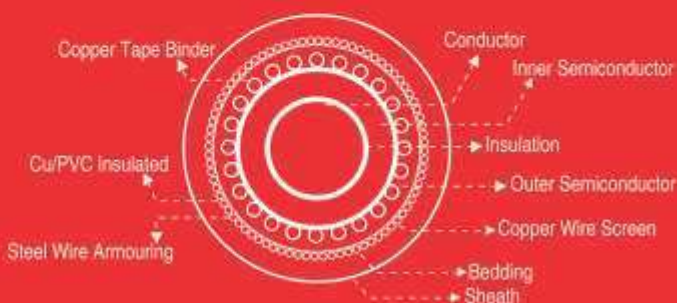
- Steel Tape: double layers of steel tapes are applied helically.
- Steel Wire: galvanized steel wires are applied helically.

9. Sheath

An extruded layer of PVC is applied with thickness as specified in IEC 60502.

Armouring of Single Core Cable

- Armouring by non-magnetic material either Aluminium Tape armouring or Aluminium Wire armouring to reduce the magnetic losses.
- If it is required for single core cable to be armoured by steel wire armouring, the magnetic circuit around the single core cable should be interrupted by inserting insulated copper wires between the steel wires.





6/10 (12) kV

Single & Three Cores Copper Conductors XLPE Insulated and PVC Sheathed



Description

- Stranded circular compacted Copper conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These Cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area m/m ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx Diameter mm	Approx Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil	Flat	Laid Ground		Laid in Free Air			
						Trefoil ⊗	Flat ○○	Trefoil ⊗	Flat ○○		
Single Core Cable											
25	0.7270	0.9271	0.200	0.450	0.635	139	145	143	173	20.0	665
35	0.5240	0.6683	0.224	0.426	0.611	166	174	174	211	21.1	770
50	0.3870	0.4937	0.251	0.393	0.578	197	206	209	255	22.5	905
70	0.2680	0.3420	0.291	0.370	0.554	242	252	262	319	24.3	1135
95	0.1930	0.2465	0.316	0.357	0.542	287	299	317	384	25.5	1390
120	0.1530	0.1956	0.345	0.344	0.529	326	339	366	443	26.9	1655
150	0.1240	0.1588	0.374	0.336	0.521	364	375	416	498	28.7	2015
185	0.0991	0.1272	0.409	0.322	0.507	411	422	478	570	30.4	2390
240	0.0754	0.0973	0.456	0.310	0.494	475	484	565	669	33.0	2950
300	0.0601	0.0781	0.512	0.301	0.487	535	542	650	765	35.8	3590
400	0.0470	0.0618	0.565	0.292	0.477	599	591	745	853	38.6	4510
500	0.0366	0.0490	0.635	0.282	0.467	674	659	859	975	42.2	5610
630	0.0283	0.0391	0.704	0.275	0.460	752	728	981	1103	45.9	6940
800	0.0221	0.0319	0.795	0.268	0.453	869	979	1160	1480	50.8	9195
1000	0.0176	0.0234	0.983	0.266	0.451	1084	1188	1515	1864	61.2	11105
Three Core Cables											
25	0.7270	0.9271	0.200	0.403	-	140	-	141	-	37.7	1795
35	0.5240	0.6684	0.224	0.382	-	167	-	171	-	40.3	2150
50	0.3870	0.4938	0.251	0.351	-	197	-	206	-	43.5	2655
70	0.2680	0.3423	0.291	0.330	-	241	-	257	-	47.2	3390
95	0.1930	0.2469	0.316	0.316	-	286	-	309	-	50.0	4165
120	0.1530	0.1961	0.345	0.309	-	325	-	356	-	53.6	5140
150	0.1240	0.1595	0.374	0.302	-	364	-	405	-	56.9	5965
185	0.0991	0.1282	0.409	0.290	-	410	-	463	-	60.9	7210
240	0.0754	0.0986	0.456	0.280	-	475	-	546	-	66.3	9020
300	0.0601	0.0799	0.512	0.271	-	535	-	626	-	71.9	11095

This data is applicable for 6.35/11 kV cables.

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.

The above data is approximate and subjected to manufacturing tolerance.

6/10 (12) kV

Single & Three Cores Aluminium Conductors, XLPE Insulated and PVC Sheathed



Description

- Stranded circular compacted Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene filters, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx. Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil ⊗	Flat ○○	Laid in Ground		Laid in Free Air			
						Trefoil ⊗	Flat ○○	Trefoil ⊗	Flat ○○		
Single Core Cable											
25	1.2000	1.5390	0.200	0.450	0.635	108	113	111	135	20.0	510
35	0.8680	1.1130	0.224	0.426	0.611	129	135	135	164	21.1	560
50	0.6410	0.8220	0.251	0.393	0.578	153	160	162	198	22.4	610
70	0.4430	0.5681	0.291	0.370	0.554	188	196	204	248	24.0	715
95	0.3200	0.4105	0.316	0.357	0.542	222	233	246	299	25.5	815
120	0.2530	0.3247	0.345	0.344	0.529	254	265	284	346	26.9	915
150	0.2060	0.2645	0.374	0.336	0.521	283	295	324	391	28.7	1115
185	0.1640	0.2107	0.409	0.322	0.507	321	333	373	449	30.4	1250
240	0.1250	0.1610	0.456	0.310	0.494	372	385	443	530	32.9	1475
300	0.1000	0.1291	0.512	0.301	0.487	421	433	511	608	35.5	1700
400	0.0778	0.1009	0.565	0.292	0.477	478	483	593	693	38.6	2120
500	0.0605	0.0791	0.635	0.282	0.467	544	545	693	802	42.2	2505
630	0.0469	0.0621	0.704	0.275	0.460	617	612	803	921	45.8	3000
800	0.0367	0.0495	0.795	0.268	0.453	715	786	954	1188	50.8	3670
1000	0.0291	0.0376	0.983	0.266	0.451	862	937	1205	1468	61.2	4755
Three Core Cables											
25	1.2000	1.5390	0.200	0.403	-	108	-	110	-	37.7	1335
35	0.8680	1.1130	0.224	0.382	-	129	-	133	-	40.3	1530
50	0.6410	0.8220	0.251	0.351	-	153	-	160	-	42.9	1800
70	0.4430	0.5683	0.291	0.330	-	187	-	200	-	46.5	2100
95	0.3200	0.4107	0.316	0.316	-	222	-	240	-	50.0	2440
120	0.2530	0.3250	0.345	0.309	-	253	-	277	-	53.2	2780
150	0.2060	0.2649	0.374	0.302	-	283	-	314	-	56.9	3280
185	0.1640	0.2114	0.409	0.290	-	320	-	361	-	60.9	3790
240	0.1250	0.1618	0.456	0.280	-	371	-	427	-	66.1	4555
300	0.1000	0.1302	0.512	0.271	-	420	-	491	-	71.3	5360

This data is applicable for 6.35/11 kV cables.

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.

The above data is approximate and subjected to manufacturing tolerance.



6/10 (12) kV

Three Cores Copper or Aluminium Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic polypropylene filters, wrapped with binder tape, covered with a layer of PVC compound as a bedding, steel tape armoured and PVC sheathed.
- Cables are produced according to IEC 60502.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
25	0.7270	0.9271	0.200	0.403	132	133	41.9	2625
35	0.5240	0.6684	0.224	0.382	157	160	44.5	3035
50	0.3870	0.4938	0.251	0.352	185	192	47.9	3625
70	0.2680	0.3423	0.291	0.330	226	237	51.8	4470
95	0.1930	0.2469	0.316	0.316	269	286	54.6	5305
120	0.1530	0.1961	0.345	0.311	306	328	57.8	6205
150	0.1240	0.1595	0.374	0.302	342	371	61.7	7290
185	0.0991	0.1282	0.409	0.290	386	424	65.5	8595
240	0.0754	0.0986	0.456	0.280	446	497	71.3	10595
300	0.0601	0.0799	0.512	0.272	502	566	77.1	12835
Three Cores, Aluminium Conductor Cables								
25	1.2000	1.5390	0.200	0.403	102	103	41.9	2165
35	0.8680	1.1130	0.224	0.382	122	124	44.5	2410
50	0.6410	0.8220	0.251	0.351	144	149	47.3	2760
70	0.4430	0.5683	0.291	0.330	176	184	51.1	3170
95	0.3200	0.4107	0.316	0.316	209	222	54.6	3585
120	0.2530	0.3250	0.345	0.309	238	255	57.8	3995
150	0.2060	0.2649	0.374	0.302	266	288	61.7	4605
185	0.1640	0.2114	0.409	0.290	301	331	65.5	5175
240	0.1250	0.1618	0.456	0.280	349	389	71.1	6120
300	0.1000	0.1302	0.512	0.271	394	444	76.5	7085

This data is applicable for 6.35/11 kV cables

This above data is approximate and subjected to manufacturing tolerance.

6/10 (12) kV

Three Cores Copper or Aluminium Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape, covered with a layer of PVC compound as a bending, steel wire armoured and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
25	0.7270	0.9271	0.200	0.403	133	136	45.1	3910
35	0.5240	0.6684	0.224	0.382	158	164	47.7	4410
50	0.3870	0.4938	0.251	0.352	187	195	51.1	5085
70	0.2680	0.3423	0.291	0.330	227	241	55.0	6000
95	0.1930	0.2469	0.316	0.316	269	289	57.8	6920
120	0.1530	0.1961	0.345	0.311	305	331	61.4	8090
150	0.1240	0.1595	0.374	0.302	340	372	64.9	9130
185	0.0991	0.1282	0.409	0.290	381	423	68.9	10630
240	0.0754	0.0986	0.456	0.280	436	494	76.6	13700
300	0.0601	0.0799	0.512	0.272	485	556	82.2	16165
Three Cores, Aluminium Conductor Cables								
25	1.2000	1.5390	0.200	0.403	103	106	45.1	3415
35	0.8680	1.1130	0.224	0.382	123	127	47.7	3750
50	0.6410	0.8220	0.251	0.351	145	152	50.5	4185
70	0.4430	0.5683	0.291	0.330	177	188	54.3	4705
95	0.3200	0.4107	0.316	0.316	210	225	57.8	5195
120	0.2530	0.3250	0.345	0.309	238	259	61.0	5725
150	0.2060	0.2649	0.374	0.302	265	291	64.9	6445
185	0.1640	0.2114	0.409	0.290	300	332	68.9	7160
240	0.1250	0.1618	0.456	0.280	346	391	76.4	9130
300	0.1000	0.1302	0.512	0.271	387	442	81.6	10315

*This data is applicable for 6.35/11 kV cables
This above data is approximate and subjected to manufacturing tolerance.*



8.7/15 (17.5) kV

Single & Three Cores Copper Conductors, XLPE Insulated and PVC Sheathed









Description

- Stranded circular compacted Copper conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape and PVC sheathed cores assembled together with non hygroscopic Polypropylene filters, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx. Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil 	Flat 	Laid in Ground		Laid in Free Air			
						Trefoil 	Flat 	Trefoil 	Flat 		
Single Core Cable											
25	0.7270	0.9271	0.165	0.469	0.654	139	145	143	173	22.0	729
35	0.5240	0.6683	0.183	0.446	0.631	166	174	174	211	23.3	846
50	0.3870	0.4937	0.204	0.412	0.597	197	206	209	255	24.7	999
70	0.2680	0.3420	0.234	0.387	0.572	242	252	262	319	26.5	1230
95	0.1930	0.2465	0.253	0.373	0.558	287	299	317	384	27.7	1479
120	0.1530	0.1956	0.275	0.361	0.546	326	339	366	443	29.3	1761
150	0.1240	0.1588	0.297	0.351	0.536	364	375	416	498	30.9	2111
185	0.0991	0.1272	0.324	0.338	0.522	411	422	478	570	32.8	2512
240	0.0754	0.0973	0.360	0.324	0.509	475	484	565	669	35.4	3083
300	0.0601	0.0781	0.402	0.313	0.498	535	542	650	765	38.0	3718
400	0.0470	0.0618	0.442	0.304	0.489	599	591	745	853	41.0	4661
500	0.0366	0.0490	0.495	0.293	0.478	674	659	859	975	44.6	5808
630	0.0283	0.0391	0.548	0.285	0.470	752	728	981	1103	48.3	7127
800	0.0221	0.0319	0.616	0.277	0.462	869	979	1160	1480	53.2	9010
1000	0.0176	0.0234	0.759	0.274	0.459	1084	1188	1515	1864	63.6	11341
Three Core Cables											
25	0.7270	0.9271	0.165	0.431	-	140	-	141	-	42.9	2105
35	0.5240	0.6684	0.183	0.408	-	167	-	171	-	45.5	2485
50	0.3870	0.4938	0.204	0.376	-	197	-	206	-	48.3	2990
70	0.2680	0.3423	0.234	0.354	-	241	-	257	-	52.3	3725
95	0.1930	0.2469	0.253	0.340	-	286	-	309	-	55.1	4505
120	0.1530	0.1961	0.275	0.329	-	325	-	356	-	58.4	5410
150	0.1240	0.1595	0.297	0.320	-	364	-	405	-	62.0	6415
185	0.0991	0.1282	0.324	0.308	-	410	-	463	-	65.9	7685
240	0.0754	0.0986	0.360	0.295	-	475	-	546	-	71.0	9540
300	0.0601	0.0799	0.402	0.288	-	535	-	626	-	76.9	11590

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.
The above data is approximate and subjected to manufacturing tolerance.

8.7/15 (17.5) kV

Single & Three Cores Aluminium Conductors, XLPE Insulated and PVC Sheathed



Description

- Stranded circular compacted Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic scree, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx. Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil mh/km	Flat mh/km	Laid in Ground		Laid in Free Air			
						Trefoil A	Flat A	Trefoil A	Flat A		
Single Core Cable											
25	1.2000	1.5390	0.165	0.469	0.654	108	113	111	135	22.0	575
35	0.8680	1.1130	0.183	0.446	0.631	129	135	135	164	23.3	635
50	0.6410	0.8220	0.204	0.412	0.597	153	160	162	198	24.6	700
70	0.4430	0.5681	0.234	0.387	0.572	188	196	204	248	26.2	800
95	0.3200	0.4105	0.253	0.373	0.558	222	233	246	299	27.7	905
120	0.2530	0.3247	0.275	0.361	0.546	254	265	284	346	29.3	1020
150	0.2060	0.2645	0.297	0.351	0.536	283	295	324	391	30.9	1215
185	0.1640	0.2107	0.324	0.338	0.522	321	333	373	449	32.8	1370
240	0.1250	0.1610	0.360	0.324	0.509	372	385	443	530	35.3	1595
300	0.1000	0.1291	0.402	0.313	0.498	421	433	511	608	37.7	1825
400	0.0778	0.1009	0.442	0.304	0.489	478	483	593	693	41.0	2270
500	0.0605	0.0791	0.0495	0.293	0.478	544	545	693	802	44.6	2670
630	0.0469	0.0621	0.548	0.288	0.470	617	612	803	921	48.2	3180
800	0.0367	0.0495	0.616	0.277	0.462	715	786	954	1188	53.2	3870
1000	0.0291	0.0376	0.759	0.274	0.459	862	937	1205	1468	63.6	4990
Three Core Cables											
25	1.2000	1.5390	0.165	0.431	-	108	-	110	-	42.5	1605
35	0.8680	1.1130	0.183	0.408	-	129	-	133	-	45.1	1815
50	0.6410	0.8220	0.204	0.376	-	153	-	160	-	47.6	2040
70	0.4430	0.5683	0.234	0.354	-	187	-	200	-	51.3	2375
95	0.3200	0.4107	0.253	0.340	-	222	-	240	-	54.7	2730
120	0.2530	0.3250	0.275	0.329	-	253	-	277	-	58.0	3120
150	0.2060	0.2649	0.297	0.320	-	283	-	314	-	61.6	3645
185	0.1640	0.2114	0.324	0.308	-	320	-	361	-	65.7	4205
240	0.1250	0.1618	0.360	0.295	-	371	-	427	-	70.4	4975
300	0.1000	0.1302	0.402	0.288	-	420	-	491	-	76.0	5775

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.
The above data is approximate and subjected to manufacturing tolerance.



8.7/15 (17.5) kV

Three Cores Copper or Aluminium Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene filters, wrapped with binder tape, covered with a layer of PVC compound as a bedding, steel tape armoured and PVC sheathed.
- Cables are produced according to IEC 60502.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
25	0.7270	0.9271	0.165	0.431	140	141	47.3	3070
35	0.5240	0.6684	0.183	0.408	167	171	49.7	3475
50	0.3870	0.4938	0.204	0.376	197	206	52.7	4055
70	0.2680	0.3423	0.234	0.354	241	257	56.7	4875
95	0.1930	0.2469	0.253	0.340	286	309	59.9	5790
120	0.1530	0.1961	0.275	0.330	325	356	63.4	6790
150	0.1240	0.1595	0.297	0.320	364	405	67.0	7865
185	0.0991	0.1282	0.324	0.308	410	463	70.9	9220
240	0.0754	0.0986	0.360	0.296	475	546	76.2	11225
300	0.0601	0.0799	0.402	0.288	535	626	83.7	14265
Three Cores, Aluminium Conductor Cables								
25	1.2000	1.5390	0.165	0.431	102	103	47.3	2610
35	0.8680	1.1130	0.183	0.408	122	124	49.7	2850
50	0.6410	0.8220	0.204	0.376	144	149	52.4	3160
70	0.4430	0.5683	0.234	0.354	176	184	56.1	3575
95	0.3200	0.4107	0.253	0.340	209	222	59.7	4040
120	0.2530	0.3250	0.275	0.329	238	255	63.2	4530
150	0.2060	0.2649	0.297	0.320	266	288	67.0	5180
185	0.1640	0.2114	0.324	0.308	301	331	70.9	5800
240	0.1250	0.1618	0.360	0.295	349	389	76.0	6755
300	0.1000	0.1302	0.402	0.288	394	444	83.0	8500

This above data is approximate and subjected to manufacturing tolerance.

8.7/15 (17.5) kV

Three Cores Copper or Aluminium XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene filters, wrapped with binder tape, covered with a layer of PVC compound as a bedding, steel wire armoured and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
25	0.7270	0.9271	0.165	0.431	133	136	50.5	4530
35	0.5240	0.6684	0.183	0.408	158	164	52.9	5010
50	0.3870	0.4938	0.204	0.376	187	195	55.9	5715
70	0.2680	0.3423	0.234	0.354	227	241	59.9	6650
95	0.1930	0.2469	0.253	0.340	269	289	63.1	7655
120	0.1530	0.1961	0.275	0.330	305	331	66.6	8765
150	0.1240	0.1595	0.297	0.320	340	372	72.3	10935
185	0.0991	0.1282	0.324	0.308	381	423	76.2	12450
240	0.0754	0.0986	0.360	0.296	436	494	81.5	14735
300	0.0601	0.0799	0.402	0.288	485	556	87.6	17230
Three Cores, Aluminium Conductor Cables								
25	1.2000	1.5390	0.165	0.431	103	106	50.5	4030
35	0.8680	1.1130	0.183	0.408	123	127	52.9	4325
50	0.6410	0.8220	0.204	0.376	145	152	55.6	4715
70	0.4430	0.5683	0.234	0.354	177	188	59.3	5245
95	0.3200	0.4107	0.253	0.340	210	225	62.9	5825
120	0.2530	0.3250	0.275	0.329	238	259	66.4	6400
150	0.2060	0.2649	0.297	0.320	265	291	72.3	8095
185	0.1640	0.2114	0.324	0.308	300	332	76.2	8865
240	0.1250	0.1618	0.360	0.295	346	391	81.1	9850
300	0.1000	0.1302	0.402	0.288	387	442	86.9	11135

This above data is approximate and subjected to manufacturing tolerance.



12/20 (24) kV

Single & Three Cores Copper Conductors, XLPE Insulated and PVC Sheathed



Description

- Stranded circular compacted Copper conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil ⊗	Flat ∞	Laid in Ground		Laid in Free Air			
						Trefoil ⊗	Flat ∞	Trefoil ⊗	Flat ∞		
Single Core Cable											
35	0.5240	0.6683	0.159	0.463	0.648	166	174	174	211	25.3	915
50	0.3870	0.4937	0.177	0.428	0.613	197	206	209	255	26.7	1070
70	0.2680	0.3420	0.202	0.403	0.588	242	252	262	319	28.7	1320
95	0.1930	0.2465	0.217	0.389	0.573	287	299	317	384	29.9	1575
120	0.1530	0.1956	0.236	0.376	0.561	326	339	366	443	31.5	1860
150	0.1240	0.1588	0.254	0.365	0.550	364	375	416	498	33.1	2220
185	0.0991	0.1272	0.276	0.350	0.535	411	422	478	570	35.0	2625
240	0.0754	0.0973	0.305	0.335	0.520	475	484	565	669	37.4	3185
300	0.0601	0.0781	0.340	0.325	0.510	535	542	650	765	40.2	3845
400	0.0470	0.0618	0.373	0.313	0.498	599	591	745	853	43.0	4780
500	0.0366	0.0490	0.417	0.302	0.487	674	659	859	975	46.6	5930
630	0.0283	0.0391	0.460	0.293	0.478	752	728	981	1103	50.3	7265
800	0.0221	0.0319	0.516	0.285	0.470	869	979	1160	1480	55.4	9200
1000	0.0176	0.0234	0.633	0.281	0.466	1084	1188	1515	1864	65.8	11570
Three Core Cables											
35	0.5240	0.6684	0.159	0.427	-	167	-	171	-	49.5	2745
50	0.3870	0.4938	0.177	0.394	-	197	-	206	-	52.8	3255
70	0.2680	0.3423	0.202	0.370	-	241	-	257	-	56.9	4035
95	0.1930	0.2469	0.217	0.357	-	286	-	309	-	59.7	4865
120	0.1530	0.1961	0.236	0.345	-	325	-	356	-	63.1	5800
150	0.1240	0.1595	0.254	0.336	-	364	-	405	-	66.7	6835
185	0.0991	0.1282	0.276	0.321	-	410	-	463	-	70.2	8110
240	0.0754	0.0986	0.305	0.308	-	475	-	546	-	75.6	9960
300	0.0601	0.0799	0.340	0.299	-	535	-	626	-	81.6	12085

This data is applicable for 12.7/22 kV cables.

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.

The above data is approximate and subjected to manufacturing tolerance.

12/20 (24) kV

Single & Three Cores Aluminium Conductors, XLPE Insulated and PVC Sheathed



Description

- Stranded circular compacted Aluminium conductor, semiconductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene filters, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil ⊗	Flat ○○	Laid in Ground		Laid in Free Air			
						Trefoil ⊗	Flat ○○	Trefoil ⊗	Flat ○○		
Single Core Cable											
35	0.8680	1.1130	0.159	0.463	0.648	129	135	135	164	25.3	705
50	0.6410	0.8220	0.177	0.428	0.613	153	160	162	198	26.6	775
70	0.4430	0.5681	0.202	0.403	0.588	188	196	204	248	28.4	890
95	0.3200	0.4105	0.217	0.389	0.573	222	233	246	299	29.9	1000
120	0.2530	0.3247	0.236	0.376	0.561	254	265	284	346	31.5	1125
150	0.2060	0.2645	0.254	0.365	0.550	283	295	324	391	33.1	1320
185	0.1640	0.2107	0.276	0.350	0.535	321	333	373	449	35.0	1475
240	0.1250	0.1610	0.305	0.335	0.520	372	385	443	530	37.3	1700
300	0.1000	0.1291	0.340	0.325	0.510	421	433	511	608	39.9	1945
400	0.0778	0.1009	0.373	0.313	0.498	478	483	593	693	43.0	2390
500	0.0605	0.0791	0.417	0.302	0.487	544	545	693	802	46.6	2800
630	0.0469	0.0621	0.460	0.293	0.478	617	612	803	921	50.2	3325
800	0.0367	0.0495	0.516	0.285	0.470	715	786	954	1188	55.4	4060
1000	0.0291	0.0376	0.633	0.281	0.466	862	937	1205	1468	65.8	5220
Three Core Cables											
35	0.8680	1.1130	0.159	0.427	-	129	-	133	-	48.9	2050
50	0.6410	0.8220	0.177	0.394	-	153	-	160	-	52.0	2295
70	0.4430	0.5683	0.202	0.370	-	187	-	200	-	55.6	2650
95	0.3200	0.4107	0.217	0.357	-	222	-	240	-	59.1	3060
120	0.2530	0.3250	0.236	0.345	-	253	-	277	-	62.3	3470
150	0.2060	0.2649	0.254	0.336	-	283	-	314	-	65.9	4025
185	0.1640	0.2114	0.276	0.321	-	320	-	361	-	70.0	4605
240	0.1250	0.1618	0.305	0.308	-	371	-	427	-	75.2	5420
300	0.1000	0.1302	0.340	0.299	-	420	-	491	-	80.3	6175

This data is applicable for 12.7/22 kV cables.

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.

The above data is approximate and subjected to manufacturing tolerance.



12/20 (24)kV

Three Cores Copper or Aluminium Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE Insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape, covered with a layer of PVC compound as a bedding, steel tape armoured and PVC sheathed.
- Cables are produced according to IEC 60502.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
35	0.5240	0.6684	0.159	0.427	167	171	54.1	3875
50	0.3870	0.4938	0.177	0.394	197	206	57.6	4490
70	0.2680	0.3423	0.202	0.370	241	257	61.6	5360
95	0.1930	0.2469	0.217	0.357	286	309	64.7	6290
120	0.1530	0.1961	0.236	0.345	325	356	67.9	7265
150	0.1240	0.1595	0.254	0.336	364	405	71.5	8380
185	0.0991	0.1282	0.276	0.321	410	463	75.4	9810
240	0.0754	0.0986	0.305	0.308	475	546	82.4	12590
300	0.0601	0.0799	0.340	0.299	535	626	88.4	14920
Three Cores, Aluminium Conductor Cables								
35	0.8680	1.1130	0.159	0.427	122	124	54.1	3250
50	0.6410	0.8220	0.177	0.394	144	149	57.2	3570
70	0.4430	0.5683	0.202	0.370	176	184	60.8	4010
95	0.3200	0.4107	0.217	0.357	209	222	64.5	4535
120	0.2530	0.3250	0.236	0.345	238	255	68.1	5085
150	0.2060	0.2649	0.254	0.336	266	288	71.7	5730
185	0.1640	0.2114	0.276	0.321	301	331	75.4	6390
240	0.1250	0.1618	0.305	0.308	349	389	82.1	8110
300	0.1000	0.1302	0.340	0.299	394	444	87.9	9180

*This data is applicable for 12.7/22kV cables.
The above data is approximate and subjected to manufacturing tolerance.*

12/20 (24)kV

Three Cores Copper or Aluminium Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape, covered with a layer of PVC compound as a bedding, steel wire armoured and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
35	0.5240	0.6684	0.159	0.427	158	164	57.3	5560
50	0.3870	0.4938	0.177	0.394	187	195	60.8	6295
70	0.2680	0.3423	0.202	0.370	227	241	64.9	7280
95	0.1930	0.2469	0.217	0.357	269	289	67.9	8300
120	0.1530	0.1961	0.236	0.345	305	331	73.2	10350
150	0.1240	0.1595	0.254	0.336	340	372	76.8	11670
185	0.0991	0.1282	0.276	0.321	381	423	80.5	13225
240	0.0754	0.0986	0.305	0.308	436	494	86.3	15515
300	0.0601	0.0799	0.340	0.299	485	556	92.5	18095
Three Cores, Aluminium Conductor Cables								
35	0.8680	1.1130	0.159	0.427	123	127	57.3	4870
50	0.6410	0.8220	0.177	0.394	145	152	60.4	5270
70	0.4430	0.5683	0.202	0.370	177	188	64.0	5820
95	0.3200	0.4107	0.217	0.357	210	225	67.7	6460
120	0.2530	0.3250	0.236	0.345	238	259	73.2	8045
150	0.2060	0.2649	0.254	0.336	265	291	76.8	8815
185	0.1640	0.2114	0.276	0.321	300	332	81.1	9675
240	0.1250	0.1618	0.305	0.308	346	391	86.0	10775
300	0.1000	0.1302	0.340	0.299	387	442	91.8	12050

This data is applicable for 12.7/22kV cables.

The above data is approximate and subjected to manufacturing tolerance.



18/30 (36) kV

Single & Three Cores Copper Conductors, XLPE Insulated and PVC Sheathed



Description

- Stranded circular compacted Copper conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil ⊗	Flat ∞	Laid in Ground		Laid in Free Air			
						Trefoil ⊗	Flat ∞	Trefoil ⊗	Flat ∞		
Single Core Cable											
50	0.3870	0.4937	0.138	0.465	0.649	197	206	209	255	32.1	1325
70	0.2680	0.3420	0.156	0.436	0.621	242	252	262	319	33.9	1575
95	0.1930	0.2465	0.167	0.422	0.607	287	299	317	384	35.3	1855
120	0.1530	0.1956	0.180	0.406	0.591	326	339	366	443	36.7	2140
150	0.1240	0.1588	0.192	0.395	0.580	364	375	416	498	38.5	2525
185	0.0991	0.1272	0.208	0.378	0.563	411	422	478	570	40.2	2930
240	0.0754	0.0973	0.228	0.362	0.547	475	484	565	669	42.8	3540
300	0.0601	0.0781	0.252	0.350	0.535	535	542	650	765	45.6	4225
400	0.0470	0.0618	0.275	0.337	0.522	599	591	745	853	48.4	5165
500	0.0366	0.0490	0.306	0.324	0.509	674	659	859	975	52.0	6350
630	0.0283	0.0391	0.336	0.313	0.498	752	728	981	1103	55.7	7715
800	0.0221	0.0319	0.374	0.303	0.488	869	979	1160	1480	60.6	9660
1000	0.0176	0.0234	0.455	0.297	0.481	1084	1188	1515	1864	71.2	12135
Three Core Cables											
50	0.3870	0.4938	0.138	0.436	-	197	-	206	-	63.0	3990
70	0.2680	0.3423	0.156	0.410	-	241	-	257	-	67.1	4835
95	0.1930	0.2469	0.167	0.395	-	286	-	309	-	69.9	5705
120	0.1530	0.1961	0.180	0.381	-	325	-	356	-	73.1	6645
150	0.1240	0.1595	0.192	0.368	-	364	-	405	-	76.3	7645
185	0.0991	0.1282	0.208	0.353	-	410	-	463	-	82.2	9385
240	0.0754	0.0986	0.228	0.338	-	475	-	546	-	85.8	10865
300	0.0601	0.0799	0.252	0.327	-	535	-	626	-	91.8	13115

This data is applicable for 19/33 kV cables.

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.

The above data is approximate and subjected to manufacturing tolerance.

18/30 (36)kV

Three Cores Copper or Aluminium Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene filters, wrapped with binder tape, covered with a layer of PVC compound as a bedding, steel wire armoured and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
50	0.3870	0.4938	0.138	0.436	187	195	74.7	8910
70	0.2680	0.3423	0.156	0.410	227	241	78.8	10025
95	0.1930	0.2469	0.167	0.395	269	289	81.8	11175
120	0.1530	0.1961	0.180	0.381	305	331	85.2	12500
150	0.1240	0.1595	0.192	0.368	340	372	88.4	13595
185	0.0991	0.1282	0.208	0.353	381	423	92.5	15255
240	0.0754	0.0986	0.228	0.338	436	494	98.3	17665
300	0.0601	0.0799	0.252	0.327	485	556	104.5	20405
Three Cores, Aluminium Conductor Cables								
50	0.6410	0.8220	0.138	0.436	145	152	74.3	7810
70	0.4430	0.5683	0.156	0.410	177	188	78.3	8560
95	0.3200	0.4107	0.167	0.395	210	225	81.8	9265
120	0.2530	0.3250	0.180	0.381	238	259	85.2	9995
150	0.2060	0.2649	0.192	0.368	265	291	88.6	10800
185	0.1640	0.2114	0.208	0.353	300	332	92.5	11615
240	0.1250	0.1618	0.228	0.338	346	391	98.0	12880
300	0.1000	0.1302	0.252	0.327	387	442	103.8	14300

This data is applicable for 19/33kV cables.

The above data is approximate and subjected to manufacturing tolerance.



18/30 (36)kV

Single & Three Cores Aluminium Conductors, XLPE Insulated and PVC Sheathed






Description

- Stranded circular compacted Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape and PVC sheathed.
- Cables are produced according to IEC 60502 or BS 6622.

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance		Current Rating				Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km		Trefoil 	Flat 	Laid in Ground		Laid in Free Air			
						Trefoil 	Flat 	Trefoil 	Flat 		
Single Core Cable											
50	0.6410	0.8220	0.138	0.465	0.649	153	160	162	198	32.0	1025
70	0.4430	0.5681	0.156	0.436	0.621	188	196	204	248	33.6	1140
95	0.3200	0.4105	0.167	0.422	0.607	222	233	246	299	35.3	1270
120	0.2530	0.3247	0.180	0.406	0.591	254	265	284	346	36.7	1400
150	0.2060	0.2645	0.192	0.395	0.580	283	295	324	391	38.5	1630
185	0.1640	0.2107	0.208	0.378	0.563	321	333	373	449	40.2	1790
240	0.1250	0.1610	0.228	0.362	0.547	372	385	443	530	42.7	2050
300	0.1000	0.1291	0.252	0.350	0.535	421	433	511	608	45.3	2320
400	0.0778	0.1009	0.275	0.337	0.522	478	483	593	693	48.4	2775
500	0.0605	0.0791	0.306	0.324	0.509	544	545	693	802	52.0	3215
630	0.0469	0.0621	0.336	0.313	0.498	617	612	803	921	55.6	3765
800	0.0367	0.0495	0.374	0.303	0.488	715	786	954	1188	60.6	4515
1000	0.0291	0.0376	0.455	0.297	0.481	862	937	1205	1468	71.2	5790
Three Core Cables											
50	0.6410	0.8220	0.138	0.436	-	153	-	160	-	62.8	3095
70	0.4430	0.5683	0.156	0.410	-	187	-	200	-	66.4	3525
95	0.3200	0.4107	0.167	0.395	-	222	-	240	-	69.9	3985
120	0.2530	0.3250	0.180	0.381	-	253	-	277	-	73.1	4435
150	0.2060	0.2649	0.192	0.368	-	283	-	314	-	76.3	4960
185	0.1640	0.2114	0.208	0.353	-	320	-	361	-	80.4	5555
240	0.1250	0.1618	0.228	0.338	-	371	-	427	-	85.5	6390
300	0.1000	0.1302	0.252	0.327	-	420	-	491	-	91.1	7350

This data is applicable for 19/33 kV cables.

The ampacity for single core sizes 800 & 1000mm² was based on a single end bonding.

The above data is approximate and subjected to manufacturing tolerance.

18/30 (36) kV

Three Cores Copper or Aluminium Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

- Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape, covered with a layer of PVC compound as a bedding, Steel Tape armoured and PVC sheathed.
- Cables are produced according to IEC 60502 .

Application

- These cables are generally suitable for direct burial or for installation on trays or in ducts.

Nominal Cross Sectional Area mm ²	Max. Conductor Resistance		Operating Capacitance mf/km	Inductance mh/km	Current Rating		Approx. Overall Diameter mm	Approx. Weight kg/km
	DC at 20 °C ohm/km	AC at 90 °C ohm/km			Laid in Ground A	Laid in Free Air A		
Three Cores, Copper Conductor Cables								
50	0.3870	0.4938	0.138	0.436	185	192	69.4	5730
70	0.2680	0.3423	0.156	0.410	226	237	73.7	6725
95	0.1930	0.2469	0.167	0.395	269	286	76.7	7705
120	0.1530	0.1961	0.180	0.381	306	328	81.3	9720
150	0.1240	0.1595	0.192	0.368	342	371	84.7	10680
185	0.0991	0.1282	0.208	0.353	386	424	88.6	12120
240	0.0754	0.0986	0.229	0.338	446	497	94.4	14310
300	0.0601	0.0799	0.252	0.327	502	566	100.4	16790
Three Cores, Aluminium Conductor Cables								
50	0.6410	0.8220	0.138	0.436	144	149	69.2	4830
70	0.4430	0.5683	0.156	0.410	176	184	73.0	5395
95	0.3200	0.4107	0.167	0.395	209	222	76.7	5980
120	0.2530	0.3250	0.180	0.381	238	255	81.3	7310
150	0.2060	0.2649	0.192	0.368	266	288	84.7	7995
185	0.1640	0.2114	0.208	0.353	301	331	88.6	8700
240	0.1250	0.1618	0.228	0.338	349	389	94.1	9820
300	0.1000	0.1302	0.252	0.327	394	444	99.7	11000

This data is applicable for 19/33kV cables.

The above data is approximate and subjected to manufacturing tolerance.

Aerial Bunched Cables

The concept of insulated aerial cables was developed in the early 1960's in Europe to provide a reliable, safe and economical alternative system of Electrification.

Aerial Bundle Cable (ABC cable) is an innovative concept for overhead power distribution as compared to the conventional bare conductor overhead distribution system.

It provides higher level of safety and reliability, lower power losses and ultimate system economy by reducing installation, maintenance and operative cost.

Aerial bundled cables (also aerial bundled conductors or simply ABC) are overhead power lines using several insulated phase conductors bundled tightly together, usually with a Bare/Insulated neutral conductor.

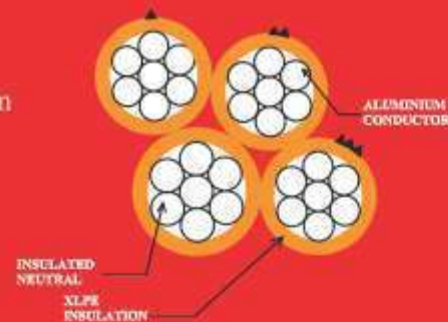
Aluminium & its alloys are used universally as conductors or neutral supports due to their inherent light weight; steel wire traditionally used in ACSR constructions are used as the supporting catenary especially for heavier medium to high voltage cables.

Standard

Basic design to BS 7870 , IEC 60502 / NFC 33-209 standards or Equivalent Standards

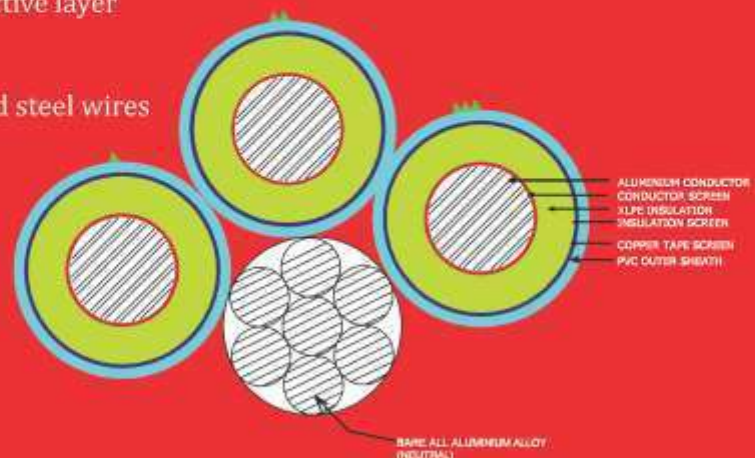
Construction for LV Aerial bunched cable

Conductor	Circular compacted stranded Aluminium
Conductor	Insulation XPLE compound
Core Identification	Through Ridges or numbering



Construction for MV Aerial bunched cable

Phase Conductor	Circular compacted stranded Aluminium Conductor
Conductor Screen	Extruded semi-conductive layer
Insulation	XPLE compound
Insulation Screen	Extruded semi-conductive layer
Metallic Screen	Copper tape screen
Outer Sheath	PVC/HDPE
Support Conductor	AAC/AAAC/Galvanized steel wires



0.6/1 (1.2)KV

LV Aerial Bunched Cables



Description

Three Phase Cores of Aluminum Conductor with one Neutral of Aluminum Alloy shall twisted together. Cables are according to NFC : 33-209, IEC or Equivalent Standard

Applications

These cables are generally suitable for overhead application

Size mm ²	Nominal Cross Sectional Area (mm ²)		Maximum DC Resistance Conductor at 20°C (Ohm/Km)		Insulation Thickness (mm) (nominal)	Current Rating in Air at ambient air temperature of 40°C (Amps.)	Short Circuit Capacity for 1 second (KA)
	Phase	Neutral	Phase	Neutral			
LV Aerial Bunched Cable with XLPE insulation							
3CX16 + 25	16	25	1.91	1.38	1.2	65	1.5
3CX25 + 25	25	25	1.2	1.38	1.4	99	2.35
3CX25 + 54.6	25	54.6	1.2	0.630	1.4	99	2.35
3CX35 + 25	35	25	0.868	1.38	1.6	122	3.29
3CX35 + 54.6	35	54.6	0.868	0.630	1.6	122	3.29
3CX50 + 35	50	35	0.641	0.986	1.6	149	4.7
3CX50 + 54.6	50	54.6	0.641	0.630	1.6	149	4.7
3CX70 + 54.6	70	54.6	0.443	0.630	1.8	190	6.58
3CX95 + 70	95	70	0.320	0.492	1.8	235	8.93





6/10(12) KV 18/30 (36) KV

MV Aerial Bunched Cables



Description

Three Phase cores fo Aluminum conductor with one neutral of aluminum alloy shall twisted together. Cables are according to IEC 60542- II, NFC or equivalent standard

Applications

These cables are generally suitable for overhead application

Size mm ²	Nominal Cross Sectional Area (mm ²)		Maximum DC Resistance of Power Core (Ohm/Km)	Insulation Thickness (mm) (nominal)	Current Rating in Air at ambient air temperature of 40°C (Amps.)	Short Circuit Capacity for 1 second (KA)
	Phase	Neutral				
10 KV MV Aerial Bunched Cables as per IEC - 60502- II						
3 Core x 35 + 35 mm ²	35	35	0.868	3.4	135	3.29
3 Core x 50 + 35 mm ²	50	35	0.647	3.4	160	4.70
3 Core x 70 + 70 mm ²	70	70	0.443	3.4	200	6.58
3 Core x 95 + 70 mm ²	95	70	0.320	3.4	245	8.96
3 Core x 120 + 70 mm ²	120	70	0.253	3.4	285	11.28
3 Core x 150 + 150 mm ²	150	150	0.206	3.4	320	14.1
3 Core x 185 + 240 mm ²	185	240	0.164	3.4	370	17.4
3 Core x 240 + 240 mm ²	240	240	0.125	3.4	440	22.6
3 Core x 300 + 300 mm ²	300	300	0.100	3.4	510	28.2
30 KV MV Aerial Bunched Cables as per IEC - 60502- II						
3 Core 120 + 70 mm ²	120	70	0.253	8.0	300	11.28
3 Core 150 + 150 mm ²	150	150	0.206	8.0	345	14.10
3 Core 185 + 240 mm ²	185	240	0.164	8.0	385	17.40
3 Core 240 + 240 mm ²	240	300	0.125	8.0	450	22.60



Laying of Power Cables

Applied Laying Depth

Type of Cable	Used Depth Cm
L.V.	50 - 80
M.V.	80-100
H.V.	100-120
E.H.V.	120-140

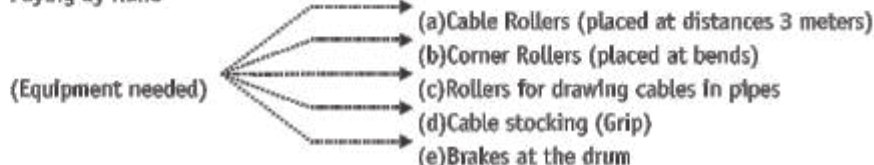
- Cable laying is a major factor affecting the cable life.
- Out catalogue based on 50 cm for L.V & M.V. and 130 cm for H.V. & E.H.V.

Laying Methods

1 Paying out from a trailer.

This method may apply only if there are no obstacles in the trench. Care has to be taken that the cable drum is rotated by hand and braked if necessary, to prevent excessive torsion strength or kinking of the cable.

2 Paying by Hand



The cable shall be pulled by men standing 4 to 6 m apart the route.

The cable shall be supported on rollers during pulling. If kinking happens to the cable, the cable drum should be braked.

3. Laying by motor-driven

The cable is pulled off the jacked-up drum by motor driven rollers set up the trench 20 to 30 apart.

Normal rollers are distributed 3 m apart between motor-driven rollers at sharp bends, it may be necessary to set up one motor driven rollers before and one after the bend.

All rollers are connected to the main switch box and switched on & off jointly.

With motor driven rollers the pull is evenly distributed over the whole length of the cable.

4. Pulling by Winch

The cable shall be equipped with a pulling eye or cable stocking the winch shall be equipped with.

(a) Dynamometer for continuous check of pulling force.

(b) Rupture device to interrupt the pulling if the maximum permissible pulling force is exceeded.

(c) Swivel of the pulling wire end to prevent twisting of cable during pulling

5. Laying part of cables in a figure of eight (8) temporarily

The coils of figure eight shape must never be smaller than the minimum bending radius.

This radius should be noticed with much care during uncoiling the figure of eight.

Maximum Tensile Forces During Laying

- Maximum tensile force when pulling by cable stocking

$$F = A \times 10 \text{ ----- } 15 \text{ N}$$

(cables with aluminium conductor)

$$F = A \times 10 \text{ ----- } 20 \text{ N}$$

(cables with copper conductor)

- But the maximum value should be revised with us before laying of cables.

- Maximum tensile force when pulling by eye attached to the conductors

$$F = A \times 30 \text{ N}$$

(cables with aluminium conductor)

$$F = A \times 50 \text{ N}$$

(cables with copper conductor)

But the maximum value should be revised with us before laying of cables

Where

A is Cable Cross Section mm²



Earthing of single core

Distribution voltage cables are normally installed with solidly bonded sheaths and, in order to minimize the sheath circulating currents on single-core cables produced by the magnetic flux linking the conductors and sheaths, they are nearly always laid in close touching trefoil formation. However, trefoil formation is poor for heat dissipation, as the three cables have a considerable heating effect upon one another. This is generally not a limitation for cable system at 33 kV but with larger conductor sizes and higher voltages alternative "specially bonded" systems are more economic.

Special bonding involves earthing the single-core cable sheaths at one point only and insulating all other points of the sheath from earth, so that the circulating sheath losses are eliminated and the phase cables can design be spaced apart to reduce their mutual heating effect without increasing sheath losses.

If one termination only is grounded, the sheaths are subjected to a standing voltage of zero at the ground connection and maximum at the point furthest from this connection. This voltage is proportional to the conductor current and cable spacing. To protect the sheath insulation against transient voltages arising from lightning or switching transients it is therefore necessary to fit sheath voltage limiters (SVLs) at all joint and sealing end positions where the sheath is insulated from earth.

Three basic variations of specially bonded systems are commonly used : single end bonding, mid-point bonding and cross-bonding.

Specially Bonded Cable Systems

Single End Bonding System

In this system the sheaths at one termination are earthed and at the other termination are insulated from ground and fitted with SVLs. It is necessary to provide a separate earth continuity conductor for fault currents which would normally return via the cable sheaths. The standing voltage is proportional to the cable that may be bonded in this manner.

Mid-point Bonding System

Bonding of the mid-point is used where the route length is too long employ a single end bonding system. In this system the cable is earthed at the mid-point (at joint) of the route and is insulated from ground and provided with SVLs at each termination or vice versa. It can be seen that this doubles the possible route length as the maximum allowable standing voltage can be tolerated at each sealing end or joint.

Cross-bonding System

In long routes, the route is split up into "major" sections, each comprised of three lengths and special joints are fitted. At each third joint position the sheaths are connected together and at all other positions they are connected so that all sheaths occupying the same position in the cable trench are connected in series. The sheaths at the intermediate positions are also connected to SVLs. The three sheaths connected in series are associated with conductors of different phases and when the cables are installed in trefoil formation their currents, and hence the sheath voltages, have equal magnitude but phase displacements of 120°. The overall effect is that the resultant voltage and current in the three sheaths are zero. When cables are laid in flat formation the voltages induced in the sheaths of the outer cable are greater than induced on the sheath of the middle cable and the phasor sum is not zero. The cables are therefore transposed at every joint position and the cross-connections are made with a phase rotation opposite to that of transposition so that the sheaths are effectively straight connected.

Handling & Laying Instructions

Handling Instructions

Cables should be installed and stored according to international regulation by trained persons with good engineering practice. Cables are supplied on heavy wooden/steel drums and handling these drums can constitute a real hazard. Indicated some of the common mistakes can be committed during the handling, care should be taken during loading and unloading.



Lifting Cable Drums



Don't lay drums flat on their sides, use proper stops to prevent drums rolling



Lift Drums on Fork Trucks



Secure drums adequately before moving



Roll in the direction shown by the arrow

NOTES

NOTES

Glimpse of Plant





Dynamic Cables Limited

www.dynamiccables.co.in

Address: F-260, Road Number 13, V.K.I Area,
Jaipur, Rajasthan, India - 302013

Email: info@dynamiccables.co.in

Tel: +91 141 4042005, 2262589

Fax: +91 141 2330182



* under approval

