30th ANNIVERSARY

BICC CABLES

Cables Crafted With Trust

MEDIUM VOLTAGE CABLES

CATALOGUE 2025

SCAN FOR DIGITAL COPY

Index

30th ANNIVERSARY

BICC CABLES Background

Andrew Fitch
Technical Manager
Since 1996 - 2000

BICC CABLES is a prominent supplier of high-quality electrical cables, holding a substantial market presence in Egypt. Over the years, the company has consistently delivered durable and reliable solutions to meet the evolving needs of various sectors.
Our expertise covers all types of electrical cables, including Building Wires, Low Voltage Cables up to 3.3 kV and Medium Voltage Power Cables up to 66 kV (Copper & Aluminum), Control Cables, Instrument Cables, Fire Resistance & Fire Alarm Cables to Overhead Transmission Lines (AAC, AAAC, ABC, ACSR).

Originally under the ownership of BICC in the UK, the company was given the name “British Insulated Callender’s Cables” and has been actively contributing to the global cable sector since 1890.

BICC CABLES, a renowned division of Sharkia Holding Group, is globally recognized for its exceptional manufacturing, customer service, and innovation capabilities. With the backing of a team of seasoned professionals, the company is committed to offering high-quality products that meet international regulations and standards.

The BICC factory is situated at Abu Rawash Industrial Zone, KM. 28 Cairo – Alexandria Desert Road, Giza, Egypt. Established in 1996 as a joint venture between BICC Cables of the UK and other investors, the site initially focused on the production of low-voltage power cables. Over the years, it has undergone significant expansion, both in production capacity and market share.

This growth has been achieved through strategic investments, including the installation of new machinery. These improvements are dedicated to meet the evolving needs of our clients and ensuring the consistent supply of high-quality cable products.

Our mission

Empower the world’s connections through innovative, reliable, and sustainable wiring solutions. We are committed to delivering high-quality products that exceed industry standards, ensuring the safety and success of our customers’ endeavors.

Our vision

We envision a world seamlessly connected, where our cutting-edge solutions empower industries, communities, and individuals alike.

BICC CABLES Background

Product Range

SCAN FOR COMPANY'S VIDEO

BICC CABLES Scope of production includes as follows:
– LV Power Cables (Copper, Tinned Copper & Aluminum)
– Medium voltage cables up to 66 kV (Copper & Aluminum)
– Control Cables
– Building Wires
– Instrument Cables
– Fire resistance & Fire Alarm Cables
– Overhead Transmission Lines (AAC, AAAC, ABC, ACSR)

This publication covers our range of production for medium voltage Cables.

Product Quality

Quality Control in all steps of manufacturing is one of the priorities of BICC CABLES, keen to provide its customers with the best quality and meeting deadlines.

All our facilities operate under the highest ISO: 9001:2015 Standards. We use the latest measuring devices (made in EU) for an effective application of quality standards.

Also, we are using only tried and tested materials and processes in full compliance with all the relevant British and International standards we are very keen to purchase raw materials from the most accredited suppliers either from local market or from abroad.

General Technical Information

Product Code

Number of Unit/s

Number of Cores /
Pairs / Triples ..etc
H : 1 Reduced Neutral
D : 2 Reduced Neutral

Unit Type

C: Core
P: Pair
R: Triplex
T: Triple
Q: Quad
F: Flat

Size

The Conductor Cross Section Area (mm²)

Conductor Material

C: Copper
T: Tinned Copper
A: Aluminium H12
J: Aluminium H14
L: Aluminium Alloy
Y: AACSR
G: ACSR

Conductor Design

S: Solid
T: Strand
F : Flexible

Fire Resistance

M: Mica Glass Tape

Insulation Type

P: PVC
X: XLPE
D: PVC 105°C
S: XLPE 2.5% C.B
A: LSHF Thermo Plastic
L: XL-LSHF
E: PE
N: PVC 90°C
F : PVC Flex

Chemical Protection

LD: Lead
PA: AL-HDPE-PA

Outer Sheath

P: PVC
E: PE
L: LSHF

Armouring

T: Steel Tape
G: Galvanized Steel Tape
W: Galvanized Steel Wire
K: Aluminum Tape
J: Aluminum Wire
A: Al Foil double side coated

Bedding

P: PVC
E: PE
L: LSHF

Screen & Sheilding

OS: Overall Shield
IS: INDV. Shield /or IS/OS
U: Copper Tape
C: Copper Tape Over Bedding
O: Copper Wire
S: Copper Braid
T: Tinned Copper Braid
F: Tinned Copper Braid over Al/PET
G: Tinned Copper Braid over PET
H: Tinned Copper Braid over Bedding
Q: Aluminum Tape Screen
R: Aluminuim Wire Screen

Rated Voltage

A: 300/500 V or 500 V
C: 0.6 / 1 kV
E: 1.5 kV_{dc}
G: 300/300 V or 300 V
I: 8.7/15 kV
K: 18/30 kV
P: 26/45 kV
B: 450/750 V
D: 1.8/3 kV
F: 3.6/6 kV
J: 6/10 kV
M: 12/20 kV
N: 20.8/36 kV

Introduction

Today, XLPE (Cross-Linked Polyethylene) insulated cables are the most common cables used for power transmission and distribution by the power and energy utilities. XLPE Insulation is a thermo-set material, with an operating temperature of 90°C at normal conditions. Cross-linking is a term to describe the process where individual polymer molecules (in PE) are tied together to form a network structure. This is done using curing techniques, such as Nitrogen curing (Dry-curing). The effects of such cross-linking on the properties of polyethylene include:

– Excellent electrical properties
– Higher operating temperature, therefore higher current capacity of the insulated conductors
– Certain mechanical properties are also improved
– Heat deformation
– Abrasion
– Chemical
– Stress Crack Resistance

This publication covers our range of production for medium voltage Cables.

Product Quality

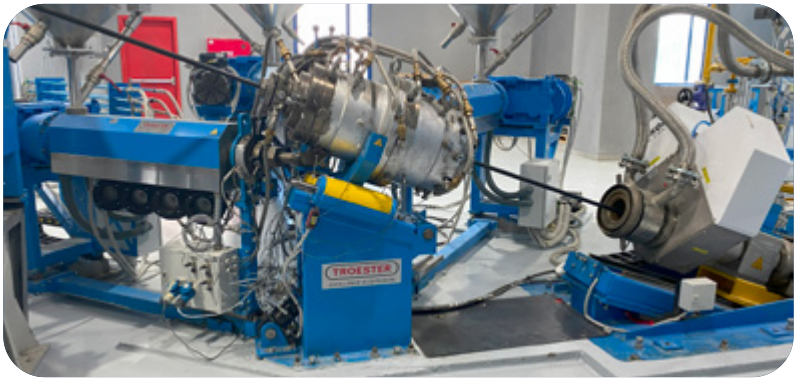
It has been found that by cross-linking PE molecules, the properties of the compound can be improved to a great extent. The operating temperature could be raised from 70°C to 90°C–95°C. The short-circuit temperature is improved from 150°C to 250°C.

The State-of-the-art CCV (Continuous Catenary vulcanization) Line in BICC Cables Company is used for triple extrusion of the inner semi-conductor, XLPE Insulation, and the outer semi-conductor; the three layers are extruded simultaneously.

Throughout the whole voltage range of distribution cables, the swing away from the traditional paper insulated types to polymeric insulated designs with advantages in ease of installation has been very significant. The lower capital cost and higher productivity processes associated with XLPE are likely to ensure a continued demand for these cables.

XLPE insulated cables are now being introduced at EHV, and work on XLPE
Insulation that will operate at increased stresses and reduced thicknesses is progressing.

Characteristics of XLPE Compound	
Insulation resistance	10^{17} (Ω/km)
Surface resistance	10^{14} (Ω)
Dielectric constant e	2.3-2.5
Loss angle tan at 50 Hz	<0.008
Super clean compound	<0.0001
Breakdown voltage (kV / mm)	45-50
Tensile strength	120-140 kg/cm^2
Elongation approx.	300%-500%



C.V Line

Medium Voltage Cables Design

Single-core or Three-core cables consist of the following:

Conductor

Conductors are made of Copper or Aluminum, Conductor design is circular stranded, and compacted. Our Conductor design is in compliance with requirements of IEC 60228 (Class 2).

Conductor Screen

Conductor screen of an extruded semi-conducting compound shall be applied over the conductor to distribute the electrical field radially.

Insulation

Triple extrusion of inner semi-conductor (conductor screen), XLPE Insulation, and outer semi-conductor (insulation screen) is applied. XLPE Insulation is dry cured. XLPE Insulation material is as per the requirements of IEC 60502-2 and BS 6622. Upon customer request, TR-XLPE Insulation is used.

Insulation Screen

An outer semiconducting layer on insulation helps in distributing the electrical stress perpendicular to the axis of the cable core and it can be bonded or strippable depends on client request.

Metallic Screen

The metallic screen in medium voltage cables shall consist of one or more tapes, or a concentric layer of wires or a combination of wires and tape(s). When choosing the material of the screen, special consideration shall be given to the possibility of corrosion, not only for mechanical safety but also for electrical safety. The nominal cross- sectional area of the screen is given below as recommended from IEC standard

Nominal area of conductor, mm²	35	50	70	95	120	150	185	240	300	400	500	630
CSA of Screen, mm²	16	16	16	16	16	25	25	25	25	35	35	35

Armoring

Armor is used to protect cables from damages, which may be caused by a sudden impact due to Falling stones and other hard materials. The armor is also utilized for pulling cables through tunnels or ducts during laying and installation. Material can be either Aluminum for single core cables or Steel for multi-core cables. Armor can be either wires or tapes.

Outer Sheath

The outer sheath is made of an extruded layer of PVC or PE material and are in compliance with the requirements of IEC 60502-2 and BS 6622. We are also capable of providing cable sheaths with special requirements to be:

– Termite resistant
– Oil resistant
– Flame retardant (in compliance with requirements of IEC 60332-1 and IEC 60332-3)
– Low Smoke Halogen Free (in Compliance with requirements of BS 7835

Medium Voltage Cables Tests

Testing of Medium voltage Power Cables

We, BICC Cables Company, are capable of performing all standard routine tests and sample tests that are normally carried out in accordance to IEC 60502-2. We have all necessary equipment for such tests, such as High voltage Labs and special ovens. We are also capable of performing tests in accordance with international or national requirements as agreed upon with our customers.

Routine Tests

Tests made by the manufacturer on each manufactured length of cable to check that each Length meets the specified requirements

The routine tests required by this standard are as follows:

– Measurement of the electrical Resistance of Conductors
– Partial Discharge Test
– High Voltage Test
– Electrical test on over sheath, if required (DC test)

Sample Tests

Tests made by the manufacturer on samples of completed cable or components taken from a Completed cable, at a specified frequency, so as to verify that the finished product meets the Specified requirements.

The routine tests required by this standard are as follows:

– Conductor Examination
– Check of Dimensions
– Hot Set Test for XLPE Insulations

General Information

Selecting MV power cable

The following factors are important when selecting a MV cable:

- Voltage designation
- Load factor
- Required load
- Short circuit current (KA) and duration (Sec).
- Environmental conditions.
- Laying conditions.

Standards

- The cable description in this catalogue are standard types and in accordance with IEC standard where applicable.
- Power cables in accordance to other standards (e.g. BS, HD, VDE) can be manufactured upon request.

Voltage

Cables are designed by U_0/U (U_m)

where,

U_0 : The rated r.m.s. power frequency voltage between conductor and earth or metallic screen.

U : The rated r.m.s. power frequency voltage between conductors.

U_m : The maximum r.m.s. power frequency voltage between conductors.

It is the highest voltage that can be sustained under normal operating conditions at any time and in any point in a system.

Rated Voltage of cable	Nominal system voltage	Highest voltage for equipment 3-phase A.C.
U_0 kV	U kV	U_m kV
3.6	6	7.2
6	10	12
8.7	15	17.5
12	20	24
18	30	36

Laying Information

During laying, the bending radius should not be smaller than values given below.
The Radius depends on the outer diameter (D) of the cable.

Type of Cable	Minimum Bending Radius (mm)	
	During Laying	Adjacent to joints or terminations
Single Core Unarmored	20 D	15 D
Single Core Armored	15 D	12 D
Three Core Unarmored	15 D	12 D
Three Core Armored	12 D	10 D

Cables Electrical Parameters

Conductor DC Resistance

The Maximum conductor DC resistance values at 20°C are as per IEC 60228 standard.

For DC resistance per unit length at different conductor temperature, the following formula shall be used:

$R_t = R_{20}\,[1+\alpha(t-20)]$	Ω/Km
R_t: Conductor DC resistance at t °C	Ω/Km
R_{20}: Conductor DC resistance at 20°C	Ω/Km
t: Conductor operating temperature	Ω/Km
α: temperature coefficient at 20 °C	°C
= 0.00393 for copper	1/ °C
= 0.00403 for Aluminum	

Conductor a.c. Resistance

a.c. resistance of the conductor at maximum operating temperature per unit length is given in the relative tables for each type of cable.

$R_{a.c.} = R_t\,(1 + Y_p + Y_s)$	Ω/Km
Y_p and Y_s are proximity and skin effect factors	

Inductance

The value of inductance is formulated as

$L=K+0.2\ LN(\frac{2S}{d})$	mH/Km
K: Constant (related to conductor formation)	
d: Conductor diameter	mm
S: Axial spacing between cables in trefoil and in case of flat formation multiply the spacing by 1.26	mm

Insulation Resistance

$R=K * LN(\frac{D}{d})$	MΩ/Km
K: Constant (related to insulation material)	Ω/Km
d: Dimeter after conductor screen	Ω/Km
D: Diameter after insulation	Ω/Km
R: Insulation Resistance	MΩ/Km

Capacitance

The value of capacitance is formulated as following:

$C = \varepsilon_r / [18LN\ \frac{D}{d}]$	μF/Km
C: Capacitance	μF/Km
ε_r: relative permittivity of Insulation	
D: Diameter over the Insulation	mm
d: Diameter under the Insulation	mm

Charging Current

the charging current is the capacitive current which flows through the dielectric layers when AC voltage is applied the value can be calculated from the following equation:

$I_c = U_0 \omega C 10^{-6}$	A/Km
U_0: Phase voltage	V
ω: Angular of velocity (2πf)	rad/s
f: Frequency	Hz
C: Capacitance to neutral	μF/Km

Dielectric Losses

The dielectric losses of an AC cable are proportional to the capacitance, the frequency, the phase voltage and the power factor. The value can be derived from the following equation:

$W_d = \omega C\, U_0^2 \tan\delta 10^{-6}$	W/Km/Phase
W_d: Dielectric Losses	W/Km/Phase
ω: Angular of velocity (2πf)	
f: Frequency	Hz
C: Capacitance to neutral	μF/Km
U_0: Phase voltage	v
tanδ: Dielectric power factor	

Cables Electrical Parameters

Voltage Drop

When current flows in a cable there is a voltage drop between the ends of the cable which is the product of the current and the impedance. The following equations should be used to calculate the voltage drop:

Single phase circuit

V_d=2(R cosθ+X sinθ)	V/amp/meter

Three phase circuit

V_d=√3(R cosθ+X sinθ)	V/amp/meter
R: AC resistance at maximum conductor temperature	Ω/Km
X: Inductive Reactance	Ω/Km
Cosθ: Load Power factor	
X =ω L10^{-3}	Ω/Km
L: Inductance	mH/km

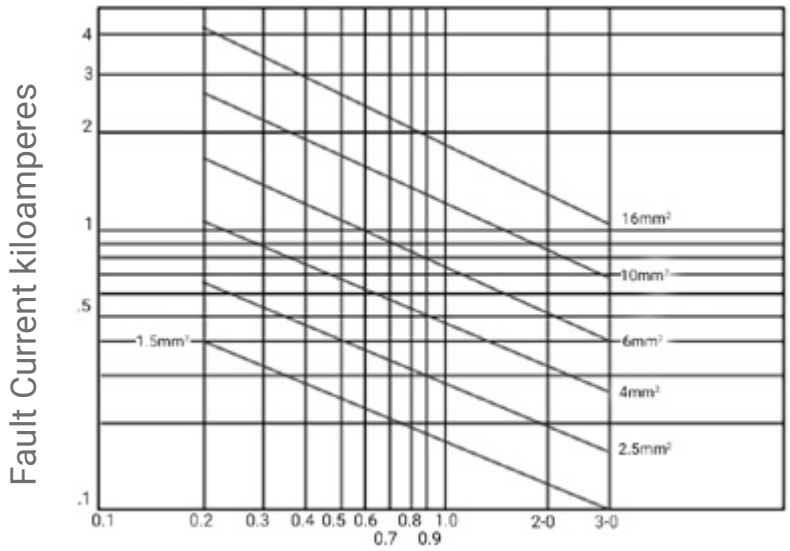
Relation between Cos θ and Sin θ:

cosθ	1	0.9	0.85	0.8	0.6
sinθ	0	0.44	0.53	0.6	0.8

Cable Short Circuit Current capacity

Tables 7-8 give the short circuit current for both copper and aluminum conductor insulated by XLPE Short circuits start from the maximum operating temperature. Maximum temperature during short circuit is 250 °C for XLPE

$I_{s.c.t}$ =$I_{s.c.1}$ / (√t)	
where	
$I_{s.c.t}$: short circuit current for t second	KA
$I_{s.c.1}$: short circuit current for 1 second	KA
t: duration	Sec



Duration of Short Circuit in Seconds for XLPE Insulated Cables

Derating factors

Table 1

Air temperature de-rating factors

Air temperature °C	20	25	30	35	40	45	50	55
XLPE cables rated 90 °C	1.08	1.04	1	0.96	0.91	0.87	0.82	0.76

Table 2

Ground temperature de-rating factors

Ground temperature °C	15	20	25	30	35	40	45	50	55
XLPE cables rated 90 °C	1.04	1	0.96	0.93	0.89	0.85	0.8	0.76	0.71

Table 3

Depth of laying de-rating factors

Depth of Laying m	Direct buried			Duct		
	Single core		Three cores	Single core		Three cores
	<= 185 mm²	> 185 mm²		<= 185 mm²	> 185 mm²	
0.5	1	1	1	1	1	1
0.6	0.98	0.98	0.99	0.98	0.98	0.99
0.8	0.96	0.94	0.96	0.96	0.95	0.97
1	0.94	0.92	0.94	0.94	0.92	0.96
1.25	0.92	0.9	0.92	0.92	0.9	0.94
1.5	0.91	0.88	0.91	0.91	0.89	0.93
1.75	0.9	0.86	0.9	0.9	0.88	0.92
2	0.89	0.85	0.89	0.89	0.87	0.91
2.5	0.88	0.83	0.88	0.88	0.85	0.9
3	0.87	0.81	0.87	0.87	0.84	0.89

Table 4

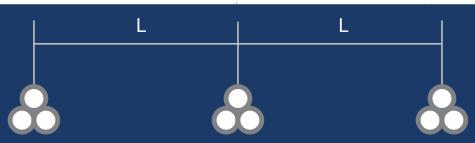
Soil thermal resistivity de-rating factors

soil thermal resistivity °C.m/W	0.8	0.9	1	1.2	1.5	2	2.5
de-rating factors	1.1	1.05	1	0.92	0.83	0.73	0.66

Derating Factors

Table 5

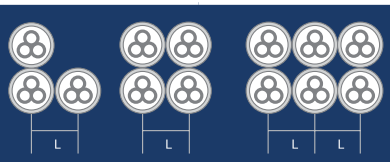
Trefoil or flat formation de-rating factors for three single core cables laid direct in ground

Number of circuits	 Trefoil Formation				 Flat Formation	
	Touching		Spacing = 0.15 m		Spacing = 0.30 m	
no	Trefoil	Flat	Trefoil	Flat	Trefoil	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 6

Trefoil or flat formation de-rating factors for the multi cores cable laid direct in ground

Number of circuits	 Trefoil Formation				 Flat Formation	
	Touching		Spacing = 0.15 m		Spacing = 0.30 m	
no	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	0.76	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.

Short Circuit current

Table 7

Short Circuit current for Copper Conductors XLPE insulated (KA) (90 / 250 °C)

CSA mm²	Duration in second									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
35	15.80	11.20	9.10	7.90	7.08	5.00	3.50	2.89	2.50	2.20
50	22.60	16.00	13.06	11.30	10.10	7.15	5.06	4.10	3.58	3.20
70	31.67	22.40	18.29	15.80	14.16	10.00	7.08	5.78	5.00	4.48
95	42.98	30.39	24.80	21.50	19.20	13.59	9.60	7.80	6.80	6.08
120	54.30	38.39	31.30	27.10	24.28	17.17	12.10	9.90	8.59	7.68
150	67.87	47.99	39.20	33.90	30.35	21.46	15.18	12.39	10.70	9.60
185	83.70	59.19	48.30	41.85	37.40	26.47	18.70	15.28	13.20	11.80
240	108.59	76.79	62.70	54.30	48.56	34.30	24.28	19.80	17.17	15.36
300	135.70	95.98	78.37	67.87	60.70	42.90	30.35	24.78	21.46	19.20
400	181.00	128.00	104.50	90.50	80.90	57.20	40.50	33.00	28.60	25.60
500	226.20	160.00	130.60	113.10	101.20	71.50	50.60	41.30	35.80	32.00
630	285.10	201.60	164.60	142.50	127.50	90.10	63.70	52.00	45.10	40.30

Table 8

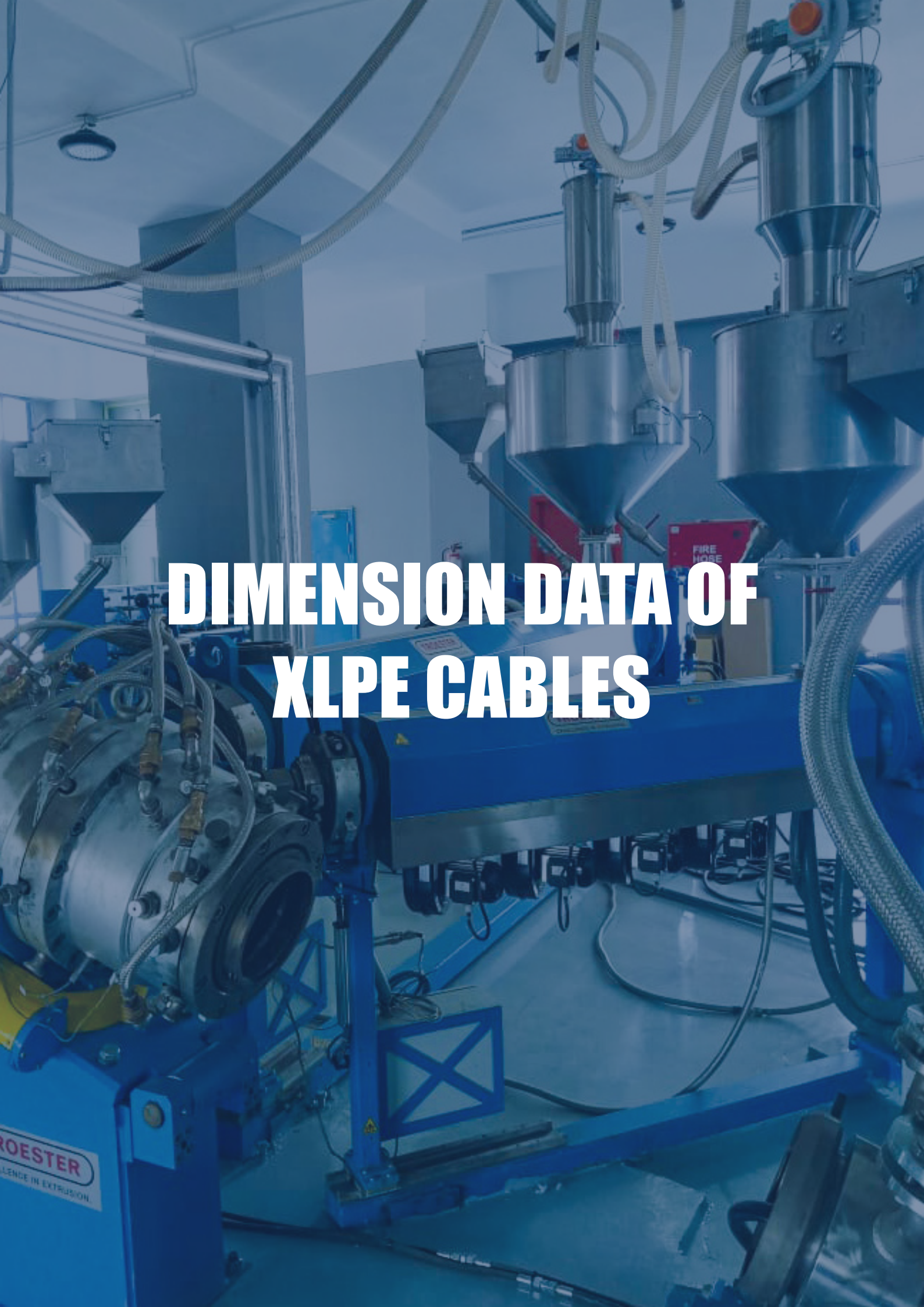
Short Circuit current for Aluminum Conductors XLPE insulated (KA) (90 / 250 °C)

CSA mm²	Duration in second									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
50	14.9	10.56	8.6	7.47	6.68	4.7	3.3	2.7	2.36	2.1
70	20.9	14.79	12.08	10.46	9.35	6.6	4.68	3.8	3.3	2.96
95	28.38	20.07	16.39	14.19	12.69	8.98	6.3	5.18	4.49	4
120	35.85	25.35	20.7	17.9	16	11.3	8	6.5	5.67	5.07
150	44.8	31.69	25.88	22.4	20	14.17	10	8.18	7.09	6.3
185	55.28	39.09	31.9	27.6	24.7	17.48	12.36	10.09	8.7	7.8
240	71.7	50.7	41.4	35.85	32.07	22.68	16	13.09	11.3	10.1
300	89.6	63.38	51.75	44.8	40.09	28.3	20	16.37	14.17	12.68
400	119.5	84.5	69	59.76	53.4	37.79	26.7	21.8	18.9	16.9
500	149.39	105.6	86.25	74.7	66.8	47.2	33.4	27.28	23.6	21.1
630	188.2	133.1	108.68	94.1	84.18	59.5	42.09	34.37	29.76	26.6

Table 9

Short Circuit current for Copper Screen (KA) (90 / 250 °C)

CSA mm²	Duration in second									
	0.1	0.2	0.3	0.4	0.5	1	2	3	4	5
16	7.20	5.10	4.18	3.60	3.20	2.29	1.60	1.30	1.10	1.00
25	11.30	8.00	6.50	5.66	5.06	3.58	2.50	2.07	1.79	1.60
35	15.80	11.20	9.10	7.90	7.08	5.00	3.50	2.89	2.5	2.20



DIMENSION DATA OF XLPE CABLES

3.6/6 (7.2) kV - Single Core Cable - Unarmored

Description

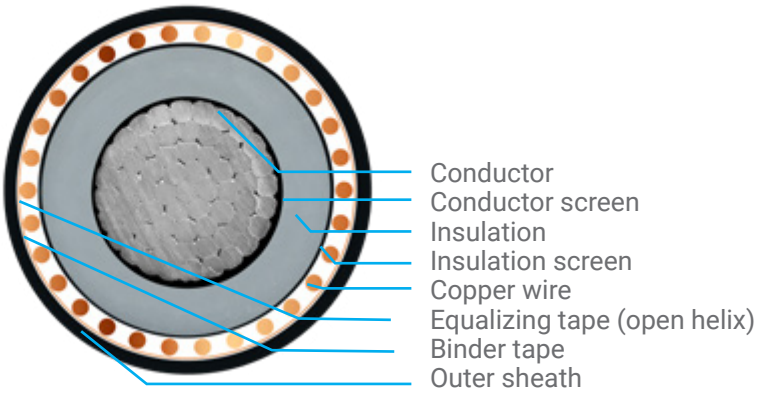
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Wires Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035C/AT0XFO00P	2.5	1.6	19.1	735	-
50	01C050C/AT0XFO00P	2.5	1.6	20.2	860	580
70	01C070C/AT0XFO00P	2.5	1.7	22.4	1085	690
95	01C095C/AT0XFO00P	2.5	1.7	24.0	1350	785
120	01C120C/AT0XFO00P	2.5	1.8	25.7	1610	895
150	01C150C/AT0XFO00P	2.5	1.8	27.1	1950	1075
185	01C185C/AT0XFO00P	2.5	1.9	29.0	2310	1220
240	01C240C/AT0XFO00P	2.6	1.9	31.8	2885	1435
300	01C300C/AT0XFO00P	2.8	2.0	34.2	3490	1670
400	01C400C/AT0XFO00P	3.0	2.2	38.3	4470	2160
500	01C500C/AT0XFO00P	3.2	2.3	42.4	5570	2575
630	01C630C/AT0XFO00P	3.2	2.4	46.3	6910	3110

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance Trefoil
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	μf/km	Ω/Km
35	0.524	0.6683	-	-	0.278	0.129
50	0.387	0.4936	0.641	0.8219	0.309	0.121
70	0.268	0.3420	0.443	0.5681	0.365	0.113
95	0.193	0.2465	0.320	0.4105	0.410	0.108
120	0.153	0.1955	0.253	0.3246	0.452	0.103
150	0.124	0.1587	0.206	0.2644	0.491	0.100
185	0.0991	0.1271	0.164	0.2107	0.539	0.097
240	0.0754	0.0971	0.125	0.1608	0.590	0.094
300	0.0601	0.0778	0.100	0.1289	0.598	0.093
400	0.0470	0.0614	0.0778	0.1006	0.634	0.090
500	0.0366	0.0485	0.0605	0.0787	0.675	0.088
630	0.0283	0.0384	0.0469	0.0616	0.755	0.086

The above data is approximate and subjected to manufacturing tolerance
This data is applicable also for 3.8/6.6 kV



3.6/6 (7.2) kV - Armored AWA Single Core Cable

Description

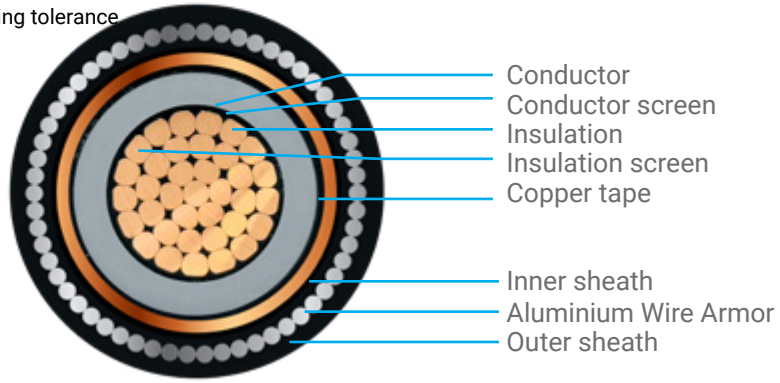
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Tape Screen
Aluminum Wire Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XFUPJP	2.5	1.7	1.8	24.5	955	745
50	01C050**C/A**T0XFUPJP	2.5	1.7	1.8	25.8	1110	830
70	01C070**C/A**T0XFUPJP	2.5	1.7	1.8	27.4	1355	950
95	01C095**C/A**T0XFUPJP	2.5	1.7	1.9	29.1	1650	1090
120	01C120**C/A**T0XFUPJP	2.5	1.7	1.9	30.5	1930	1205
150	01C150**C/A**T0XFUPJP	2.5	1.7	2	32.1	2255	1355
185	01C185**C/A**T0XFUPJP	2.5	2	2.1	34.6	2705	1600
240	01C240**C/A**T0XFUPJP	2.6	2	2.1	37.1	3300	1855
300	01C300**C/A**T0XFUPJP	2.8	2	2.2	39.9	3960	2145
400	01C400**C/A**T0XFUPJP	3	2	2.4	43.5	4910	2585
500	01C500**C/A**T0XFUPJP	3.2	2.5	2.5	48.6	6305	3270
630	01C630**C/A**T0XFUPJP	3.2	2.5	2.6	52.9	7760	3895

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance Trefoil
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6683	-	-	0.278	0.143
50	0.387	0.4936	0.641	0.8219	0.309	0.133
70	0.268	0.3420	0.443	0.5681	0.365	0.126
95	0.193	0.2465	0.320	0.4105	0.410	0.120
120	0.153	0.1955	0.253	0.3246	0.452	0.115
150	0.124	0.1587	0.206	0.2644	0.491	0.112
185	0.0991	0.1271	0.164	0.2107	0.539	0.109
240	0.0754	0.0971	0.125	0.1608	0.590	0.105
300	0.0601	0.0778	0.100	0.1289	0.598	0.102
400	0.0470	0.0614	0.0778	0.1006	0.634	0.099
500	0.0366	0.0485	0.0605	0.0787	0.675	0.099
630	0.0283	0.0384	0.0469	0.0616	0.755	0.095

The above data is approximate and subjected to manufacturing tolerance
This data is applicable also for 3.8/6.6 kV



3.6/6 (7.2) kV - Armored ATA Single Core Cable

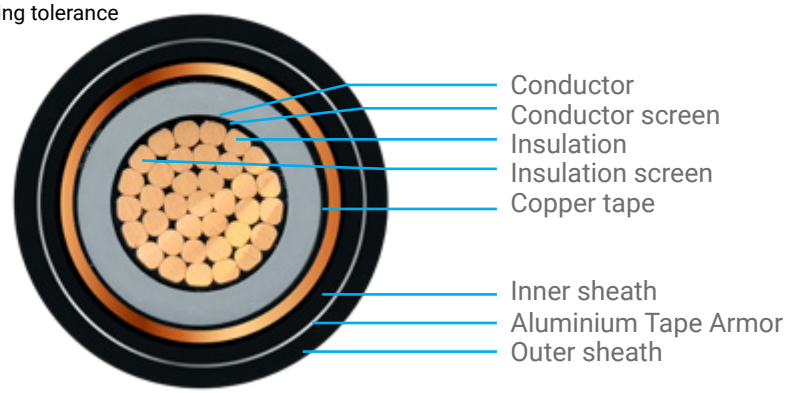
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Aluminum Tape Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XFOPJP	2.5	0.5	1.7	22.6	878	671
50	01C050**C/A**T0XFOPJP	2.5	0.5	1.7	23.4	964	687
70	01C070**C/A**T0XFOPJP	2.5	0.5	1.8	25.2	1208	806
95	01C095**C/A**T0XFOPJP	2.5	0.5	1.8	26.7	1484	923
120	01C120**C/A**T0XFOPJP	2.5	0.5	1.9	28.3	1771	1048
150	01C150**C/A**T0XFOPJP	2.5	0.5	1.9	29.6	2067	1169
185	01C185**C/A**T0XFOPJP	2.5	0.5	2	31.6	2450	1345
240	01C240**C/A**T0XFOPJP	2.6	0.5	2.1	34.3	3035	1589
300	01C300**C/A**T0XFOPJP	2.8	0.5	2.2	37	3683	1867
400	01C400**C/A**T0XFOPJP	3	0.5	2.3	40.4	4580	2252
500	01C500**C/A**T0XFOPJP	3.2	0.5	2.4	44.4	5771	2736
630	01C630**C/A**T0XFOPJP	3.2	0.5	2.5	48.6	7186	3317

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance Trefoil
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6683	-	-	0.278	0.141
50	0.387	0.4936	0.641	0.8219	0.309	0.127
70	0.268	0.3420	0.443	0.5681	0.365	0.120
95	0.193	0.2465	0.320	0.4105	0.410	0.115
120	0.153	0.1955	0.253	0.3246	0.452	0.111
150	0.124	0.1587	0.206	0.2644	0.491	0.107
185	0.0991	0.1271	0.164	0.2107	0.539	0.104
240	0.0754	0.0971	0.125	0.1608	0.590	0.100
300	0.0601	0.0778	0.100	0.1289	0.598	0.098
400	0.0470	0.0614	0.0778	0.1006	0.634	0.095
500	0.0366	0.0485	0.0605	0.0787	0.675	0.093
630	0.0283	0.0384	0.0469	0.0616	0.755	0.090

The above data is approximate and subjected to manufacturing tolerance
This data is applicable also for 3.8/6.6 kV



3.6/6 (7.2) kV - Multi Core Cable - Unarmored

Description

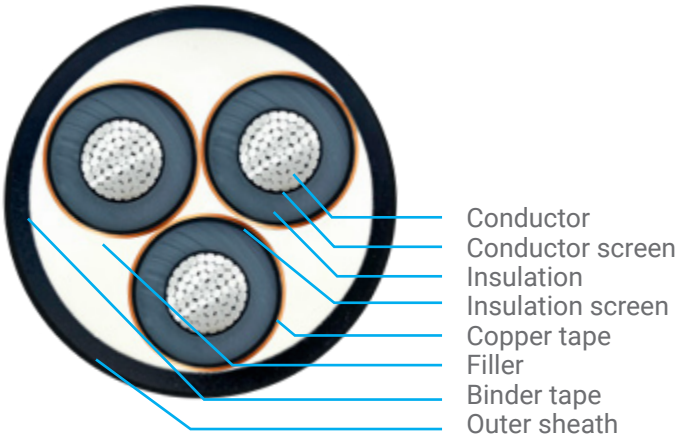
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Operating Temperature: 90°C.

Copper Tape Screen
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XFU00P	2.5	2.2	35.4	1865	-
50	03C050**C/A**T0XFU00P	2.5	2.3	37.9	2290	1470
70	03C070**C/A**T0XFU00P	2.5	2.4	42.5	3015	1835
95	03C095**C/A**T0XFU00P	2.5	2.5	46.1	3870	2175
120	03C120**C/A**T0XFU00P	2.5	2.6	49.5	4675	2535
150	03C150**C/A**T0XFU00P	2.5	2.7	52.8	5545	2915
185	03C185**C/A**T0XFU00P	2.5	2.8	56.6	6670	3380
240	03C240**C/A**T0XFU00P	2.6	3.0	63.1	8570	4205
300	03C300**C/A**T0XFU00P	2.8	3.2	68.2	10500	5020
400	03C400**C/A**T0XFU00P	3.0	3.5	76.4	13265	6360
500	03C500**C/A**T0XFU00P	3.2	3.7	85.2	16780	7770

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.278	0.113
50	0.387	0.4939	0.641	0.8221	0.309	0.105
70	0.268	0.3424	0.443	0.5684	0.365	0.099
95	0.193	0.2471	0.320	0.4109	0.410	0.094
120	0.153	0.1964	0.253	0.3252	0.452	0.090
150	0.124	0.1598	0.206	0.2651	0.491	0.088
185	0.0991	0.1285	0.164	0.2116	0.539	0.086
240	0.0754	0.0991	0.125	0.1621	0.590	0.083
300	0.0601	0.0803	0.100	0.1305	0.598	0.082
400	0.0470	0.0646	0.0778	0.1027	0.634	0.080
500	0.0366	0.0526	0.0605	0.0814	0.675	0.079

The above data is approximate and subjected to manufacturing tolerance.
This data is applicable also for 3.8/6.6 kV



3.6/6 (7.2) kV - Multi Core Cable – STA

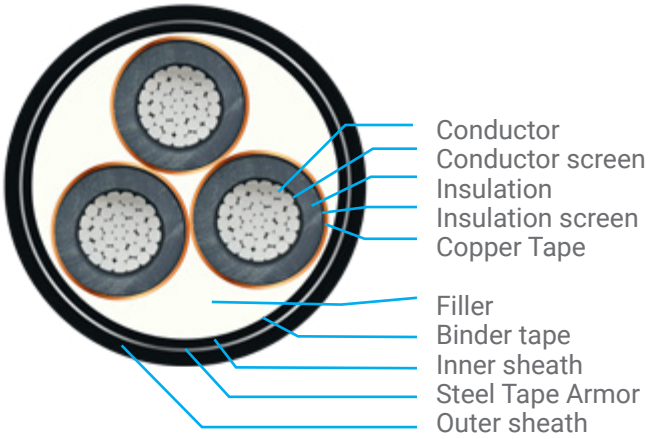
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Double Steel Tape Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XFUPTP	2.5	0.5	2.3	40.2	2700	-
50	03C050**C/A**T0XFUPTP	2.5	0.5	2.4	42.7	3185	2380
70	03C070**C/A**T0XFUPTP	2.5	0.5	2.5	47.5	4035	2880
95	03C095**C/A**T0XFUPTP	2.5	0.5	2.6	51.1	4975	3280
120	03C120**C/A**T0XFUPTP	2.5	0.5	2.8	54.9	5915	3780
150	03C150**C/A**T0XFUPTP	2.5	0.5	2.9	58.4	6890	4265
185	03C185**C/A**T0XFUPTP	2.5	0.5	3.0	62.2	8110	4820
240	03C240**C/A**T0XFUPTP	2.6	0.5	3.2	68.9	10205	5840
300	03C300**C/A**T0XFUPTP	2.8	0.5	3.4	74.2	12300	6820
400	03C400**C/A**T0XFUPTP	3.0	0.8	3.7	83.8	16120	9100
500	03C500**C/A**T0XFUPTP	3.2	0.8	3.9	92.8	20000	10990

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.278	0.113
50	0.387	0.4939	0.641	0.8221	0.309	0.105
70	0.268	0.3424	0.443	0.5684	0.365	0.099
95	0.193	0.2471	0.320	0.4109	0.410	0.094
120	0.153	0.1964	0.253	0.3252	0.452	0.090
150	0.124	0.1598	0.206	0.2651	0.491	0.088
185	0.0991	0.1285	0.164	0.2116	0.539	0.086
240	0.0754	0.0991	0.125	0.1621	0.590	0.083
300	0.0601	0.0803	0.100	0.1305	0.598	0.082
400	0.0470	0.0646	0.0778	0.1027	0.634	0.080
500	0.0366	0.0526	0.0605	0.0814	0.675	0.079

The above data is approximate and subjected to manufacturing tolerance
This data is applicable also for 3.8/6.6 kV



3.6/6 (7.2) kV - Multi Core Cable – SWA

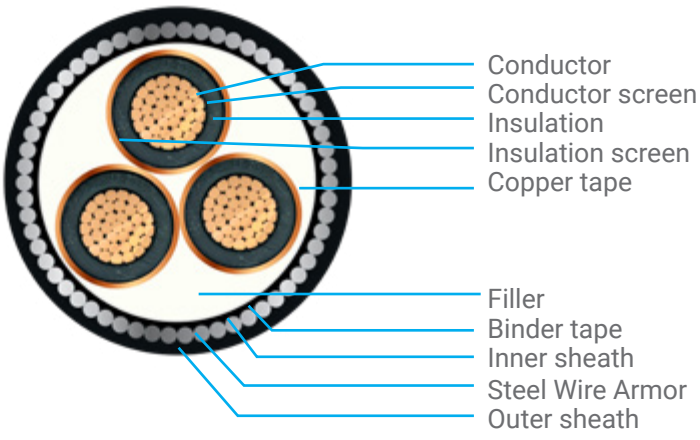
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Steel Wire Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XFUPWP	2.5	2.5	2.4	43.9	3670	-
50	03C050**C/A**T0XFUPWP	2.5	2.5	2.5	46.4	4200	3420
70	03C070**C/A**T0XFUPWP	2.5	2.5	2.6	51.2	5180	4045
95	03C095**C/A**T0XFUPWP	2.5	2.5	2.7	55	6210	4515
120	03C120**C/A**T0XFUPWP	2.5	2.5	2.9	58.6	7235	5090
150	03C150**C/A**T0XFUPWP	2.5	2.5	3.0	62.1	8275	5650
185	03C185**C/A**T0XFUPWP	2.5	2.5	3.1	65.9	9600	6310
240	03C240**C/A**T0XFUPWP	2.6	3.15	3.3	73.9	12525	8160
300	03C300**C/A**T0XFUPWP	2.8	3.15	3.5	79.2	14800	9320
400	03C400**C/A**T0XFUPWP	3.0	3.15	3.8	87.8	18180	11160
500	03C500**C/A**T0XFUPWP	3.2	3.15	4.0	96.8	22220	13210

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.278	0.113
50	0.387	0.4939	0.641	0.8221	0.309	0.105
70	0.268	0.3424	0.443	0.5684	0.365	0.099
95	0.193	0.2471	0.320	0.4109	0.410	0.094
120	0.153	0.1964	0.253	0.3252	0.452	0.090
150	0.124	0.1598	0.206	0.2651	0.491	0.088
185	0.0991	0.1285	0.164	0.2116	0.539	0.086
240	0.0754	0.0991	0.125	0.1621	0.590	0.083
300	0.0601	0.0803	0.100	0.1305	0.598	0.082
400	0.0470	0.0646	0.0778	0.1027	0.634	0.080
500	0.0366	0.0526	0.0605	0.0814	0.675	0.079

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 3.8/6.6 kV



6/10 (12) kV - Single Core Cable

Description

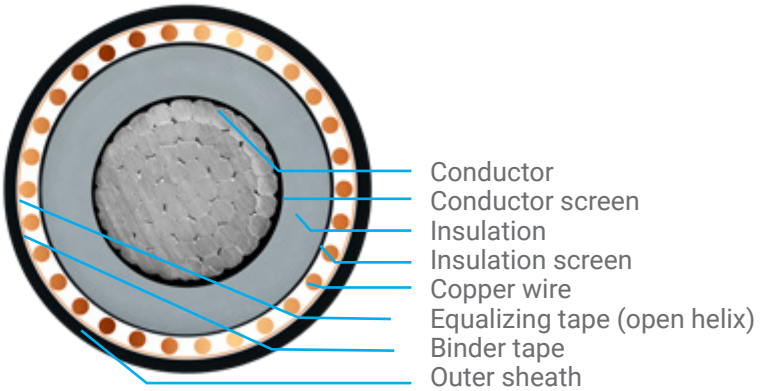
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Wires Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XJO00P	3.4	1.6	20.9	760	-
50	01C050**C/A**T0XJO00P	3.4	1.7	22.2	910	645
70	01C070**C/A**T0XJO00P	3.4	1.7	24.2	1125	750
95	01C095**C/A**T0XJO00P	3.4	1.8	26.0	1405	855
120	01C120**C/A**T0XJO00P	3.4	1.8	27.5	1650	955
150	01C150**C/A**T0XJO00P	3.4	1.9	29.1	2010	1155
185	01C185**C/A**T0XJO00P	3.4	1.9	30.8	2360	1290
240	01C240**C/A**T0XJO00P	3.4	2.0	33.6	2945	1520
300	01C300**C/A**T0XJO00P	3.4	2.1	35.6	3530	1735
400	01C400**C/A**T0XJO00P	3.4	2.2	39.1	4450	2145
500	01C500**C/A**T0XJO00P	3.4	2.3	42.8	5515	2555
630	01C630**C/A**T0XJO00P	3.4	2.4	49.2	6960	3090

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	μf/km	Ω/Km
35	0.524	0.6684	-	-	0.219	0.135
50	0.387	0.4938	0.641	0.8220	0.243	0.127
70	0.268	0.3423	0.443	0.5682	0.284	0.118
95	0.193	0.2469	0.320	0.4106	0.318	0.113
120	0.153	0.1962	0.253	0.3249	0.349	0.108
150	0.124	0.1595	0.206	0.2648	0.378	0.105
185	0.0991	0.1282	0.164	0.2111	0.413	0.101
240	0.0754	0.0987	0.125	0.1615	0.466	0.097
300	0.0601	0.0799	0.100	0.1298	0.503	0.095
400	0.0470	0.0642	0.0778	0.1019	0.567	0.092
500	0.0366	0.0522	0.0605	0.0804	0.639	0.089
630	0.0283	0.0432	0.0469	0.0640	0.766	0.086

The above data is approximate and subjected to manufacturing tolerance this data is applicable also for 6.35/11 kV



6/10 (12) kV - Armored AWA Single Core Cable

Description

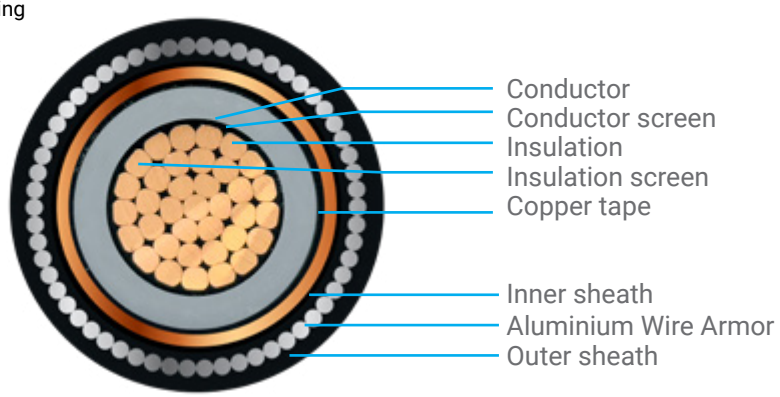
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Tape Screen
Aluminum Wire Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XJUPJP	3.4	1.7	1.8	26.3	1045	835
50	01C050**C/A**T0XJUPJP	3.4	1.7	1.8	27.6	1205	930
70	01C070**C/A**T0XJUPJP	3.4	1.7	1.9	29.4	1465	1065
95	01C095**C/A**T0XJUPJP	3.4	1.7	2	31.1	1770	1210
120	01C120**C/A**T0XJUPJP	3.4	2	2	33.1	2110	1390
150	01C150**C/A**T0XJUPJP	3.4	2	2.1	34.7	2440	1540
185	01C185**C/A**T0XJUPJP	3.4	2	2.1	36.4	2835	1730
240	01C240**C/A**T0XJUPJP	3.4	2	2.2	38.9	3430	1985
300	01C300**C/A**T0XJUPJP	3.4	2	2.3	41.3	4075	2260
400	01C400**C/A**T0XJUPJP	3.4	2.5	2.4	45.7	5160	2830
500	01C500**C/A**T0XJUPJP	3.4	2.5	2.5	49	6335	3300
630	01C630**C/A**T0XJUPJP	3.4	2.5	2.6	53.3	7810	3940

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.219	0.148
50	0.387	0.4938	0.641	0.8220	0.243	0.137
70	0.268	0.3423	0.443	0.5682	0.284	0.130
95	0.193	0.2469	0.320	0.4106	0.318	0.125
120	0.153	0.1962	0.253	0.3249	0.349	0.120
150	0.124	0.1595	0.206	0.2648	0.378	0.117
185	0.0991	0.1282	0.164	0.2111	0.413	0.113
240	0.0754	0.0987	0.125	0.1615	0.466	0.108
300	0.0601	0.0799	0.100	0.1298	0.503	0.104
400	0.0470	0.0642	0.0778	0.1019	0.567	0.103
500	0.0366	0.0522	0.0605	0.0804	0.639	0.099
630	0.0283	0.0432	0.0469	0.0640	0.766	0.096

The above data is approximate and subjected to manufacturing tolerance this data is applicable also for 6.35/11 kV



6/10 (12) kV – Armored ATA Single Core Cable

Description

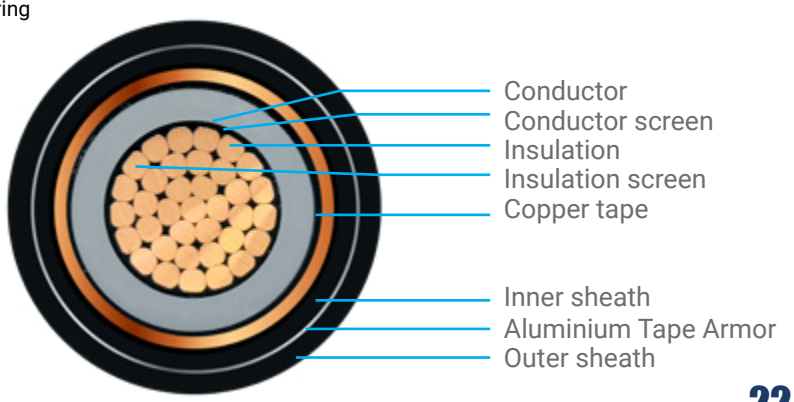
Copper or Aluminum
Circular Compacted Conductor
Copper Tape Screen

SC/XLPE/SC Insulation
PVC Jacket
Aluminum Tape Armor

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XJOPKP	3.4	0.5	1.8	24.1	906	699
50	01C050**C/A**T0XJOPKP	3.4	0.5	1.8	25.4	1060	783
70	01C070**C/A**T0XJOPKP	3.4	0.5	1.8	27	1296	894
95	01C095**C/A**T0XJOPKP	3.4	0.5	1.9	28.7	1592	1031
120	01C120**C/A**T0XJOPKP	3.4	0.5	2	30.3	1884	1161
150	01C150**C/A**T0XJOPKP	3.4	0.5	2	31.6	2184	1285
185	01C185**C/A**T0XJOPKP	3.4	0.5	2.1	33.6	2574	1469
240	01C240**C/A**T0XJOPKP	3.4	0.5	2.1	35.9	3136	1690
300	01C300**C/A**T0XJOPKP	3.4	0.5	2.2	38.2	3762	1947
400	01C400**C/A**T0XJOPKP	3.4	0.5	2.3	41.4	4657	2329
500	01C500**C/A**T0XJOPKP	3.4	0.5	2.4	44.8	5803	2768
630	01C630**C/A**T0XJOPKP	3.4	0.5	2.5	49	7220	3350

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance Trefoil
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.219	0.142
50	0.387	0.4938	0.641	0.8220	0.243	0.132
70	0.268	0.3423	0.443	0.5682	0.284	0.125
95	0.193	0.2469	0.320	0.4106	0.318	0.120
120	0.153	0.1962	0.253	0.3249	0.349	0.116
150	0.124	0.1595	0.206	0.2648	0.378	0.112
185	0.0991	0.1282	0.164	0.2111	0.413	0.108
240	0.0754	0.0987	0.125	0.1615	0.466	0.103
300	0.0601	0.0799	0.100	0.1298	0.503	0.100
400	0.0470	0.0642	0.0778	0.1019	0.567	0.097
500	0.0366	0.0522	0.0605	0.0804	0.639	0.093
630	0.0283	0.0432	0.0469	0.0640	0.766	0.091

The above data is approximate and subjected to manufacturing tolerance this data is applicable also for 6.35/11 kV



6/10 (12) kV - Multi Core Cable - Unarmored

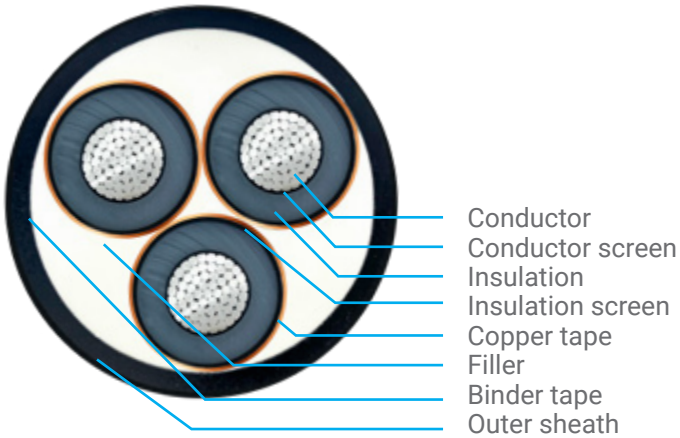
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XJU00P	3.4	2.3	39.4	2095	-
50	03C050**C/A**T0XJU00P	3.4	2.4	42	2535	1720
70	03C070**C/A**T0XJU00P	3.4	2.5	46.5	3280	2110
95	03C095**C/A**T0XJU00P	3.4	2.7	50.4	4185	2490
120	03C120**C/A**T0XJU00P	3.4	2.8	53.8	5010	2870
150	03C150**C/A**T0XJU00P	3.4	2.9	57.1	5900	3270
185	03C185**C/A**T0XJU00P	3.4	3.0	60.9	7045	3755
240	03C240**C/A**T0XJU00P	3.4	3.2	66.9	8940	4575
300	03C300**C/A**T0XJU00P	3.4	3.3	71	10785	5305
400	03C400**C/A**T0XJU00P	3.4	3.6	78.1	13450	6430
500	03C500**C/A**T0XJU00P	3.4	3.7	86.1	16885	7875

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.219	0.121
50	0.387	0.4938	0.641	0.8221	0.243	0.112
70	0.268	0.3423	0.443	0.5683	0.284	0.105
95	0.193	0.2470	0.320	0.4108	0.318	0.100
120	0.153	0.1963	0.253	0.3251	0.349	0.096
150	0.124	0.1596	0.206	0.2650	0.378	0.093
185	0.0991	0.1283	0.164	0.2115	0.413	0.090
240	0.0754	0.0988	0.125	0.1619	0.466	0.087
300	0.0601	0.0801	0.100	0.1303	0.503	0.085
400	0.0470	0.0645	0.0778	0.1026	0.567	0.082
500	0.0366	0.0525	0.0605	0.0813	0.639	0.080

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 6.35/11 kV



6/10 (12) kV - Multi Core Cable – STA

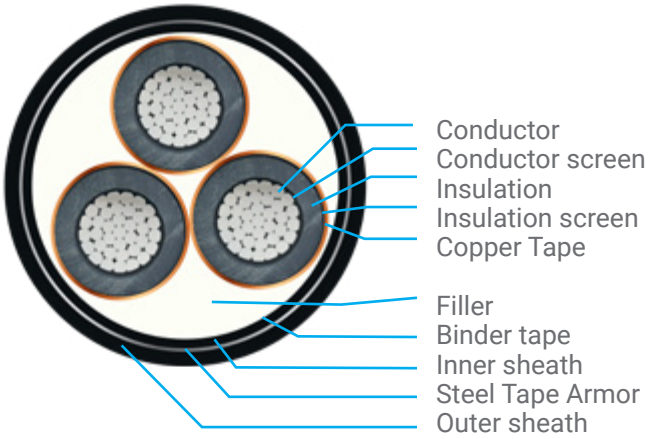
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Double Steel Tape Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XJUPTP	3.4	0.5	2.5	44.4	3040	-
50	03C050**C/A**T0XJUPTP	3.4	0.5	2.6	47.2	3570	2775
70	03C070**C/A**T0XJUPTP	3.4	0.5	2.7	51.9	4450	3305
95	03C095**C/A**T0XJUPTP	3.4	0.5	2.8	55.6	5415	3725
120	03C120**C/A**T0XJUPTP	3.4	0.5	2.9	59.2	6350	4420
150	03C150**C/A**T0XJUPTP	3.4	0.5	3.0	62.5	7320	4695
185	03C185**C/A**T0XJUPTP	3.4	0.5	3.1	66.6	8595	5305
240	03C240**C/A**T0XJUPTP	3.4	0.5	3.3	72.8	10670	6305
300	03C300**C/A**T0XJUPTP	3.4	0.5	3.5	77.3	12695	7215
400	03C400**C/A**T0XJUPTP	3.4	0.8	3.8	85.5	16365	9350
500	03C500**C/A**T0XJUPTP	3.4	0.8	4.0	93.9	20185	11175

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.219	0.121
50	0.387	0.4938	0.641	0.8221	0.243	0.112
70	0.268	0.3423	0.443	0.5683	0.284	0.105
95	0.193	0.2470	0.320	0.4108	0.318	0.100
120	0.153	0.1963	0.253	0.3251	0.349	0.096
150	0.124	0.1596	0.206	0.2650	0.378	0.093
185	0.0991	0.1283	0.164	0.2115	0.413	0.09
240	0.0754	0.0988	0.125	0.1619	0.466	0.087
300	0.0601	0.0801	0.100	0.1303	0.503	0.085
400	0.0470	0.0645	0.0778	0.1026	0.567	0.082
500	0.0366	0.0525	0.0605	0.0813	0.639	0.080

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 6.35/11 kV



6/10 (12) kV - Multi Core Cable – SWA

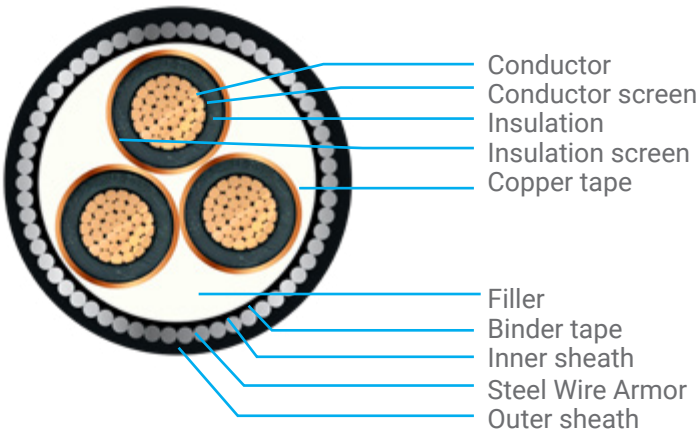
Description

Copper or Aluminum
Circular Compacted Conducto
SC/XLPE/SC Insulation
Copper Tape Screen
Steel Wire Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XJUPWP	3.4	2.5	2.6	48.1	4410	-
50	03C050**C/A**T0XJUPWP	3.4	2.5	2.7	50.9	4680	3910
70	03C070**C/A**T0XJUPWP	3.4	2.5	2.8	55.6	5690	4565
95	03C095**C/A**T0XJUPWP	3.4	2.5	2.9	59.3	6720	5025
120	03C120**C/A**T0XJUPWP	3.4	2.5	3.0	62.9	7765	5630
150	03C150**C/A**T0XJUPWP	3.4	2.5	3.1	66.2	8805	6175
185	03C185**C/A**T0XJUPWP	3.4	2.5	3.2	70.2	10180	6890
240	03C240**C/A**T0XJUPWP	3.4	3.15	3.5	77.9	13165	8800
300	03C300**C/A**T0XJUPWP	3.4	3.15	3.6	82.2	15280	9800
400	03C400**C/A**T0XJUPWP	3.4	3.15	3.9	89.7	18490	11740
500	03C500**C/A**T0XJUPWP	3.4	3.15	4.1	97.9	22445	13435

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.219	0.121
50	0.387	0.4938	0.641	0.8221	0.243	0.112
70	0.268	0.3423	0.443	0.5683	0.284	0.105
95	0.193	0.2470	0.320	0.4108	0.318	0.100
120	0.153	0.1963	0.253	0.3251	0.349	0.096
150	0.124	0.1596	0.206	0.2650	0.378	0.093
185	0.0991	0.1283	0.164	0.2115	0.413	0.090
240	0.0754	0.0988	0.125	0.1619	0.466	0.087
300	0.0601	0.0801	0.100	0.1303	0.503	0.085
400	0.0470	0.0645	0.0778	0.1026	0.567	0.082
500	0.0366	0.0525	0.0605	0.0813	0.639	0.080

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 6.35/11 kV



8.7/15 (17.5) kV - Single Core Cable

Description

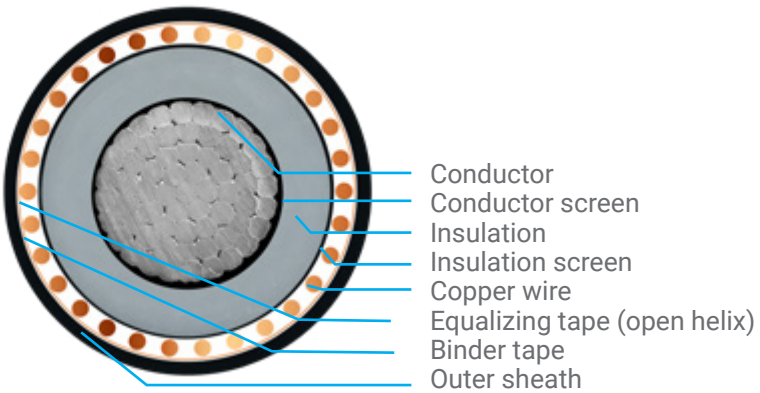
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Wires Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm²	C Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XIO00P	4.5	1.7	23.3	850	-
50	01C050**C/A**T0XIO00P	4.5	1.7	24.4	985	730
70	01C070**C/A**T0XIO00P	4.5	1.8	26.6	1220	855
95	01C095**C/A**T0XIO00P	4.5	1.8	28.2	1495	955
120	01C120**C/A**T0XIO00P	4.5	1.9	29.9	1760	1075
150	01C150**C/A**T0XIO00P	4.5	2.0	31.5	2125	1285
185	01C185**C/A**T0XIO00P	4.5	2.0	33.2	2480	1425
240	01C240**C/A**T0XIO00P	4.5	2.1	36.0	3075	1670
300	01C300**C/A**T0XIO00P	4.5	2.2	38.0	3670	1900
400	01C400**C/A**T0XIO00P	4.5	2.3	41.5	4600	2345
500	01C500**C/A**T0XIO00P	4.5	2.4	45.2	5685	2775
630	01C630**C/A**T0XIO00P	4.5	2.5	51.6	7150	3380

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm²	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6683	-	-	0.179	0.142
50	0.387	0.4937	0.641	0.8220	0.197	0.133
70	0.268	0.3421	0.443	0.5682	0.229	0.124
95	0.193	0.2467	0.320	0.4106	0.255	0.118
120	0.153	0.1959	0.253	0.3248	0.278	0.113
150	0.124	0.1592	0.206	0.2647	0.300	0.110
185	0.0991	0.1278	0.164	0.2111	0.327	0.106
240	0.0754	0.0981	0.125	0.1614	0.368	0.102
300	0.0601	0.0791	0.100	0.1297	0.396	0.099
400	0.0470	0.0632	0.0778	0.1017	0.444	0.095
500	0.0366	0.0510	0.0605	0.0802	0.498	0.092
630	0.0283	0.0418	0.0469	0.0637	0.595	0.089

The above data is approximate and subjected to manufacturing tolerance



8.7/15 (17.5) kV – Armored AWA Single Core Cable

Description

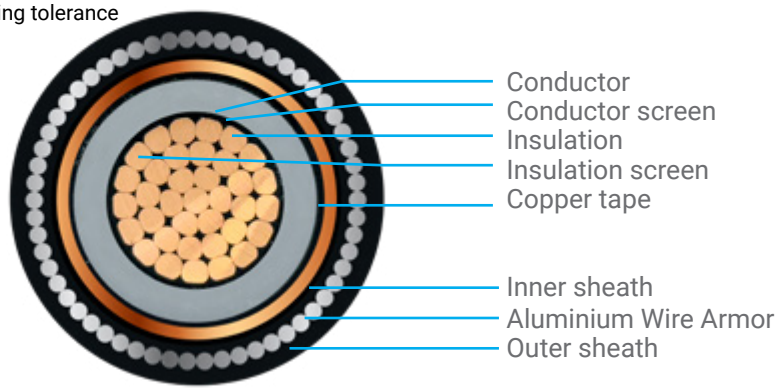
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Tape Screen
Aluminum Wire Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XIO00P	4.5	1.7	1.9	28.7	1180	975
50	01C050**C/A**T0XIO00P	4.5	1.7	1.9	30	1345	1065
70	01C070**C/A**T0XIO00P	4.5	1.7	2	31.8	1605	1205
95	01C095**C/A**T0XIO00P	4.5	2	2.1	34.1	1990	1425
120	01C120**C/A**T0XIO00P	4.5	2	2.1	35.5	2270	1550
150	01C150**C/A**T0XIO00P	4.5	2	2.1	36.9	2590	1690
185	01C185**C/A**T0XIO00P	4.5	2	2.2	38.8	3005	1900
240	01C240**C/A**T0XIO00P	4.5	2	2.3	41.3	3610	2165
300	01C300**C/A**T0XIO00P	4.5	2	2.3	43.5	4245	2430
400	01C400**C/A**T0XIO00P	4.5	2.5	2.5	48.1	5365	3035
500	01C500**C/A**T0XIO00P	4.5	2.5	2.6	51.6	6590	3555
630	01C630**C/A**T0XIO00P	4.5	2.5	2.7	55.7	8045	4175

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6683	-	-	0.179	0.153
50	0.387	0.4937	0.641	0.8220	0.197	0.142
70	0.268	0.3421	0.443	0.5682	0.229	0.135
95	0.193	0.2467	0.320	0.4106	0.255	0.130
120	0.153	0.1959	0.253	0.3248	0.278	0.125
150	0.124	0.1592	0.206	0.2647	0.300	0.121
185	0.0991	0.1278	0.164	0.2111	0.327	0.117
240	0.0754	0.0981	0.125	0.1614	0.368	0.112
300	0.0601	0.0791	0.100	0.1297	0.396	0.108
400	0.0470	0.0632	0.0778	0.1017	0.444	0.106
500	0.0366	0.0510	0.0605	0.0802	0.498	0.102
630	0.0283	0.0418	0.0469	0.0637	0.595	0.098

The above data is approximate and subjected to manufacturing tolerance



8.7/15 (17.5) kV – Armored ATA Single Core Cable

Description

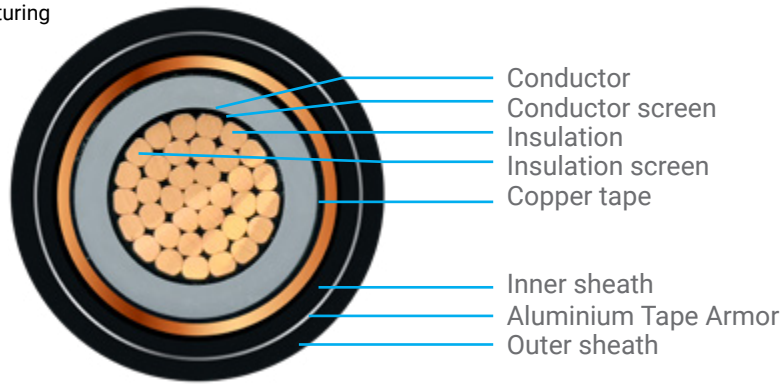
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Tape Screen
Aluminum Tape Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XIOPKP	4.5	0.5	1.8	26.3	1013	806
50	01C050**C/A**T0XIOPKP	4.5	0.5	1.9	27.8	1184	907
70	01C070**C/A**T0XIOPKP	4.5	0.5	1.9	29.4	1426	1024
95	01C095**C/A**T0XIOPKP	4.5	0.5	2	31.1	1728	1167
120	01C120**C/A**T0XIOPKP	4.5	0.5	2	32.5	2010	1287
150	01C150**C/A**T0XIOPKP	4.5	0.5	2.1	34	2332	1432
185	01C185**C/A**T0XIOPKP	4.5	0.5	2.1	35.8	2711	1606
240	01C240**C/A**T0XIOPKP	4.5	0.5	2.2	38.3	3298	1852
300	01C300**C/A**T0XIOPKP	4.5	0.5	2.3	40.6	3936	2121
400	01C400**C/A**T0XIOPKP	4.5	0.5	2.4	43.8	4843	2514
500	01C500**C/A**T0XIOPKP	4.5	0.5	2.5	47.4	6025	2990
630	01C630**C/A**T0XIOPKP	4.5	0.5	2.6	51.4	7435	3565

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6683	-	-	0.179	0.148
50	0.387	0.4937	0.641	0.8220	0.197	0.138
70	0.268	0.3421	0.443	0.5682	0.229	0.130
95	0.193	0.2467	0.320	0.4106	0.255	0.125
120	0.153	0.1959	0.253	0.3248	0.278	0.120
150	0.124	0.1592	0.206	0.2647	0.300	0.116
185	0.0991	0.1278	0.164	0.2111	0.327	0.112
240	0.0754	0.0981	0.125	0.1614	0.368	0.107
300	0.0601	0.0791	0.100	0.1297	0.396	0.104
400	0.0470	0.0632	0.0778	0.1017	0.444	0.100
500	0.0366	0.0510	0.0605	0.0802	0.498	0.097
630	0.0283	0.0418	0.0469	0.0637	0.595	0.094

The above data is approximate and subjected to manufacturing



8.7/15 (17.5) kV - Multi Core Cable Unarmored

Description

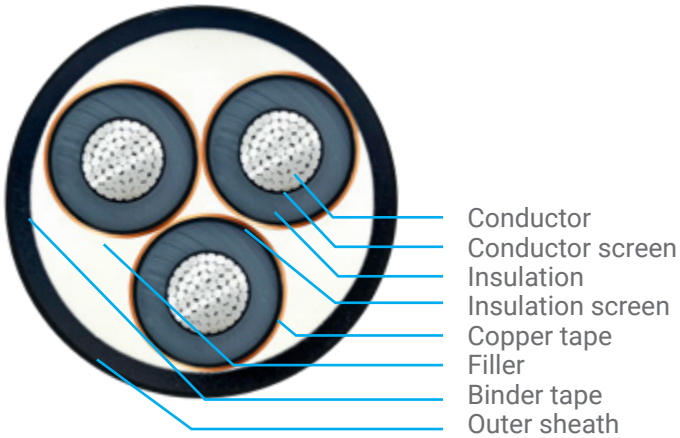
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Tape Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XIU00P	4.5	2.5	44.6	2425	-
50	03C050**C/A**T0XIU00P	4.5	2.6	47.2	2885	2070
70	03C070**C/A**T0XIU00P	4.5	2.7	51.7	3660	2500
95	03C095**C/A**T0XIU00P	4.5	2.8	55.3	4565	2875
120	03C120**C/A**T0XIU00P	4.5	2.9	58.8	5420	3270
150	03C150**C/A**T0XIU00P	4.5	3.0	62.0	6320	3690
185	03C185**C/A**T0XIU00P	4.5	3.2	66.1	7530	4240
240	03C240**C/A**T0XIU00P	4.5	3.3	71.9	9435	5070
300	03C300**C/A**T0XIU00P	4.5	3.5	76.2	11345	5865
400	03C400**C/A**T0XIU00P	4.5	3.7	83.3	14055	7165
500	03C500**C/A**T0XIU00P	4.5	3.9	91.2	17540	8530

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.179	0.129
50	0.387	0.4938	0.641	0.8220	0.197	0.120
70	0.268	0.3422	0.443	0.5683	0.229	0.112
95	0.193	0.2469	0.320	0.4107	0.255	0.107
120	0.153	0.1961	0.253	0.3250	0.278	0.102
150	0.124	0.1594	0.206	0.2649	0.300	0.099
185	0.0991	0.1281	0.164	0.2113	0.327	0.096
240	0.0754	0.0986	0.125	0.1617	0.368	0.092
300	0.0601	0.0798	0.100	0.1301	0.396	0.090
400	0.0470	0.0641	0.0778	0.1024	0.444	0.086
500	0.0366	0.0520	0.0605	0.0810	0.498	0.084

The above data is approximate and subjected to manufacturing tolerance



8.7/15 (17.5) kV - Multi Core Cable – STA

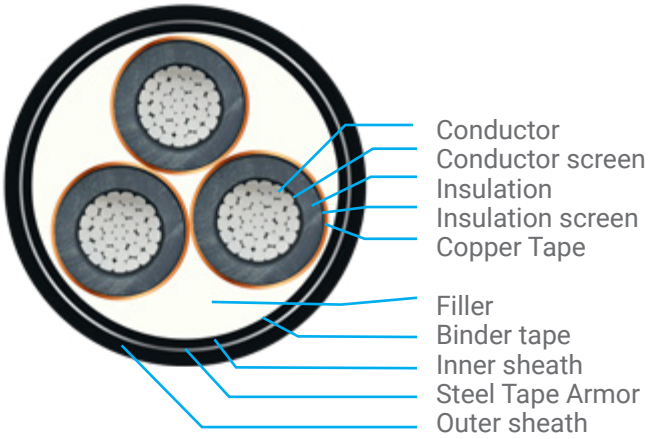
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Double Steel Tape Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	N: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XIUPTP	4.5	0.5	2.6	49.6	3490	-
50	03C050**C/A**T0XIUPTP	4.5	0.5	2.7	52.4	4040	3245
70	03C070**C/A**T0XIUPTP	4.5	0.5	2.8	57.1	4955	3820
95	03C095**C/A**T0XIUPTP	4.5	0.5	3.0	60.9	5970	4285
120	03C120**C/A**T0XIUPTP	4.5	0.5	3.1	64.6	6945	4805
150	03C150**C/A**T0XIUPTP	4.5	0.5	3.2	67.8	7925	5300
185	03C185**C/A**T0XIUPTP	4.5	0.5	3.3	71.9	9240	5950
240	03C240**C/A**T0XIUPTP	4.5	0.5	3.5	78.1	11370	7005
300	03C300**C/A**T0XIUPTP	4.5	0.8	3.7	83.6	14190	8710
400	03C400**C/A**T0XIUPTP	4.5	0.8	3.9	90.9	17205	10385
500	03C500**C/A**T0XIUPTP	4.5	0.8	4.1	99.0	21030	12020

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	μf/km	Ω/Km
35	0.524	0.6684	-	-	0.179	0.129
50	0.387	0.4938	0.641	0.8220	0.197	0.120
70	0.268	0.3422	0.443	0.5683	0.229	0.112
95	0.193	0.2469	0.320	0.4107	0.255	0.107
120	0.153	0.1961	0.253	0.3250	0.278	0.102
150	0.124	0.1594	0.206	0.2649	0.300	0.099
185	0.0991	0.1281	0.164	0.2113	0.327	0.096
240	0.0754	0.0986	0.125	0.1617	0.368	0.092
300	0.0601	0.0798	0.100	0.1301	0.396	0.090
400	0.0470	0.0641	0.0778	0.1024	0.444	0.086
500	0.0366	0.0520	0.0605	0.0810	0.498	0.084

The above data is approximate and subjected to manufacturing tolerance



8.7/15 (17.5) kV - Multi Core Cable – SWA

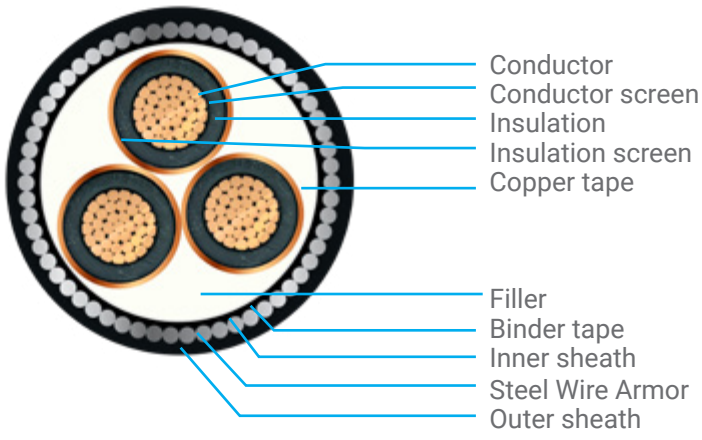
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Steel Wire Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XIUPWP	4.5	2.5	2.7	53.3	4685	-
50	03C050**C/A**T0XIUPWP	4.5	2.5	2.8	56.1	5275	4505
70	03C070**C/A**T0XIUPWP	4.5	2.5	2.9	60.8	6315	5205
95	03C095**C/A**T0XIUPWP	4.5	2.5	3.1	64.6	7400	5715
120	03C120**C/A**T0XIUPWP	4.5	2.5	3.2	68.3	8480	6340
150	03C150**C/A**T0XIUPWP	4.5	3.15	3.3	72.8	10200	7640
185	03C185**C/A**T0XIUPWP	4.5	3.15	3.5	77.1	11745	8455
240	03C240**C/A**T0XIUPWP	4.5	3.15	3.6	83.1	14000	9635
300	03C300**C/A**T0XIUPWP	4.5	3.15	3.8	87.6	16190	10710
400	03C400**C/A**T0XIUPWP	4.5	3.15	4.0	94.9	19410	12605
500	03C500**C/A**T0XIUPWP	4.5	3.15	4.2	103	23420	14410

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.179	0.129
50	0.387	0.4938	0.641	0.8220	0.197	0.120
70	0.268	0.3422	0.443	0.5683	0.229	0.112
95	0.193	0.2469	0.320	0.4107	0.255	0.107
120	0.153	0.1961	0.253	0.3250	0.278	0.102
150	0.124	0.1594	0.206	0.2649	0.3	0.099
185	0.0991	0.1281	0.164	0.2113	0.327	0.096
240	0.0754	0.0986	0.125	0.1617	0.368	0.092
300	0.0601	0.0798	0.100	0.1301	0.396	0.090
400	0.0470	0.0641	0.0778	0.1024	0.444	0.086
500	0.0366	0.0520	0.0605	0.0810	0.498	0.084

The above data is approximate and subjected to manufacturing tolerance



12 / 20 (24) kV - Single Core Cable

Description

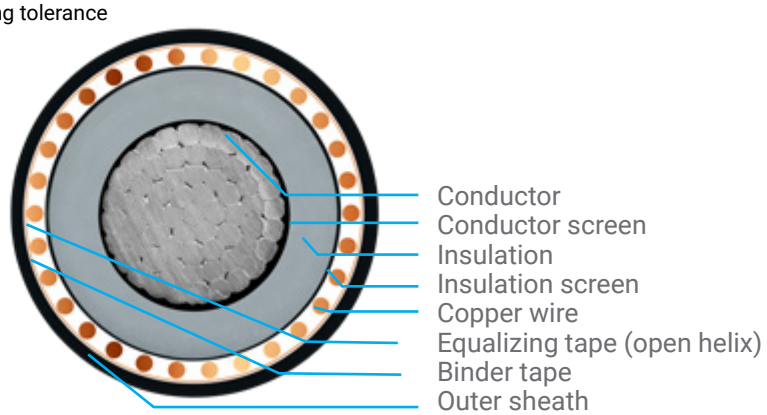
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Tape Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XMO00P	5.5	1.8	25.5	935	-
50	01C050**C/A**T0XMO00P	5.5	1.8	26.6	1075	800
70	01C070**C/A**T0XMO00P	5.5	1.9	28.8	1320	925
95	01C095**C/A**T0XMO00P	5.5	1.9	30.4	1595	1030
120	01C120**C/A**T0XMO00P	5.5	2.0	32.1	1865	1155
150	01C150**C/A**T0XMO00P	5.5	2.0	33.5	2225	1350
185	01C185**C/A**T0XMO00P	5.5	2.1	35.4	2600	1505
240	01C240**C/A**T0XMO00P	5.5	2.2	38.2	3205	1755
300	01C300**C/A**T0XMO00P	5.5	2.2	40.2	3880	2060
400	01C400**C/A**T0XMO00P	5.5	2.3	43.5	4730	2395
500	01C500**C/A**T0XMO00P	5.5	2.4	47.2	5825	2830
630	01C630**C/A**T0XMO00P	5.5	2.5	53.6	7305	3440

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.157	0.148
50	0.387	0.4937	0.641	0.8220	0.171	0.138
70	0.268	0.3421	0.443	0.5682	0.198	0.129
95	0.193	0.2467	0.320	0.4106	0.219	0.123
120	0.153	0.1959	0.253	0.3248	0.238	0.117
150	0.124	0.1591	0.206	0.2647	0.256	0.114
185	0.0991	0.1277	0.164	0.2111	0.278	0.110
240	0.0754	0.0980	0.125	0.1614	0.312	0.105
300	0.0601	0.0790	0.100	0.1296	0.335	0.102
400	0.0470	0.0631	0.0778	0.1017	0.375	0.098
500	0.0366	0.0508	0.0605	0.0802	0.419	0.095
630	0.0283	0.0414	0.0469	0.0638	0.498	0.092

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 12.7/22 kV



12 / 20 (24) kV – Armored AWA Single Core Cable

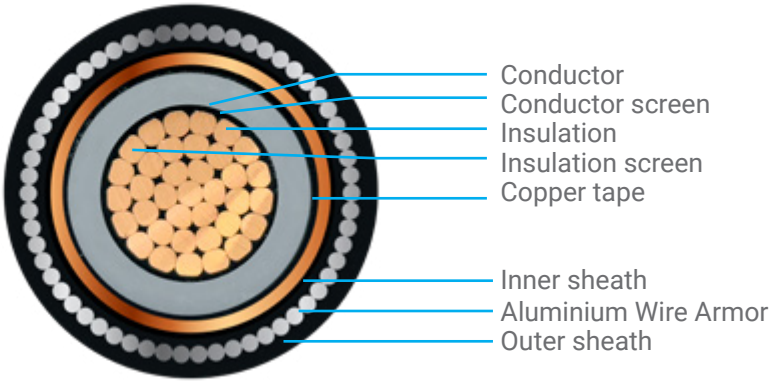
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Aluminum Wire Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm²	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XMUPJP	5.5	1.7	1.9	30.7	1295	1085
50	01C050**C/A**T0XMUPJP	5.5	1.7	2	32.2	1475	1200
70	01C070**C/A**T0XMUPJP	5.5	2	2.1	34.6	1810	1410
95	01C095**C/A**T0XMUPJP	5.5	2	2.1	36.1	2115	1550
120	01C120**C/A**T0XMUPJP	5.5	2	2.2	37.7	2430	1705
150	01C150**C/A**T0XMUPJP	5.5	2	2.2	39.1	2750	1850
185	01C185**C/A**T0XMUPJP	5.5	2	2.3	41	3175	2070
240	01C240**C/A**T0XMUPJP	5.5	2	2.3	43.3	3770	2325
300	01C300**C/A**T0XMUPJP	5.5	2.5	2.5	47.3	4635	2820
400	01C400**C/A**T0XMUPJP	5.5	2.5	2.6	50.3	5580	3240
500	01C500**C/A**T0XMUPJP	5.5	2.5	2.7	53.8	6805	3770
630	01C630**C/A**T0XMUPJP	5.5	2.5	2.8	58.1	8310	4440

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm²	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.157	0.158
50	0.387	0.4937	0.641	0.8220	0.171	0.147
70	0.268	0.3421	0.443	0.5682	0.198	0.140
95	0.193	0.2467	0.320	0.4106	0.219	0.134
120	0.153	0.1959	0.253	0.3248	0.238	0.129
150	0.124	0.1591	0.206	0.2647	0.256	0.124
185	0.0991	0.1277	0.164	0.2111	0.278	0.120
240	0.0754	0.0980	0.125	0.1614	0.312	0.115
300	0.0601	0.0790	0.100	0.1296	0.335	0.113
400	0.0470	0.0631	0.0778	0.1017	0.375	0.109
500	0.0366	0.0508	0.0605	0.0802	0.419	0.105
630	0.0283	0.0414	0.0469	0.0638	0.498	0.101

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 12.7/22 kV



12 / 20 (24) kV – Armored ATA Single Core Cable

Description

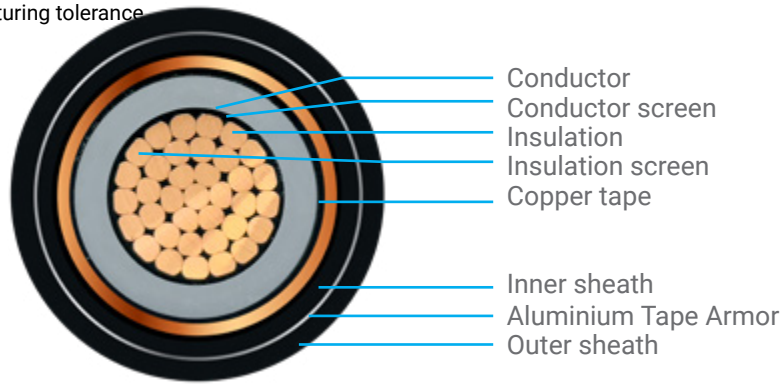
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Operating Temperature: 90°C.

Copper Wires Screen
Aluminum Tape Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	01C035**C/A**T0XMOPKP	5.5	0.5	1.9	28.5	1130	923
50	01C050**C/A**T0XMOPKP	5.5	0.5	1.9	29.8	1290	1013
70	01C070**C/A**T0XMOPKP	5.5	0.5	2	31.6	1554	1152
95	01C095**C/A**T0XMOPKP	5.5	0.5	2.1	33.3	1862	1301
120	01C120**C/A**T0XMOPKP	5.5	0.5	2.1	34.7	2149	1426
150	01C150**C/A**T0XMOPKP	5.5	0.5	2.1	36	2458	1558
185	01C185**C/A**T0XMOPKP	5.5	0.5	2.2	38	2861	1756
240	01C240**C/A**T0XMOPKP	5.5	0.5	2.3	40.5	3458	2012
300	01C300**C/A**T0XMOPKP	5.5	0.5	2.4	43	4125	2308
400	01C400**C/A**T0XMOPKP	5.5	0.5	2.5	46	5022	2693
500	01C500**C/A**AT0XMOPKP	5.5	0.5	2.6	49.6	6214	3179
630	01C630**C/A**T0XMOPKP	5.5	0.5	2.7	53.8	7666	3796

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.157	0.153
50	0.387	0.4937	0.641	0.8220	0.171	0.142
70	0.268	0.3421	0.443	0.5682	0.198	0.135
95	0.193	0.2467	0.320	0.4106	0.219	0.129
120	0.153	0.1959	0.253	0.3248	0.238	0.124
150	0.124	0.1591	0.206	0.2647	0.256	0.120
185	0.0991	0.1277	0.164	0.2111	0.278	0.115
240	0.0754	0.0980	0.125	0.1614	0.312	0.110
300	0.0601	0.0790	0.100	0.1296	0.335	0.107
400	0.0470	0.0631	0.0778	0.1017	0.375	0.103
500	0.0366	0.0508	0.0605	0.0802	0.419	0.100
630	0.0283	0.0414	0.0469	0.0638	0.498	0.096

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 12.7/22 kV



12 / 20 (24) kV - Multi Core Cable Unarmored

Description

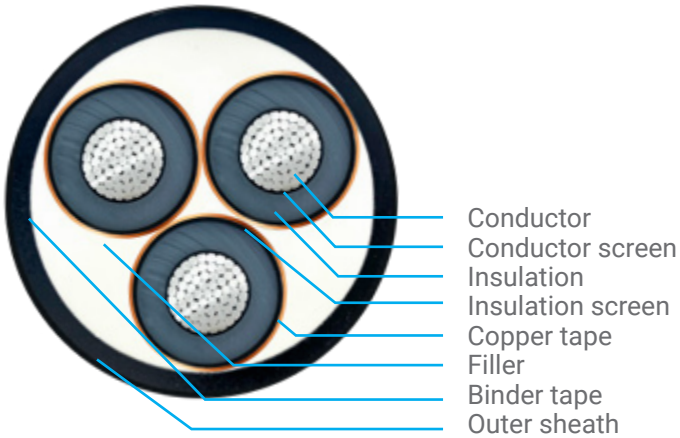
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Tape Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XMU00P	5.5	2.6	49.3	2755	-
50	03C050**C/A**T0XMU00P	5.5	2.7	51.9	3235	2430
70	03C070**C/A**T0XMU00P	5.5	2.8	56.4	4045	2885
95	03C095**C/A**T0XMU00P	5.5	3.0	60.1	4975	3275
120	03C120**C/A**T0XMU00P	5.5	3.1	63.5	5845	3700
150	03C150**C/A**T0XMU00P	5.5	3.2	66.7	6765	4140
185	03C185**C/A**T0XMU00P	5.5	3.3	70.6	7975	4685
240	03C240**C/A**T0XMU00P	5.5	3.5	76.6	9945	5580
300	03C300**C/A**T0XMU00P	5.5	3.6	80.7	11845	6365
400	03C400**C/A**T0XMU00P	5.5	3.9	88	14645	7765
500	03C500**C/A**T0XMU00P	5.5	4.1	96	18190	9180

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.157	0.135
50	0.387	0.4938	0.641	0.8220	0.171	0.126
70	0.268	0.3422	0.443	0.5683	0.198	0.118
95	0.193	0.2468	0.320	0.4107	0.219	0.112
120	0.153	0.1960	0.253	0.3249	0.238	0.107
150	0.124	0.1593	0.206	0.2648	0.256	0.104
185	0.0991	0.1280	0.164	0.2112	0.278	0.100
240	0.0754	0.0984	0.125	0.1616	0.312	0.096
300	0.0601	0.0795	0.100	0.1300	0.335	0.094
400	0.0470	0.0638	0.0778	0.1022	0.375	0.090
500	0.0366	0.0517	0.0605	0.0808	0.419	0.087

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 12.7/22 kV



12 / 20 (24) kV- Multi Core Cable – STA

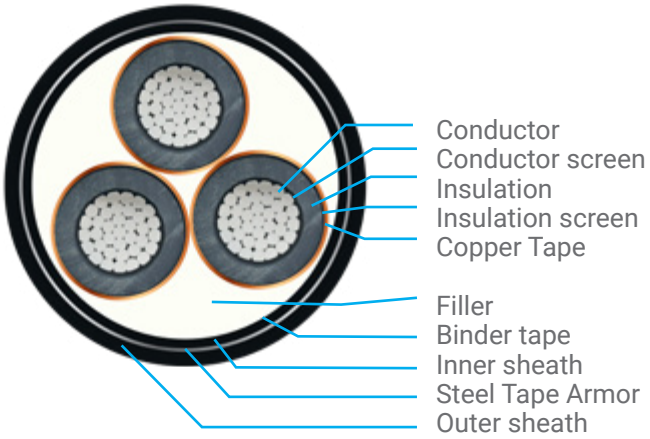
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Double Steel Tape Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XMUPTP	5.5	0.5	2.8	54.5	3960	-
50	03C050**C/A**T0XMUPTP	5.5	0.5	2.9	57.3	4530	3750
70	03C070**C/A**T0XMUPTP	5.5	0.5	3.0	61.8	5445	4315
95	03C095**C/A**T0XMUPTP	5.5	0.5	3.1	65.7	6500	4810
120	03C120**C/A**T0XMUPTP	5.5	0.5	3.2	69.3	7490	5350
150	03C150**C/A**T0XMUPTP	5.5	0.5	3.3	72.5	8490	5870
185	03C185**C/A**T0XMUPTP	5.5	0.5	3.5	76.8	9870	6580
240	03C240**C/A**T0XMUPTP	5.5	0.8	3.7	84.0	12810	8445
300	03C300**C/A**T0XMUPTP	5.5	0.8	3.8	88.3	14900	9420
400	03C400**C/A**T0XMUPTP	5.5	0.8	4.1	95.8	18010	11205
500	03C500**C/A**T0XMUPTP	5.5	0.8	4.3	104.0	21905	12895

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.157	0.135
50	0.387	0.4938	0.641	0.8220	0.171	0.126
70	0.268	0.3422	0.443	0.5683	0.198	0.118
95	0.193	0.2468	0.320	0.4107	0.219	0.112
120	0.153	0.1960	0.253	0.3249	0.238	0.107
150	0.124	0.1593	0.206	0.2648	0.256	0.104
185	0.0991	0.1280	0.164	0.2112	0.278	0.100
240	0.0754	0.0984	0.125	0.1616	0.312	0.096
300	0.0601	0.0795	0.100	0.1300	0.335	0.094
400	0.0470	0.0638	0.0778	0.1022	0.375	0.090
500	0.0366	0.0517	0.0605	0.0808	0.419	0.087

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 12.7/22 kV



12 / 20 (24) kV - Multi Core Cable – SWA

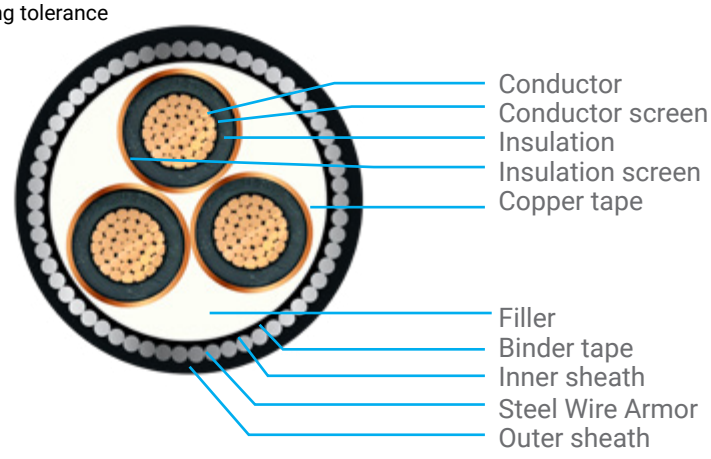
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Steel Wire Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steet Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
35	03C035**C/A**T0XMUPWP	5.5	2.5	2.9	58.2	5245	-
50	03C050**C/A**T0XMUPWP	5.5	2.5	3.0	61	5895	5135
70	03C070**C/A**T0XMUPWP	5.5	2.5	3.1	65.5	6905	5795
95	03C095**C/A**T0XMUPWP	5.5	2.5	3.2	69.4	8060	6365
120	03C120**C/A**T0XMUPWP	5.5	3.15	3.4	74.5	9905	7760
150	03C150**C/A**T0XMUPWP	5.5	3.15	3.5	77.7	10990	8365
185	03C185**C/A**T0XMUPWP	5.5	3.15	3.6	81.8	12465	9175
240	03C240**C/A**T0XMUPWP	5.5	3.15	3.8	88	14860	10495
300	03C300**C/A**T0XMUPWP	5.5	3.15	3.9	92.3	17040	11560
400	03C400**C/A**T0XMUPWP	5.5	3.15	4.2	99.8	20355	13565
500	03C500**C/A**T0XMUPWP	5.5	3.15	4.4	108	24435	15420

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
35	0.524	0.6684	-	-	0.157	0.135
50	0.387	0.4938	0.641	0.8220	0.171	0.126
70	0.268	0.3422	0.443	0.5683	0.198	0.118
95	0.193	0.2468	0.320	0.4107	0.219	0.112
120	0.153	0.1960	0.253	0.3249	0.238	0.107
150	0.124	0.1593	0.206	0.2648	0.256	0.104
185	0.0991	0.1280	0.164	0.2112	0.278	0.100
240	0.0754	0.0984	0.125	0.1616	0.312	0.096
300	0.0601	0.0795	0.100	0.1300	0.335	0.094
400	0.0470	0.0638	0.0778	0.1022	0.375	0.090
500	0.0366	0.0517	0.0605	0.0808	0.419	0.087

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 12.7/22 kV



18/30 (36) kV - Single Core Cable

Description

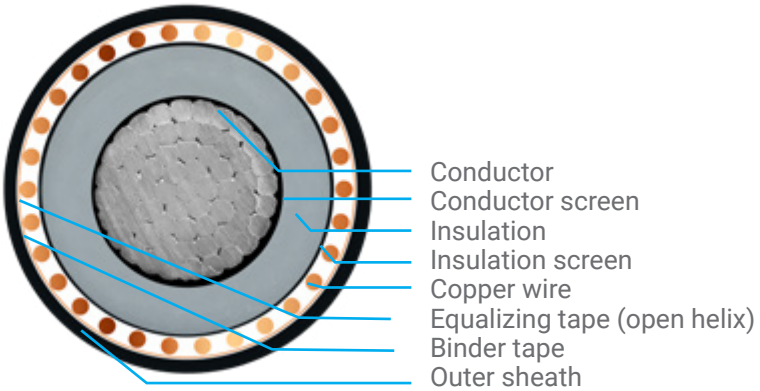
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation

Copper Wires Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
50	01C050**C/A**T0XKO00P	8.0	2.0	32.0	1320	1050
70	01C070**C/A**T0XKO00P	8.0	2.0	34.0	1570	1180
95	01C095**C/A**T0XKO00P	8.0	2.1	35.8	1875	1310
120	01C120**C/A**T0XKO00P	8.0	2.1	37.3	2145	1430
150	01C150**C/A**T0XKO00P	8.0	2.2	38.9	2530	1655
185	01C185**C/A**T0XKO00P	8.0	2.2	40.6	2905	1810
240	01C240**C/A**T0XKO00P	8.0	2.3	43.4	3530	2080
300	01C300**C/A**T0XKO00P	8.0	2.4	45.6	4245	2425
400	01C400**C/A**T0XKO00P	8.0	2.5	48.9	5120	2790
500	01C500**C/A**T0XKO00P	8.0	2.6	52.6	6245	3250
630	01C630**C/A**T0XKO00P	8.0	2.7	59.0	7785	3920

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
50	0.387	0.4937	0.641	0.8220	0.134	0.150
70	0.268	0.3421	0.443	0.5682	0.153	0.139
95	0.193	0.2466	0.320	0.4106	0.168	0.133
120	0.153	0.1958	0.253	0.3248	0.181	0.127
150	0.124	0.1590	0.206	0.2646	0.194	0.123
185	0.0991	0.1275	0.164	0.2109	0.209	0.119
240	0.0754	0.0977	0.125	0.1612	0.233	0.113
300	0.0601	0.0787	0.100	0.1294	0.249	0.110
400	0.0470	0.0627	0.0778	0.1014	0.276	0.105
500	0.0366	0.0503	0.0605	0.0798	0.307	0.101
630	0.0283	0.0409	0.0469	0.0632	0.362	0.096

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 19/33 kV



18/30 (36) kV – Armored AWA Single Core Cable

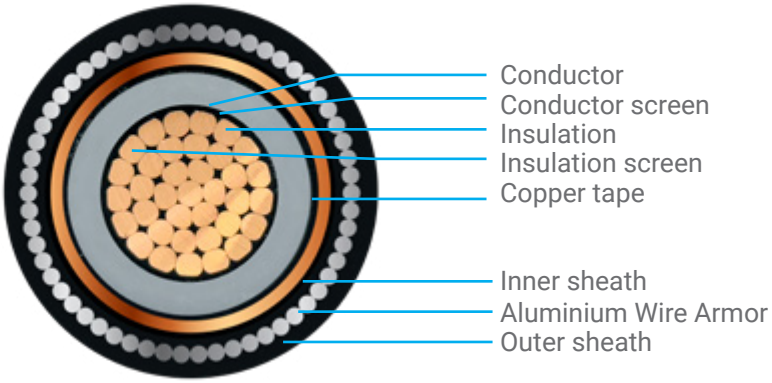
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Aluminum Wire Armor
PVC Jacket
Copper Tape Screen

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Wire Diameter	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
50	01C050**C/A**T0XKUPJP	8	2	2.2	38.2	1905	1630
70	01C070**C/A**T0XKUPJP	8	2	2.2	39.8	2175	1775
95	01C095**C/A**T0XKUPJP	8	2	2.3	41.5	2515	1950
120	01C120**C/A**T0XKUPJP	8	2	2.3	42.9	2820	2100
150	01C150**C/A**T0XKUPJP	8	2.5	2.4	45.9	3360	2460
185	01C185**C/A**T0XKUPJP	8	2.5	2.5	47.8	3805	2700
240	01C240**C/A**T0XKUPJP	8	2.5	2.6	50.3	4460	3015
300	01C300**C/A**T0XKUPJP	8	2.5	2.6	52.7	5145	3330
400	01C400**C/A**T0XKUPJP	8	2.5	2.8	55.9	6125	3800
500	01C500**C/A**T0XKUPJP	8	2.5	2.8	59.2	7370	4335
630	01C630**C/A**T0XKUPJP	8	2.5	3	63.7	8945	5075

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
50	0.387	0.4937	0.641	0.8220	0.134	0.158
70	0.268	0.3421	0.443	0.5682	0.153	0.149
95	0.193	0.2466	0.320	0.4106	0.168	0.143
120	0.153	0.1958	0.253	0.3248	0.181	0.137
150	0.124	0.1590	0.206	0.2646	0.194	0.134
185	0.0991	0.1275	0.164	0.2109	0.209	0.130
240	0.0754	0.0977	0.125	0.1612	0.233	0.124
300	0.0601	0.0787	0.100	0.1294	0.249	0.120
400	0.0470	0.0627	0.0778	0.1014	0.276	0.115
500	0.0366	0.0503	0.0605	0.0798	0.307	0.111
630	0.0283	0.0409	0.0469	0.0632	0.362	0.107

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 19/33 kV



18 / 30 (36) kV – Armored ATA Single Core Cable

Description

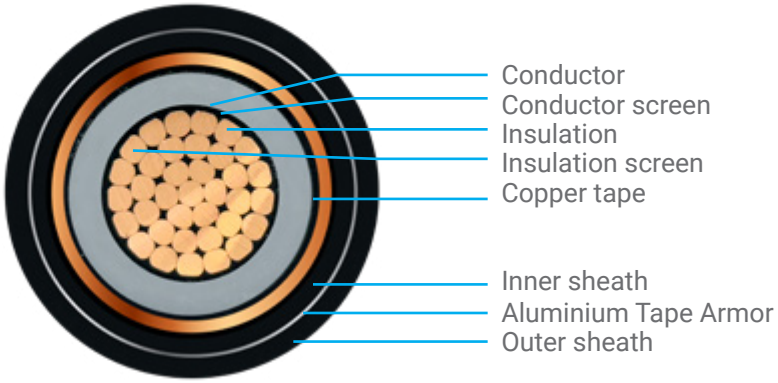
Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Operating Temperature: 90°C.

Copper Tape Screen
Aluminum Tape Armor
PVC Jacket

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Aluminum Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
50	01C050**C/A**T0XKOPKP	8	0.5	2.1	35.2	1619	1342
70	01C070**C/A**T0XKOPKP	8	0.5	2.2	37	1898	1496
95	01C095**C/A**T0XKOPKP	8	0.5	2.2	38.5	2202	1641
120	01C120**C/A**T0XKOPKP	8	0.5	2.3	40.1	2519	1796
150	01C150**C/A**T0XKOPKP	8	0.5	2.3	41.6	2859	1960
185	01C185**C/A**T0XKOPKP	8	0.5	2.4	43.6	3281	2176
240	01C240**C/A**T0XKOPKP	8	0.5	2.5	46.1	3900	2454
300	01C300**C/A**T0XKOPKP	8	0.5	2.5	48.4	4569	2751
400	01C400**C/A**T0XKOPKP	8	0.5	2.6	51.4	5491	3161
500	01C500**C/A**T0XKOPKP	8	0.5	2.7	55	6715	3680
630	01C630**C/A**T0XKOPKP	8	0.5	2.9	59.4	8232	4361

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
50	0.387	0.4937	0.641	0.8220	0.134	0.152
70	0.268	0.3421	0.443	0.5682	0.153	0.144
95	0.193	0.2466	0.320	0.4106	0.168	0.138
120	0.153	0.1958	0.253	0.3248	0.181	0.133
150	0.124	0.1590	0.206	0.2646	0.194	0.129
185	0.0991	0.1275	0.164	0.2109	0.209	0.124
240	0.0754	0.0977	0.125	0.1612	0.233	0.118
300	0.0601	0.0787	0.100	0.1294	0.249	0.115
400	0.0470	0.0627	0.0778	0.1014	0.276	0.110
500	0.0366	0.0503	0.0605	0.0798	0.307	0.106
630	0.0283	0.0409	0.0469	0.0632	0.362	0.103

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 19/33 kV.



18/30 (36) kV - Multi Core Cable Unarmored

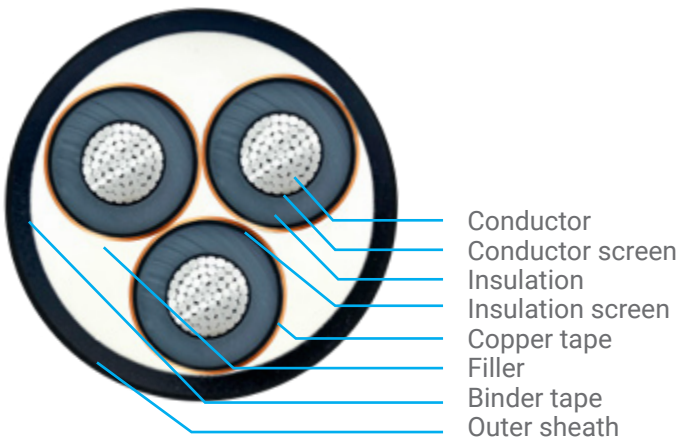
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C Copper A: Aluminum	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
50	03C050**C/A**T0XKU00P	8.0	3.1	63.3	4195	3400
70	03C070**C/A**T0XKU00P	8.0	3.2	67.8	5070	3925
95	03C095**C/A**T0XKU00P	8.0	3.3	71.7	6090	4395
120	03C120**C/A**T0XKU00P	8.0	3.5	75.1	7015	4875
150	03C150**C/A**T0XKU00P	8.0	3.6	78.3	7990	5365
185	03C185**C/A**T0XKU00P	8.0	3.7	82.2	9255	5965
240	03C240**C/A**T0XKU00P	8.0	3.8	88.0	11280	6920
300	03C300**C/A**T0XKU00P	8.0	4.0	92.3	13290	7810
400	03C400**C/A**T0XKU00P	8.0	4.2	99.4	16155	9305
500	03C500**C/A**T0XKU00P	8.0	4.4	107.4	19825	10815

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance		Maximum Conductor Resistance		Capacitance	Reactance
	Copper		Aluminum			
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
50	0.387	0.4937	0.641	0.8220	0.134	0.140
70	0.268	0.3421	0.443	0.5682	0.153	0.130
95	0.193	0.2467	0.320	0.4106	0.168	0.124
120	0.153	0.1959	0.253	0.3248	0.181	0.118
150	0.124	0.1591	0.206	0.2647	0.194	0.114
185	0.0991	0.1277	0.164	0.2111	0.209	0.110
240	0.0754	0.0980	0.125	0.1614	0.233	0.105
300	0.0601	0.0791	0.100	0.1297	0.249	0.103
400	0.0470	0.0632	0.0778	0.1018	0.276	0.098
500	0.0366	0.0510	0.0605	0.0803	0.307	0.094

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 19/33 kV



18/30 (36) kV - Multi Core Cable – STA

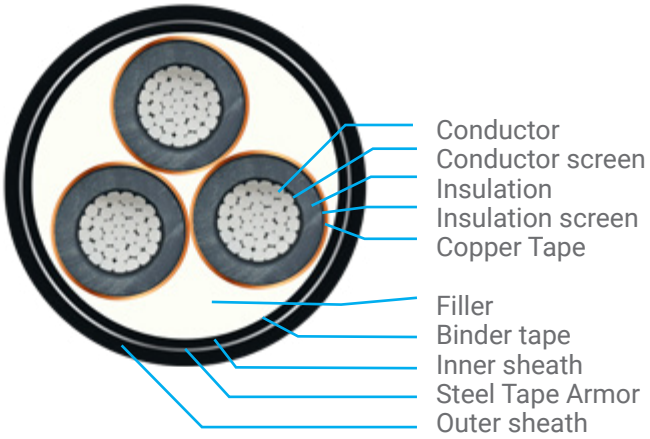
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Double Steel Tape Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	C: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
50	03C050**C/A**T0XKUPTP	8.0	0.5	3.3	69.3	5865	5095
70	03C070**C/A**T0XKUPTP	8.0	0.5	3.4	74.0	6895	5785
95	03C095**C/A**T0XKUPTP	8.0	0.5	3.5	77.7	7975	6290
120	03C120**C/A**T0XKUPTP	8.0	0.8	3.7	82.5	9820	7690
150	03C150**C/A**T0XKUPTP	8.0	0.8	3.8	85.7	10910	8295
185	03C185**C/A**T0XKUPTP	8.0	0.8	3.9	89.8	12365	9075
240	03C240**C/A**T0XKUPTP	8.0	0.8	4.1	96.0	14700	10335
300	03C300**C/A**T0XKUPTP	8.0	0.8	4.2	100.3	16865	11385
400	03C400**C/A**T0XKUPTP	8.0	0.8	4.5	107.8	20110	13330
500	03C500**C/A**T0XKUPTP	8.0	0.8	4.7	116.0	24140	15130

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
50	0.387	0.4937	0.641	0.8220	0.134	0.140
70	0.268	0.3421	0.443	0.5682	0.153	0.130
95	0.193	0.2467	0.320	0.4106	0.168	0.124
120	0.153	0.1959	0.253	0.3248	0.181	0.118
150	0.124	0.1591	0.206	0.2647	0.194	0.114
185	0.0991	0.1277	0.164	0.2111	0.209	0.110
240	0.0754	0.0980	0.125	0.1614	0.233	0.105
300	0.0601	0.0791	0.100	0.1297	0.249	0.103
400	0.0470	0.0632	0.0778	0.1018	0.276	0.098
500	0.0366	0.0510	0.0605	0.0803	0.307	0.094

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 19/33 kV



18/30 (36) kV - Multi Core Cable – SWA

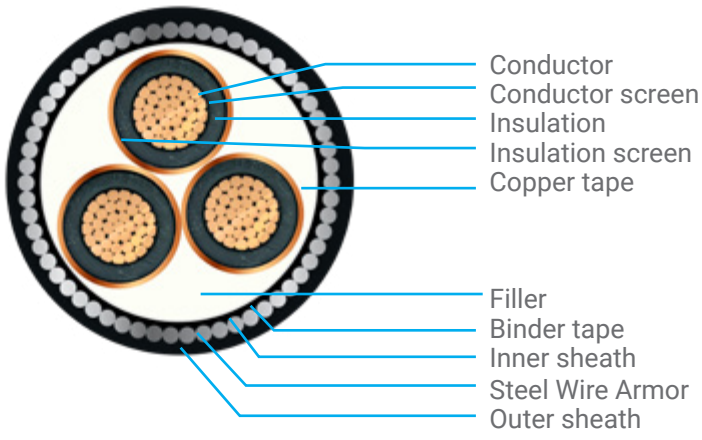
Description

Copper or Aluminum
Circular Compacted Conductor
SC/XLPE/SC Insulation
Copper Tape Screen
Steel Wire Armoring
PVC Jacket
Operating Temperature: 90°C.

Nominal Cross-sectional area	Cable code	Nominal Insulation Thickness	Steel Tape Thickness	Nominal Sheath Thickness	Approximate Overall Diameter	Approximate Weight	
mm^2	N: Copper A: Aluminum	mm	mm	mm	mm	Copper Kg/Km	Aluminum Kg/Km
50	03C050**C/A**T0XKUPWP	8.0	3.15	3.4	74.3	8190	7465
70	03C070**C/A**T0XKUPWP	8.0	3.15	3.5	79.0	9400	8330
95	03C095**C/A**T0XKUPWP	8.0	3.15	3.7	82.9	10655	8965
120	03C120**C/A**T0XKUPWP	8.0	3.15	3.8	86.5	11850	9710
150	03C150**C/A**T0XKUPWP	8.0	3.15	3.9	89.7	12990	10370
185	03C185**C/A**T0XKUPWP	8.0	3.15	4.0	93.8	14535	11245
240	03C240**C/A**T0XKUPWP	8.0	3.15	4.2	100.0	17040	12675
300	03C300**C/A**T0XKUPWP	8.0	3.15	4.3	104.3	19295	13815
400	03C400**C/A**T0XKUPWP	8.0	3.15	4.6	111.8	22680	15980
500	03C500**C/A**T0XKUPWP	8.0	3.15	4.8	120.0	26955	17945

Electrical Data						
Nominal Cross sectional area	Maximum Conductor Resistance Copper		Maximum Conductor Resistance Aluminum		Capacitance	Reactance
	DC at 20 °C	AC at 90 °C	DC at 20 °C	AC at 90 °C		
mm^2	Ω/Km	Ω/Km	Ω/Km	Ω/Km	µf/km	Ω/Km
50	0.387	0.4937	0.641	0.8220	0.134	0.140
70	0.268	0.3421	0.443	0.5682	0.153	0.130
95	0.193	0.2467	0.320	0.4106	0.168	0.124
120	0.153	0.1959	0.253	0.3248	0.181	0.118
150	0.124	0.1591	0.206	0.2647	0.194	0.114
185	0.0991	0.1277	0.164	0.2111	0.209	0.110
240	0.0754	0.0980	0.125	0.1614	0.233	0.105
300	0.0601	0.0791	0.100	0.1297	0.249	0.103
400	0.0470	0.0632	0.0778	0.1018	0.276	0.098
500	0.0366	0.0510	0.0605	0.0803	0.307	0.094

The above data is approximate and subjected to manufacturing tolerance
this data is applicable also for 19/33 kV



GUIDE TO USE AND SELECTION OF CABLES

Guide to Use and selection of cables

The object of this part is to provide general recommendations for the selection
(Taking into account the cable system), storage, transportation and installation of the cables.

Recommendations for selection of cables

According to the particular type of cables, the cables specified in this standard are designed to be buried directly in free soil or in ducts, or installed in air (indoors or outdoors).

System Categories

According to IEC 60183, three categories of voltage systems are considered:

Category A : This category comprises those systems in which any phase conductor that comes in contact with earth or an earth conductor, is disconnected from the system within 1 min.

Category B : This category comprises those systems which under fault conditions, are operated for a short time with one phase earthed. This period according to IEC 60183 should not exceed 1 h. For cables covered by this standard a longer period, not exceeding 8 h on any occasion, can be tolerated. The total duration of earth faults in any year should not exceed 125 h.

Category C: This category comprises all systems which do not fall into category A or B.

Current rating

If cables in accordance with this HD are exposed to localised heat, solar radiation or high temperature ambient conditions, or there is a possibility of higher soil thermal resistivity, the current carrying capacity should be reduced.

Due to the relatively high conductor temperature, there is a risk of drying of the surrounding soil causing an increase in thermal resistivity which in turn would lead to the cable temperature rising to a value higher than anticipated. For cable laid directly in the ground, a suitable de-rating factor should be applied or a lower maximum sustained conductor operating temperature should be assumed to take into account the possible effects of soil drying out.

Recommendation for cable installation

Cables may be either directly buried in earth or pulled into ducts or pipes, or installed on walls and ceiling using cable racks or trays.

The cable route, laying method, climatic conditions and service conditions (operating conditions) should, together be taken into account when selecting the type of cable.

Installation of the cable should be done by authorized and skilled contractors only. All national regulations should be taken into account.
The pulling force should be continuously monitored during the pull-in procedure and should not exceed the permissible values.

Guide to Use and selection of cables

Bending radii during installation

a)Permissible bending radii should take account of:

Type of cable (single-core or three core cables or preassembled cables)
Presence of either lead sheath or a longitudinal applied metallic foil

b)Reduction of permissible bending radii may be considered, provided that the following are all applicable:

the cable is at a temperature of not less than 30°C or heated up to 30°C;
- the cable is bent by means of preformed rollers

Prevention of moisture ingress

Care should be exercised during installation to avoid any damage to cable coverings. The protective cap should not be removed from the ends of the cable until immediately prior to termination or jointing. When the caps have been removed the unprotected ends of the cable should not be exposed to moisture

Installation in ducts/pipes

a) Inner diameter of ducts and pipes should be large enough to allow for free movement and replacement of the cables

b) To protect the pipes against mechanical shock, it is recommended to use sand bedding.

Pulling force

Cables may be pulled either into ducts or direct into earth by using appropriate pulling devices ensuring that the pulling force is evenly distributed on the cable conductors.

Pulling head the maximum pulling force should be:

$P = S\ A\ (N)$

where S is the cross-sectional area of the conductors, in mm^2 , and A is the permissible tensile stress of the conductors, in N/mm^2

a)Pulling grip via conductor

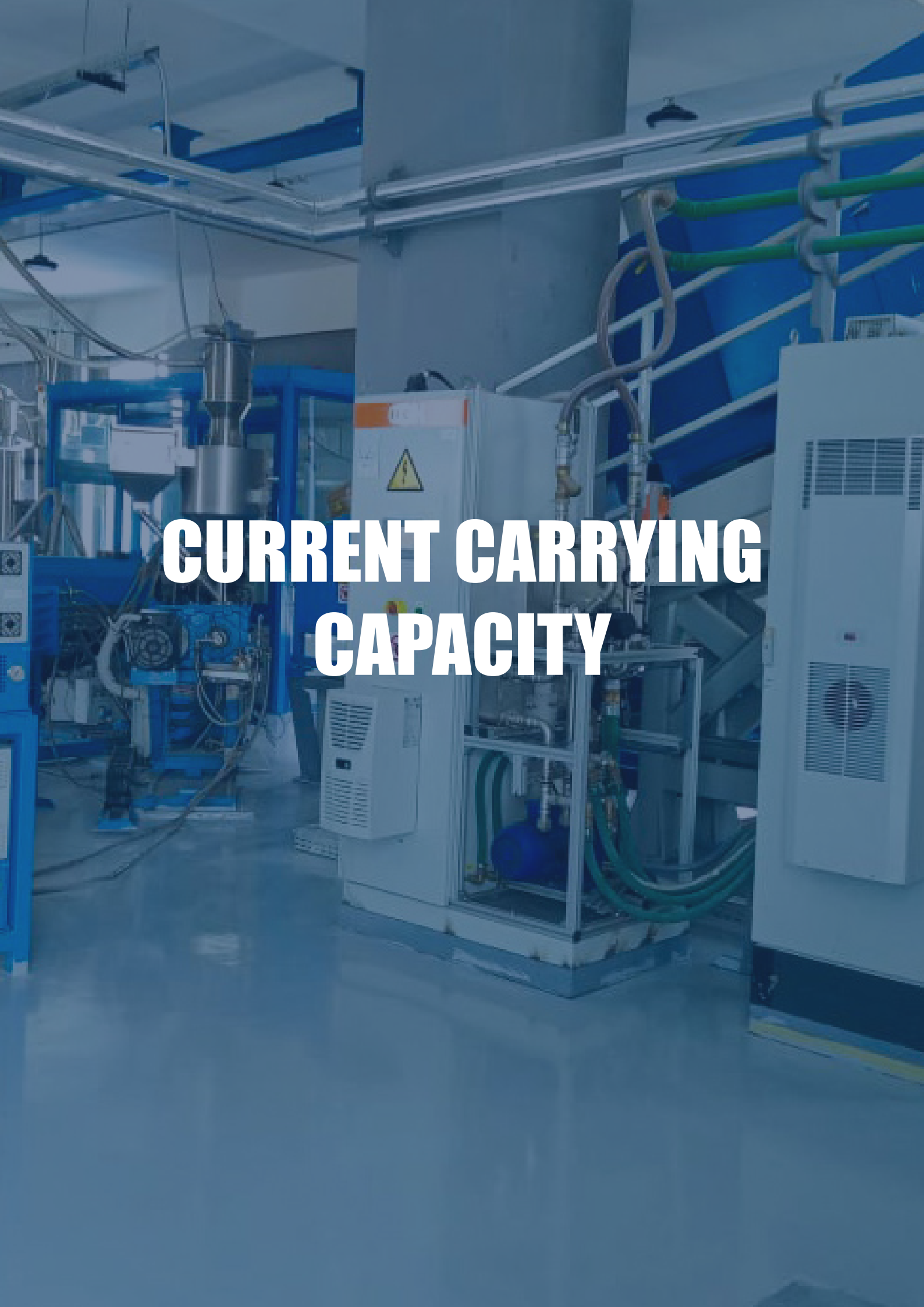
The pulling force, recommended for the pulling head, may be applied for the pulling grip.

b)Pulling grip via over sheath

The pulling force can also be applied by a frictional device acting on the over sheath. In this case, the maximum pulling force should be:

$P = 3D^2\ (N)$

where D is the outer cable diameter in millimeters. The pulling force should not be higher than the value calculated with cross section of the conductors.



CURRENT CARRYING CAPACITY

Current Rating

Current Ratings:

Cable current carrying capacity is defined as the continuous maximum current that cable can carry at its maximum operating temperature.
The values given in the tables are valid for one circuit on three phase system under below basic assumptions and conditions of installation:
For grouping cables de-rating factors must be used

-Ambient air temperature (shaded)	30°C
-Ground temperature	20°C
-Thermal resistivity of soil	1°C.m/W
-Depth of laying	0.5 m
-Maximum conductor temperature	90°C
-Screens bonded	both ends
-Drying out of the soil	ignored

To obtain the maximum current carrying capacity of a cable operating at different conditions from the standards, you have to multiply the value of current given in the technical information for the corresponding cable by de-rating factors mentioned in the tables from 1 to 6 as follows:
Ia = Kt Is in amperes
Ia : Current rating at actual operating conditions (amperes)
Is : Current rating at standard operating conditions, from tables (amperes)
Kt : De-rating factors given in the tables 1 to 6
It has to be noted that Kt is the total de-rating factors Kt = K1*K2*…Kn.

Frequency

Values in this catalogue are based on 50 HZ frequency

3.6/6 (7.2) KV Single Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	201	207	149	184	189
50	238	245	179	223	229
70	292	292	228	282	290
95	348	347	270	343	350
120	395	394	310	395	405
150	443	441	351	451	462
185	501	498	400	520	532
240	580	575	468	618	630
300	654	646	546	714	726
400	742	727	619	827	838
500	837	815	709	960	965
630	934	904	804	1098	1098
800	1032	988	902	1232	1232

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	156	160	118	114	152
50	185	190	142	174	182
70	222	230	175	223	229
95	269	278	210	270	274
120	309	317	243	310	320
150	340	348	274	352	360
185	390	393	312	410	420
240	452	454	375	484	495
300	513	509	423	560	571
400	587	577	490	655	665
500	671	660	570	769	779
630	762	770	655	895	900
800	858	885	749	1032	1032

3.6/6 (7.2) KV Single Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	197	203	146	185	190
50	233	240	175	224	230
70	286	286	223	283	291
95	341	340	265	344	351
120	387	386	304	396	407
150	434	432	344	452	464
185	491	488	392	522	534
240	568	564	459	620	633
300	641	633	535	716	729
400	727	712	607	829	841
500	820	799	695	963	969
630	915	886	788	1101	1102
800	1011	968	884	1236	1237

AL/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	153	157	116	114	153
50	181	186	139	175	183
70	218	225	172	224	230
95	264	272	206	271	275
120	303	311	238	311	321
150	333	341	269	353	361
185	382	385	306	411	422
240	443	445	368	485	497
300	503	499	415	562	573
400	575	565	480	657	668
500	658	647	559	771	782
630	747	755	642	898	904
800	841	867	734	1035	1036

3.6/6 (7.2) KV Single Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	193	199	143	167	171
50	228	235	172	202	207
70	280	280	219	255	262
95	334	333	260	310	316
120	379	378	298	356	366
150	425	423	337	407	418
185	481	478	384	470	481
240	557	553	450	558	570
300	628	620	524	644	656
400	712	698	595	746	757
500	804	783	681	867	872
630	897	868	772	991	992
800	991	949	866	1112	1113

AL/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	150	154	114	103	138
50	177	182	136	158	165
70	214	221	169	202	207
95	259	267	202	244	248
120	297	305	233	280	289
150	326	334	264	318	325
185	374	377	300	370	380
240	434	436	361	437	447
300	493	489	407	506	516
400	564	554	470	591	601
500	645	634	548	694	704
630	732	740	629	808	814
800	824	850	719	932	932

3.6/6 (7.2) KV Multi Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	197	146	179
50	233	175	217
70	286	216	271
95	342	260	331
120	390	296	383
150	438	337	437
185	495	384	503
240	574	450	596
300	655	519	703
400	731	587	792
500	824	670	914

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	155	115	143
50	184	137	173
70	225	170	217
95	269	204	264
120	307	235	306
150	344	265	348
185	391	303	402
240	449	352	466
300	508	403	539
400	582	467	631
500	673	547	753

3.6/6 (7.2) KV Multi Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	188	146	177
50	223	174	212
70	273	216	265
95	325	258	319
120	368	294	365
150	412	331	414
185	465	375	473
240	535	433	553
300	599	490	630
400	674	560	721
500	754	634	822

AL/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	146	113	137
50	173	135	165
70	212	167	205
95	253	201	248
120	287	229	285
150	322	258	323
185	365	294	371
240	421	342	435
300	475	389	498
400	541	450	578
500	615	518	670

3.6/6 (7.2) KV Multi Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	190	149	180
50	225	177	216
70	275	219	269
95	327	260	324
120	370	298	370
150	414	333	419
185	467	378	478
240	535	438	561
300	596	493	635
400	663	553	717
500	734	620	808

AL/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	147	115	140
50	174	137	168
70	213	169	208
95	255	202	252
120	289	232	289
150	323	260	327
185	366	297	375
240	423	347	443
300	475	393	504
400	537	448	578
500	605	511	665

6/10 (12) KV Single Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	201	207	152	189	193
50	238	245	183	227	233
70	292	292	227	287	295
95	347	347	272	347	356
120	395	394	314	401	412
150	443	441	355	457	466
185	501	498	412	526	536
240	580	575	476	625	634
300	654	646	544	721	729
400	741	727	621	830	840
500	837	815	709	961	966
630	936	904	806	1101	1098
800	1033	988	903	1248	1234

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	156	160	119	145	153
50	185	189	142	176	184
70	226	225	177	225	231
95	271	278	212	273	276
120	308	317	244	316	324
150	346	350	276	354	365
185	393	395	315	414	426
240	456	455	377	487	497
300	513	511	424	563	575
400	587	579	492	657	669
500	671	661	572	771	782
630	762	770	657	896	904
800	858	885	750	1036	1037

6/10 (12) KV Single Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	197	203	149	190	194
50	233	240	179	228	234
70	286	286	222	288	296
95	340	340	267	348	357
120	387	386	308	402	414
150	434	432	348	458	468
185	491	488	404	528	538
240	568	564	466	627	637
300	641	633	533	723	732
400	726	712	609	832	843
500	820	799	695	964	970
630	917	886	790	1104	1102
800	1012	968	885	1252	1239

AL/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	153	157	117	145	154
50	181	185	139	177	185
70	221	221	173	226	232
95	266	272	208	274	277
120	302	311	239	317	325
150	339	343	270	355	366
185	385	387	309	415	428
240	447	446	369	488	499
300	503	501	416	565	577
400	575	567	482	659	672
500	658	648	561	773	785
630	747	755	644	899	908
800	841	867	735	1039	1041

6/10 (12) KV Single Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	193	199	146	171	175
50	228	235	175	205	211
70	280	280	218	259	266
95	333	333	262	313	321
120	379	378	302	362	373
150	425	423	341	412	421
185	481	478	396	475	484
240	557	553	457	564	573
300	628	620	522	651	659
400	711	698	597	749	759
500	804	783	681	868	873
630	899	868	774	994	992
800	992	949	867	1127	1115

AL/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	150	154	115	131	139
50	177	181	136	159	167
70	217	217	170	203	209
95	261	267	204	247	249
120	296	305	234	285	293
150	332	336	265	320	329
185	377	379	303	374	385
240	438	437	362	439	449
300	493	491	408	509	519
400	564	556	472	593	605
500	645	635	550	696	707
630	732	740	631	809	817
800	824	850	720	935	937

6/10 (12) KV Multi Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	197	148	182
50	233	177	220
70	286	219	275
95	343	263	336
120	390	302	388
150	438	341	442
185	496	388	508
240	575	454	601
300	655	523	706
400	732	590	794
500	825	672	916

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	152	115	141
50	181	137	171
70	222	170	214
95	266	204	260
120	303	234	301
150	340	265	343
185	386	303	396
240	449	355	470
300	509	406	542
400	582	469	633
500	673	548	754

6/10 (12) KV Multi Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	189	148	179
50	222	176	214
70	272	217	266
95	325	260	321
120	369	297	368
150	413	332	417
185	464	377	475
240	535	436	556
300	598	493	632
400	675	561	724
500	754	634	822

AL/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	146	115	139
50	173	136	166
70	211	169	206
95	253	202	249
120	288	231	287
150	322	259	326
185	364	296	372
240	421	344	437
300	474	391	499
400	542	451	580
500	615	518	670

6/10 (12) KV Multi Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	190	150	182
50	224	178	217
70	275	221	271
95	327	264	326
120	370	299	373
150	415	336	423
185	466	381	480
240	534	440	561
300	595	495	635
400	663	556	718
500	733	619	808

AL/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	147	117	141
50	174	138	169
70	213	170	209
95	254	205	253
120	289	233	291
150	324	262	330
185	365	299	376
240	422	348	443
300	474	394	504
400	536	450	579
500	605	511	664

8.7/15 (17.5) KV Single Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	201	207	152	189	193
50	238	245	183	227	234
70	292	295	227	287	295
95	347	351	272	347	356
120	395	398	314	403	412
150	443	445	355	458	466
185	501	502	412	527	536
240	580	578	478	626	634
300	658	648	547	723	731
400	746	726	623	830	841
500	840	817	711	962	968
630	940	906	806	1102	1098
800	1035	988	903	1248	1234

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	158	160	119	145	153
50	188	189	146	179	184
70	228	229	181	225	231
95	275	278	216	273	280
120	312	320	249	316	324
150	350	354	280	359	369
185	396	398	319	414	426
240	460	459	377	491	505
300	517	515	429	566	580
400	591	584	497	661	675
500	675	667	575	773	790
630	768	778	660	901	912
800	863	890	760	1042	1042

8.7/15 (17.5) KV Single Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	197	203	149	190	194
50	233	240	179	228	235
70	286	289	222	288	296
95	340	344	267	348	357
120	387	390	308	404	414
150	434	436	348	459	468
185	491	492	404	529	538
240	568	566	468	628	637
300	645	635	536	725	734
400	731	711	611	832	844
500	823	801	697	965	972
630	921	888	790	1105	1102
800	1014	968	885	1252	1239

AL/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	155	157	117	145	154
50	184	185	143	180	185
70	223	224	177	226	232
95	270	272	212	274	281
120	306	314	244	317	325
150	343	347	274	360	370
185	388	390	313	415	428
240	451	450	369	492	507
300	507	505	420	568	582
400	579	572	487	663	678
500	662	654	564	775	793
630	753	762	647	904	916
800	846	872	745	1045	1046

8.7/15 (17.5) KV Single Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	193	199	146	171	175
50	228	235	175	205	212
70	280	283	218	259	266
95	333	337	262	313	321
120	379	382	302	364	373
150	425	427	341	413	421
185	481	482	396	476	484
240	557	555	459	565	573
300	632	622	525	653	661
400	716	697	599	749	760
500	807	785	683	869	875
630	903	870	774	995	992
800	994	949	867	1127	1115

AL/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm²	A	A	A	A	A
35	152	154	115	131	139
50	180	181	140	162	167
70	219	220	173	203	209
95	265	267	208	247	253
120	300	308	239	285	293
150	336	340	269	324	333
185	380	382	307	374	385
240	442	441	362	443	456
300	497	495	412	511	524
400	567	561	477	597	610
500	649	641	553	698	714
630	738	747	634	814	824
800	829	855	730	941	941

8.7/15 (17.5) KV Multi Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	197	152	187
50	234	181	225
70	286	223	281
95	343	268	341
120	390	307	394
150	438	346	448
185	496	394	514
240	575	461	608
300	657	530	712
400	734	598	802
500	829	682	924

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	153	118	145
50	181	140	174
70	222	173	218
95	266	208	265
120	303	238	306
150	340	269	348
185	386	307	401
240	449	360	474
300	509	411	547
400	583	475	637
500	673	554	757

8.7/15 (17.5) KV Multi Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	189	151	182
50	223	179	217
70	274	221	271
95	325	263	325
120	368	300	372
150	412	337	421
185	464	381	479
240	534	442	559
300	602	502	640
400	676	568	729
500	755	639	827

AL/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	146	117	141
50	173	139	168
70	212	171	209
95	253	205	253
120	287	234	290
150	322	263	328
185	364	229	375
240	421	348	440
300	476	397	504
400	542	455	582
500	615	521	673

8.7/15 (17.5) KV Multi Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	190	153	185
50	224	182	220
70	275	223	275
95	327	266	329
120	370	303	376
150	415	342	428
185	464	385	484
240	533	445	564
300	594	498	638
400	663	559	721
500	734	625	812

AL/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	147	119	143
50	174	141	171
70	213	173	212
95	254	207	256
120	289	236	293
150	324	267	334
185	365	303	380
240	421	350	445
300	473	397	506
400	536	452	580
500	604	516	666

12/20 (24) KV Single Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	201	207	152	189	193
50	238	245	183	227	234
70	292	297	227	287	295
95	347	353	275	347	360
120	397	402	318	403	416
150	443	448	358	460	468
185	501	505	416	523	540
240	580	579	481	630	638
300	662	650	550	725	736
400	750	729	625	832	841
500	844	819	711	962	971
630	945	906	807	1104	1099
800	1035	988	904	1248	1238

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	158	160	123	149	153
50	188	189	148	185	188
70	228	232	181	229	235
95	275	278	222	277	284
120	312	320	254	320	328
150	350	354	286	363	372
185	396	405	322	417	428
240	460	465	381	495	509
300	517	520	435	570	586
400	591	600	505	665	680
500	675	675	580	779	798
630	768	790	675	905	920
800	863	894	766	1049	1060

12/20 (24) KV Single Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	197	203	149	190	194
50	233	240	179	228	235
70	286	291	222	288	296
95	340	346	270	348	361
120	389	394	312	404	418
150	434	439	351	461	470
185	491	495	408	525	542
240	568	567	471	632	641
300	649	637	539	727	739
400	735	714	613	834	844
500	827	803	697	965	975
630	926	888	791	1107	1103
800	1014	968	886	1252	1243

AL/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
35	155	157	121	149	154
50	184	185	145	186	189
70	223	227	177	230	236
95	270	272	218	278	285
120	306	314	249	321	329
150	343	347	280	364	373
185	388	397	316	418	430
240	451	456	373	496	511
300	507	510	426	572	588
400	579	588	495	667	683
500	662	662	568	781	801
630	753	774	662	908	924
800	846	876	751	1052	1064

12/20 (24) KV Single Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	193	199	146	171	175
50	228	235	175	205	212
70	280	285	218	259	266
95	333	339	265	313	325
120	381	386	306	364	376
150	425	430	344	415	423
185	481	485	400	473	488
240	557	556	462	569	577
300	636	624	528	654	665
400	720	700	601	751	760
500	810	787	683	869	878
630	907	870	775	996	993
800	994	949	868	1127	1119

AL/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
35	152	154	119	134	139
50	180	181	142	167	170
70	219	222	173	207	212
95	265	267	214	250	257
120	300	308	244	289	296
150	336	340	274	328	336
185	380	389	310	376	387
240	442	447	366	446	460
300	497	500	417	515	529
400	567	576	485	600	615
500	649	649	557	703	721
630	738	759	649	817	832
800	829	858	736	947	958

12/20 (24) KV Multi Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	200	156	194
50	234	184	229
70	287	226	285
95	343	272	346
120	391	311	398
150	439	351	453
185	496	399	518
240	576	466	613
300	657	536	716
400	736	605	808
500	832	690	931

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	155	121	151
50	181	142	177
70	223	176	221
95	266	211	268
120	304	242	310
150	341	272	351
185	386	311	404
240	450	364	478
300	509	415	550
400	584	479	641
500	674	558	760

12/20 (24) KV Multi Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	189	153	184
50	223	181	220
70	274	224	274
95	325	267	328
120	368	303	374
150	413	340	424
185	464	385	481
240	537	449	565
300	602	508	643
400	676	571	730
500	756	646	831

AL/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	146	118	143
50	173	141	171
70	212	173	212
95	253	208	255
120	287	237	292
150	322	265	330
185	364	302	377
240	422	353	444
300	476	400	507
400	541	458	583
500	615	525	674

12/20 (24) KV Multi Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	190	155	186
50	225	183	223
70	275	226	277
95	326	268	331
120	370	307	380
150	413	344	429
185	464	387	486
240	532	447	565
300	593	502	639
400	661	563	721
500	734	628	814

AL/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
35	147	120	144
50	174	142	173
70	213	175	214
95	254	209	258
120	289	240	297
150	323	269	335
185	365	304	381
240	421	354	446
300	473	400	507
400	534	455	581
500	604	517	667

18/30 (36) KV Single Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
50	238	245	183	227	238
70	292	297	230	290	295
95	347	356	279	351	364
120	397	404	322	407	420
150	447	451	362	464	471
185	505	509	420	527	544
240	585	583	485	633	641
300	666	654	554	729	740
400	754	731	629	834	845
500	848	821	713	965	973
630	949	908	810	1106	1099
800	1039	990	908	1251	1238

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
50	188	189	152	185	193
70	228	232	189	232	239
95	279	278	222	282	288
120	316	320	259	324	332
150	354	354	290	367	379
185	400	405	322	425	433
240	460	468	386	499	513
300	517	526	440	575	590
400	591	605	510	672	685
500	679	684	587	786	803
630	772	794	680	909	933
800	870	899	772	1053	1075

18/30 (36) KV Single Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
50	233	240	179	228	239
70	286	291	225	291	296
95	340	349	273	352	365
120	389	396	316	408	422
150	438	442	355	465	473
185	495	499	412	529	546
240	573	571	475	635	644
300	653	641	543	731	743
400	739	716	616	837	848
500	831	805	699	968	977
630	930	890	794	1109	1103
800	1018	970	890	1255	1243

AL/XLPE/ATA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
					
mm^2	A	A	A	A	A
50	184	185	149	186	194
70	223	227	185	233	240
95	273	272	218	283	289
120	310	314	254	325	333
150	347	347	284	368	381
185	392	397	316	426	435
240	451	459	378	500	515
300	507	515	431	577	592
400	579	593	500	674	688
500	665	670	575	788	806
630	757	778	666	912	937
800	853	881	757	1056	1079

18/30 (36) KV Single Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
50	228	235	175	205	215
70	280	285	221	262	266
95	333	342	268	317	329
120	381	388	310	367	380
150	429	433	348	419	426
185	485	489	404	476	491
240	562	560	466	572	580
300	640	628	532	658	669
400	724	702	604	753	763
500	814	789	685	871	879
630	911	872	778	998	993
800	998	951	872	1130	1119

AL/XLPE/AWA/PVC

Nominal Cross sectional area	Current Rating				
	Laid in ground			Laid in free air (Shaded)	
	Flat	Trefoil	Duct	Flat Touched	Trefoil Touched
mm²	A	A	A	A	A
50	180	181	146	167	175
70	219	222	181	210	216
95	268	267	214	255	260
120	304	308	249	293	300
150	340	340	278	331	343
185	384	389	310	383	392
240	442	450	370	450	464
300	497	505	422	519	533
400	567	581	490	607	619
500	652	657	564	709	725
630	742	762	653	821	843
800	836	863	742	950	971

18/30 (36) KV Multi Core Unarmored Cables with CU Or AL Conductor

CU/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
50	236	191	239
70	287	233	292
95	344	280	353
120	391	319	406
150	439	360	461
185	497	409	527
240	577	477	621
300	657	547	722
400	738	619	817
500	836	706	941

AL/XLPE/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
50	183	148	185
70	223	181	226
95	266	217	274
120	304	248	316
150	341	279	357
185	387	318	411
240	450	372	484
300	509	424	556
400	584	489	647
500	674	568	764

18/30 (36) KV Multi Core Tape Armored Cables with CU Or AL Conductor

CU/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
50	223	186	224
70	273	229	277
95	325	273	333
120	369	310	381
150	414	349	431
185	465	395	489
240	536	456	570
300	602	515	647
400	676	582	736
500	757	655	836

AL/XLPE/STA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
50	173	145	174
70	212	177	215
95	253	212	259
120	288	242	297
150	322	272	335
185	364	310	382
240	421	359	447
300	475	407	509
400	541	466	586
500	615	532	676

18/30 (36) KV Multi Core Wire Armored Cables with CU Or AL Conductor

CU/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
50	225	189	227
70	275	232	281
95	326	276	336
120	369	311	383
150	412	349	432
185	462	394	489
240	529	452	567
300	591	508	641
400	660	569	724
500	732	635	817

AL/XLPE/SWA/PVC

Nominal Cross sectional area	Current Rating		
	Ground	Duct	Laid in free air (Shaded)
mm^2	A	A	A
50	175	147	176
70	213	179	218
95	254	215	262
120	288	244	299
150	322	273	337
185	363	310	384
240	419	358	447
300	471	404	508
400	533	460	582
500	602	522	668

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info@bicccables.com bicccables.com

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