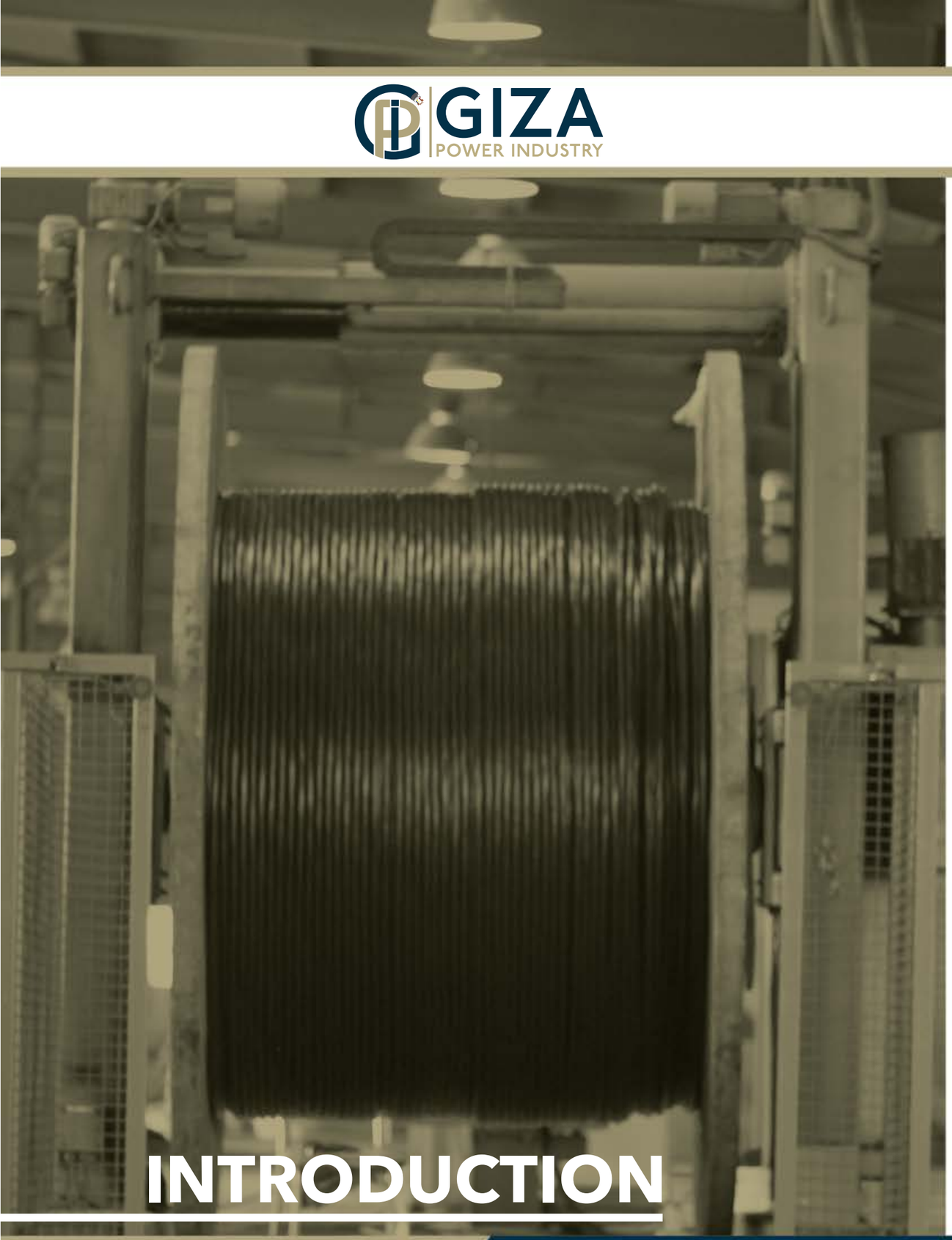
Products Catalogue

GIZA
POWER INDUSTRY

We Own The Power



INTRODUCTION

Giza Power industry factory was established in 1984 to produce different varieties of power cables under name of (Giza Cables), over total landscape of 81,745 m2 at industrial sector of Abo Rawash Giza, Egypt.

Plant kick off was on May 1985. By March 1988 factory was legally commissioned for commercial production under license number 986. In Feb 2015 factory name was changed after it was sold to a new owner to (Giza power industry). GPI is one of the best modern equipped factories in Egypt for cable production.

Since 1988 plant succeeded to open different markets in Qatar, Ethiopia, Yemen, Algeria, Tanzania, Libya, Spain, France, Italy, Romania ...etc. covering Egypt, MENA, Africa and Europe regions.

GPI success story is based on our employees whom we call family working on team work base. Safety and employee satisfaction is one of main key points that we make sure we fulfil during our manufacturing process.

We are able to fulfill customer needs, by working hard on customer development satisfaction points and requirements achieving client's specifications and quality.

Client's perception is one of most important role we make sure to achieve. Different governmental, international and private authorities audits are done on continues time frame. We are updated with most recent modern technicians and certificates, ISO, safety, KEMA, Ministry of electricity.

GPI production range is covering ranges from (0.6*1 KV up to 220KV) low, medium, high voltage cables for two types of conductors (Aluminum & Copper).

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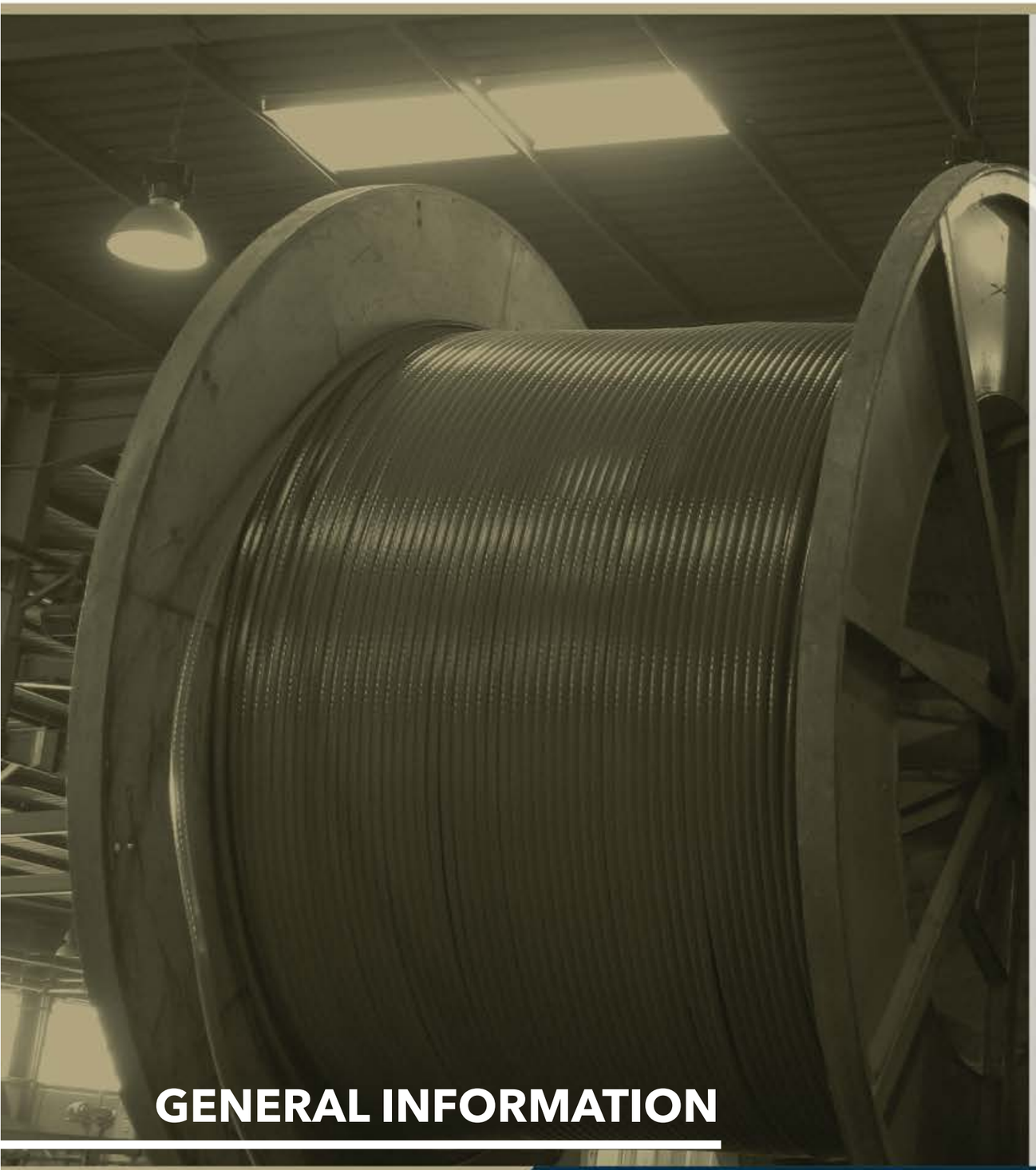

GENERAL INFORMATION

Selecting a Power Cable

The following factors are important when selecting a suitable cable construction which is required to transport electrical energy from the power station to the consumer:

- Maximum operating voltage.
- Insulation level.
- Frequency.
- Load to be carried.
- Magnitude and duration of possible overload.
- Magnitude and duration of short-circuit current.
- Voltage drop.
- Length of line.
- Type of installation.

- Underground (direct or in ducts).
- In air.

- Chemical and physical properties of soil
- Max. and min. ambient air temperatures and soil temperature.
- Specification and requirements to be met.

Voltage

The standard rated voltage of a cable is denoted by Uo/U (Um).

Uo: is the rated power frequency voltage between conductor and earth or metallic screen.

U: is the rated power frequency voltage between conductors.

Um: is the maximum continuously permissible operating voltage of a cable at any time or at any part of the network.

Uo/U (kV)	0.6/1	1.8/3	3.6/6	6/10	8.7/15	12/20	18/30	38/66	76/132	127/220
Um (kV)	1.2	3.6	7.2	12	17.5	24	36	72.5	145	245

Note: Cable design for 1.8/3 , 6/10, 12/20 and 18/30 kV is applicable for 1.9/3.3 , 6.35/11, 12.7/22 and 19/33 kV respectively.

Standards

Cables described in this catalogue are standard types, and their performance has been proved in operation.

Construction and tests are in accordance with the recommendation of IEC publications where ever applicable.

Power cables in accordance to a her standard (e.g. DIN , ASTM , BS, HD, NEMA) can be manufactured upon customer's request.

Weight and Dimension

Weight and dimension are approximate.

The deviations are due to manufacturing tolerance.

Jacket Marking

Standard embossed or Ink jet outer Jacket Marking consisting of:

1- Name of manufacturer. "GIZA POWER INDUSTRY''

2- Type designation, size of conductor, rated voltage, Cable type.

3- Continous length marking every meter.

4- Year of manufacture.

5- Any special part no. on request.

IEC Standard

S/N	No.of IEC	Subject
1.	60028	International Standard of Resistance for Copper.§
2.	60060-1	High-Voltage Test Techniques
3.	60104	Aluminum-Magnesium-Silicon Alloy Wire for Overhead Line Conductors.
4.	60121	Recommendation for commercial annealed aluminum electrical conductor wire.
5.	60137	Insulated bushings for alternating voltage above 1000 V.
6.	60173	Colours of the cores of flexible cables and cores.
7.	60183	Guide to the selection of high voltage cables.
8.	60227	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V
9.	60228	Conductors of insulated cables.
10.	60229	Tests on cable over-sheaths which have a special protection function and are applied by extrusion.
11.	60230	Impulse tests on cables and their accessories.
12.	60270	Partial discharge measurements
13.	60287	Current rating equations (100% load factor) and calculation of losses
14.	60331	Tests for electric cables under fire conditions circuit integrity.
15.	60332	Test on electric cables under fire conditions.
16.	60502	Cables for rated voltages of 0.6 kV (Um=1 kV) up to and including 30kV (Um=36kV).
17.	60719	Calculation of the lower and upper limits for the average outer dimensions of cables
		with circular copper conductors and of rated voltages up to and including 450/750 V.
18.	60724	Guide to the short-circuit temperature limits of electric cables with a rated voltage
		not exceeding 0.6/1 kV.
19.	60811	Common test methods for insulating and sheathing materials of electric cables
20.	60840	Test method and requirements
		Power cables with extruded insulation and their accessories for rated voltages
		above 30 kV(Um=36kV) up to l5OkV (Um=l7OkV).
21.	60853	Calculation of the cyclic and emergency current rating of cables.
22.	60885	Electrical test for electric cables

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IEC Standard

S/N	No.of IEC	Subject
23.	60888	Zinc-Coated steel wires for stranded conductors
24.	60889	Hard drawn aluminum wire for overhead line conductors
25.	60949	Calculation of thermally permissible short-circuit currents, taking
		into account non-adiabatic heating effects.
26.	60986	Guide to the short-circuit temperature limits of electric cables with a rated voltage
		from 1.8/3 (3.6) kV to 18/30 (36) kV.
27.	61089	Round wire concentric lay overhead electrical stranded conductors.
28.	61232	Aluminum - clad steel wires for electrical purposes.
29.	61597	Overhead electrical conductors - calculation methods for stranded bare conductors.
30.	61443	Short circuit temperature limits of electric cables with rated voltages
		above 30 kV (Um=36 kV).
31.	62067	Power cable with extruded insulation and their accessories for rated voltages above
		150 kV (Um=170kV) up to 500kV (UrnS5O kV(- Test methods and requirements

HD Standard

S/N	No.of IEC	Subject
1.	HD 21.1 S4	Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation
2.	HD 21.3 S3	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V
3.	HD 603	Electric Power distribution, electric cable, insulated cable, polyvinyl chloride.
		Specification, dimension, test, marking
4.	HD 620	Distribution cables with exlruded insulation for rated voltages from 3.6/6(7.2)kV to 20.8/36(42)kV
5.	HD 626	Overhead distribution cables of rated voltage U0 /U (Um(O.6/l (1 .2(kV
6.	HD 632	Power cables with exlruded insulation and their accessories for rated voltages above 36 kV (Urn
		42kV) up to 150 kV(Um 170 kV)

cont'd

BS Standard

S/N	No.of IEC	Subject
1.	BS215-1	Aluminum conductors and Aluminum conductors, steel-reinforced for overhead power transmission.
		Part I: Aluminum stranded conductors.
2.	BS215-2	Aluminum conductors and Aluminum conductors, steel-reinforced for overhead power transmission.
		Part2: Aluminum stranded conductors, steel reinforced.
3.	ES 2627	Wrought aluminum for electrical purposes Wire.
4.	BS 5099	Spark testing of electric cables.
5.	BS 5467	600/1000 V and 1900/3300 V armoured electric cables having thermosetting insulation.
6.	ES 6004	Electric cables - PVC insulation, non-armoured cables for voltages up to and including 450/750 V
		for electric power, lighting and internal wiring.
7.	BS 6007	Electric cables - single core unsheathed heat resisting cables for voltages up to and including 450/750V
		for internal wiring.
8.	BS 6346	600/1000 V and 1900/3300 V armoured electric cables having PVC insulation.
9.	BS 6360	Conductors in insulated cables and cords.
10.	BS 6387	Performance requirements for cables required to maintain circuit integrity underfire conditions.
11.	BS 6485	PVC- covered conductors for overhead power lines.
12.	BS 6500	Electric cables - Flexible cords rated up to 300/500 V. for use with appliances and equipment intended
		for domestic, office and similar environments.
13.	BS6622	Cables with extruded cross-linked polyethylene or ethylene propylene rubber insulation for rated
		voltages from 3.8/6.6KV up to 19/33KV
14.	ES 7655	Insulation and sheathing materials for cables.
15.	BS7884	Copper and copper-cadmium stranded conductors for overhead electric traction and power
		transmission systems.
16.	BS7889	Electric cables - Thermosetting insulated, unarmoured cables for avoltage of 600/1000V.
17.	ES 7919	Electric cables - Flexible cables rated up to 450/750 V. far use with appliances and equipment intended
		for industrial and similar environments.

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S/N	No.of IEC	Subject
1.	BSEN 10218-1	Steel wire and products- Part 1 : Test Methods
2.	BS EN 10218-2	Steel wire and products- Part2: wire dimensions and tolerances
3.	BS EN 10244-2	Steel wire and products- Non-ferrous metallic coating on steel wire-part2: Zinc or zinc alloy coatings
4.	BS EN 10257	Zinc or zinc alloy coated non-alloy steel wire for armouring either power cables or telecommunication
		cables.
5.	BS EN 12548	Lead and lead alloyes - lead alloy ingots for electric cable sheathing and for sleeves
6.	BS EN 12659	Lead and lead alloys - lead
7.	BS EN 13601	Copper and copper alloys - Copper rod, bar and wire for general electrical purposes
8.	BS EN 13602	Copper and copper alloys - Drawn, round copper wire for the manufacture of electrical conductors
9.	BSEN5O182	Conductors for overhead lines - Round wire concentric lay stranded conductors.
10.	BSEN5O183	Conductors for overhead lines - Aluminum - magnesium - silicon alloy wires
11.	BSEN5O189	Conductors for overhead lines - Zinc coated steel wires
12.	BS EN 50266	Common test methods for cables under fire conditions - Test for vertical flame spread of verticaly.
		mounted bunched wires or cables.
13.	BS EN 50356	Method for spark testing of cables
14.	BS EN 50395	Electrical test methods for low voltage energy cables (Supersedes HD 21.2)
15.	BSEN6O811	Insulating and sheathing materials of electric cables. common test methods.

- GPI Product range up to 1200mm & in process of upgrading to 2500mm

Definitions of dimensional values

1. Nominal value

Value by which a quantity is designated and which is often used in tables. Usually, in IEC standard, nominal values give rise to values to be checked by measurements taking into account specified tolerances.

2. Approximate value

Value which is neither guaranteed nor checked; it is used, for example, for the calculation of other dimensional values.

3. Median value

When several test results have been obtained and ordered in an increasing (or decreasing) succession, the median value is the middle value if the number of available values is odd, and the mean of the two middle values if the number is even.

4. Fictitious value

Value calculated according to the “fictitious method” described in annex A in IEC 60502.

Definitions concerning Tests

1. Routine tests

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

2. 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.

3. Type tests

Test made before supplying, on a general commercial basis, a type of cable covered by this standard, in order to demonstrate satisfactory performance characteristics to meet the intended application. These tests are of such a nature that, after they have been made, they need not be repeated, unless changes are made in the cable materials or design or manufacturing process, which might change the performance characteristics.

4. Electrical test after installation

Tests made to demonstrate the integrity of the cable and its accessories as installed.

1. Resistance

The values of conductor DC resistance given in the following tables are based on 20 °C. In case the DC resistance is required at any other temperature the following formula is used

$R_0=R_{20}$ [1+a (Θ-20)] Ω/km

Where

R_0 : Conductor DC resistance at ^{O}C Ω /km

R_{20} Conductor DC resistance at 20 ^{O}C Ω /km

Θ: Operating temperature ^{O}C

a : Resistance temperature coefficient 1/^{O}C

0.00393 for Copper

0.00403 for Aluminium

To get AC resistance of the conductor at its operating temperature the following formula is used

$R_{AC} = R_0 (1 + y_P + y_S)$ Ω /km

Where

y_P and y_S are proximity and skin effect factors respectively which depend on operation frequency, cable laying,cable construction, and cable spacing.

2. Inductance

The self and mutual inductance are formulated as follow:

$L=K+0.2 \ln (\frac{2S}{d})$ mh/km

Where

L: Inductance mh/km

K : Constant depends on the conductors number of wires

No. of Wires	7	19	37	61
k	0.0642	0.0554	0.0528	0.0514

d : Conductors diameter mm

S : Axial spacing between cables in trefoil formation mm

S: 1.26 x axial spacing between cables in flat formation mm

3. Capacitance

The capacitance is formulated as follow

$C = (\frac{\epsilon_r}{18 \ln \frac{D}{d}})$ µf/km

Where

C : Capacitance µf/km

E_r : Relative permittivity of insulation material

D : Diameter over insulation (excluding Outer semi conductor layer in case of M.V, H.V& E.H.V) mm

d : Conductor diameter (including Inner semi conductor layer in case of M.V, H.V& E.H.V) mm

4. Insulation Resistance

The Insulation Resistance is formulated as follow

$R=K \ln (\frac{D}{d})$

Where

R : Insulation resistance MΩ/km

K : Constant depends on the insulation material

d : Diameter of the conductor (including Inner semi conductor layer in case of M.V, H.V& E.H.V) mm

D : Diameter of the insulated core (excluding Outer semi conductor layer in case of M.V, H.V& E.H.V) mm

5. Charging Current

The charging current is the capacitive current which flows when AC voltage is applied to the cables as a result of the capacitance between the conductor and earth, and for a multicore cable in which cores are not screened, between conductors. The value can be derived from the following equation.

$I_C=U_O \ \omega C 10^{-6}$ A/km

Where

I_C : Charging current A/km

U_O : Voltage between phase and earth. v

: 2TTf

F : Frequency Hz

C : Capacitance to neutral µf

6. 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.

$W_D = 2_{TT} f C U_O^2 \tan ó 10^{-6}$ watt/km/phase

Where

W_D : Dielectric losses watt/km/phase

f : Frequency Hz

C : Capacitance to neutral µf/km

U_O : Voltage between phase and earth V

tan ó : Dielectric power factor

7. Cable Ampacity

Cable ampacity or current carrying capacity is defined as the continuous maximum current the cable can carry at its maximum operating temperature. In the technical information tables the following installation conditions were assumed during the current calculation:

- Ambient air temperature = 40 °C
- Ground temperature = 35 °C
- Ground thermal resistivity = 120 °C. cm/Watt
- Burial depth = 0.5 mt.

- In case of installation conditions are different from the stated, derating factors tabulated in tables 2 to 10 must be used for calculating the new current carrying capacity.
- All cable ampacities are based on IEC 60287

8. Cable Short Circuit Capacity

Tables 12-16 give the short circuit current for conductor and screen based on the following conditions

A- Short circuit starts from the maximum operating conductor/ screen temperature.

B- Maximum temperature during short circuit

C- Maximum short circuit current duration is 5 seconds.

If the short circuit current is required at duration not mentioned in the catalogue. it is obtained by dividing the short circuit current for 1 second by the square root of the required duration as follows:

$$I_{S.C.T} = \frac{I_{S.C.1}}{\sqrt{F}}$$

Where

$I_{S.C.T}$:Short circuit current for t second kA

$I_{S.C.T}$: Short circuit current for 1 second kA

T :Duration Sec.

9. Voltage Drop

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

A. Single phase circuit.

$$Vd = 2I\ L\ (R \cos ø + x \sin ø) \quad V$$

B. Three phase circuit.

$$V_d = \sqrt{3}I\ L\ (R \cos ø + X \sin ø) \quad V$$

Where

V_d : Voltage drop V

I : Load current A

R : AC Resistance Ω/km

X : Reactance Ω/km

cos ø : Power factor

L : Length km

X = ω L 10-3 Ω/km

ω= 2 $_{TT}$ f

L= from tables

mh/km

Relation between cos ø and sin ø

Cos	1.0	0.9	0.8	0.71	0.6	0.5
Sin	0.0	0.44	0.6	0.71	0.8	0.87

* L.V. cable systems should be planned so as not to exceed voltage drop 3-5 % in normal operating conditions.
* Voltage drop data for L.V. Cable (Single & Multi Core) are tabulated in Tables 17 & 18.

Metals

Table 1
Electrical Properties

Metal	Relative Conductivity Copper 100%	Electrical Resistivity at 20°c ohm. m (10-8)	Temperature Coefficient of Resistance per °C
Copper (annealed)	100	1.7241	0.00393
Copper (hard drawn)	97	1.777	0.00393
Tinned copper	95-97	1.741 - 1.814	0.00393
Aluminium	61	2.8264	0.00403
Lead	8	21.40	0.00400

Physical Properties

Property	Unit	Copper	Aluminium	Lead
Density at 20 °C	kg / m3	8890.0	2703.0	11340.00
Coeff. thermal expansion	Per °C x 10-6	17.0	23.0	29.00
Melting point	°C	1083.0	659.0	327.00
Thermal conductivity	W/cm °C	3.8	2.4	0.34
Ultimate tensile strength	Mn/m2	225.0	70-90	-

Derating Factors

Table 2
Ground Temperature Derating Factor

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

Table 3
Air Temperature Derating Factor

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

Table 4
Burial Depth Derating Factor

Depth of Laying mt.	Cables Cross Section		
	Up to 70 mm2	95 up to 240 mm2	300 mm2 & above
0.50	1.00	1.00	1.00
0.60	0.99	0.98	0.97
0.80	0.97	0.96	0.94
1.00	0.95	0.93	0.92
1.25	0.94	0.92	0.89
1.50	0.93	0.90	0.87
1.75	0.92	0.89	0.86
2.00	0.91	0.88	0.85

Table 5
Soil Thermal Resistivity Derating Factor

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

Table 6
PVC Rated Temperature Derating Factor

Type of PVC Rated Temperature °C	70	85	105
Rating factor	1.000	1.195	1.414

Table 7
Trefoil or Flat Formation Derating 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	
nr	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

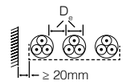
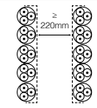
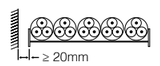
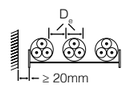
*L=Spacing

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

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

* L = Spacing

Table 9
Reduction factors for groups of more than one multi-core cable in air To be applied to the current-carrying capacity for one multi-core cable in free ai

Number of Trays	Number of Cables						Method of installation	
	1	2	3	4	6	9		
1	1.00	0.88	0.82	0.79	0.76	0.73	Cables on perforated trays	Touching
2	1.00	0.87	0.80	0.77	0.73	0.68		
3	1.00	0.86	0.79	0.76	0.71	0.66		
1	1.00	1.00	0.98	0.95	0.91	-		 Spaced
2	1.00	0.99	0.96	0.92	0.87	-		
3	1.00	0.98	0.95	0.91	0.85	-		
1	1.00	0.88	0.82	0.78	0.73	0.72	Cables on vertical perforated trays	 Touching
2	1.00	0.88	0.81	0.76	0.71	0.70		
1	1.00	0.91	0.89	0.88	0.87	-		Spaced
2	1.00	0.91	0.88	0.87	0.85	-		
1	1.00	0.87	0.82	0.80	0.79	0.78	Cables on ladder supports, cleats, etc.	 Touching
2	1.00	0.86	0.80	0.78	0.76	0.73		
3	1.00	0.85	0.79	0.76	0.73	0.70		
1	1.00	1.00	1.00	1.00	1.00	-		 Spaced
2	1.00	0.99	0.98	0.97	0.96	-		
3	1.00	0.98	0. 97	0.96	0.93	-		

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

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

NOTE 3 Values are given for vertical spacing between trays of 300mm and at least 20mm between trays and wall. For closer spacing, the factors should be reduced.

NOTE 4 Values are given for horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing the factors should be reduced.

Table 10

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

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

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

NOTE 2 Factors are given for single layers of cables 101 trefoil groups) as shown in the table and do not apply when cables are installed in more than one layer touching each other. Values tar such installations may be significantly lower and should be determined by an appropriate method.

NOTE 3 Values are given tar vertical spacings between trays of 300 mm. Far closer spacing, the factors should be reduced.

NOTE 4 Values are given for horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing, the factors should be reduced.

NOTE 5 For circuits having more than one cable in parallel per phase, each three phase set of conductors should be considered as a circuit for the purpose of this table.

Table 11

Max. Short Circuit Temperature for Cable Components

Material	Item	Temp. °C
Insulation	PVC insulation	140 For C.S.A >300mm2
		160 For C.S.A ≤ 300 mm2
	XLPE insulation	250
Jacket	PVC sheathing	200
	LLDPE sheathing	150
	HDPE sheathing	180
Metal	Lead sheath	170
	Lead sheath - alloy	200*
	Copper	250
	Aluminum	250

*Temp. = 210°C for cables with rated voltages above 30kV (Um36 kV),

Table 12

KA Short Circuit Current- Copper Conductor- PVC Insulated

C.S.A. mm2	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	5.8	4.1	3.4	2.9	2.6	1.8	1.3	1.1	0.9	0.8
25	9.1	6.4	5.2	4.5	4.1	2.9	2.0	1.7	1.4	1.3
35	12.7	9.0	7.3	6.4	5.7	4.0	2.8	2.3	2.0	1.8
50	18.2	12.9	10.5	9.1	8.1	5.8	4.1	3.3	2.9	2.6
70	25.5	18.0	14.7	12.7	11.4	8.1	5.7	4.6	4.0	3.6
95	34.5	24.4	19.9	17.3	15.5	10.9	7.7	6.3	5.5	4.9
120	43.6	30.9	25.2	21.8	19.5	13.8	9.8	8.0	6.9	6.2
150	56.5	38.6	31.5	27.8	24.4	17.3	12.2	10.0	8.6	7.7
185	67.3	47.6	38.8	33.6	30.1	21.3	15.0	12.3	10.6	9.5
240	87.3	61.7	50.4	43.6	39.0	27.6	19.5	15.9	13.8	12.3
300	109.1	77.1	63.0	54.5	48.8	34.5	24.4	19.9	17.3	15.4
400	130.0	91.9	75.1	65.0	58.2	41.1	29.1	23.7	20.6	18.4
500	162.5	114.9	93.8	81.3	72.7	51.4	36.3	29.7	25.7	23.0
630	204.8	144.8	118.2	102.4	91.6	64.8	45.8	37.4	32.4	29.0

Table 13

kA Short Circuit Current – Aluminium Conductor – PVC Insulated

C.S.A. mm2	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	3.8	2.7	2.2	1.9	1.7	1.2	0.9	0.7	0.6	0.5
25	6.0	4.2	3.5	3.0	2.7	1.9	1.3	1.1	1.0	0.8
35	8.4	5.9	4.9	4.2	3.8	2.7	1.9	1.5	1.3	1.2
50	12.0	8.5	6.9	6.0	5.4	3.8	2.7	2.2	1.9	1.7
70	16.8	11.9	9.7	8.4	7.5	5.3	3.8	3.1	2.7	2.4
95	22.8	16.1	13.2	11.4	10.2	7.2	5.1	4.2	3.6	3.2
120	28.8	20.4	16.7	14.4	12.9	9.1	6.4	5.3	4.6	4.1
150	36.0	25.5	20.8	18.0	16.1	11.4	8.1	6.6	5.7	5.1
185	44.5	31.4	25.7	22.2	19.9	14.1	9.9	8.1	7.0	6.3
240	57.7	40.8	33.3	28.8	25.8	18.2	12.9	10.5	9.1	8.2
300	72.1	51.0	41.6	36.0	32.2	22.8	16.1	13.2	11.4	10.2
400	86.0	60.8	49.7	43.0	38.5	27.2	19.2	15.7	13.6	12.2
500	107.5	76.0	62.1	53.8	48.1	34.0	24.0	19.6	17.0	15.2
630	135.5	95.8	78.2	67.7	60.6	42.8	30.3	24.7	21.4	19.2

Table 14

kA Short Circuit Current – Copper Conductor – XLPE Insulated Duration sec.

C.S.A. mm2	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	7.2	5.1	4.2	3.6	3.2	2.3	1.6	1.3	1.1	1.02
25	11.3	8.0	6.5	5.7	5.1	3.6	2.5	2.1	1.8	1.60
35	15.8	11.2	9.1	7.9	7.1	5.0	3.5	2.9	2.5	2.24
50	22.6	16.0	13.1	11.3	10.1	7.2	5.1	4.1	3.6	3.20
70	31.7	22.4	18.3	15.8	14.2	10.0	7.1	5.8	5.0	4.5
95	43.0	30.4	24.8	21.5	19.2	13.6	9.6	7.8	6.8	6.1
120	54.3	38.4	31.3	27.1	24.3	17.2	12.1	9.9	8.6	7.7
150	67.8	48.0	39.2	33.9	30.3	21.5	15.2	12.4	10.7	9.6
185	83.7	59.2	48.3	41.8	37.4	26.5	18.7	15.3	13.2	11.8
240	108.5	76.7	62.7	54.3	48.5	34.3	24.3	19.8	17.2	15.3
300	135.7	95.9	78.3	67.8	60.7	42.9	30.3	24.8	21.5	19.2
400	180.9	127.9	104.4	90.4	80.9	57.2	40.4	33.0	28.6	25.6
500	226.1	159.9	130.5	113.1	101.1	71.5	50.6	41.3	35.8	32.0
630	284.9	201.4	164.5	142.4	127.4	90.1	63.7	52.0	45.0	40.3
800	361.8	255.8	208.9	180.9	161.8	114.4	80.9	66.0	57.2	51.2
1000	452.2	319.8	261.1	226.1	202.2	143.0	101.1	82.6	71.2	64.0
1200	542.6	383.7	313.3	271.3	242.7	171.6	121.3	99.1	85.8	76.7
1600	723.5	511.6	417.7	361.8	323.6	228.8	161.8	132.1	114.4	102.3
2000	904.4	639.5	522.2	452.2	404.5	286	202.2	165.1	143	127.9
2500	1130.5	799.4	652.7	565.3	505.6	357.5	252.8	206.4	178.8	159.9

Table 15

kA Short Circuit Current – Aluminium Conductor – XLPE Insulated

C.S.A. mm2	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	4.7	3.4	2.7	2.4	2.1	1.5	1.1	0.9	0.75	0.67
25	7.4	5.2	4.3	3.7	3.3	2.3	1.7	1.4	1.2	1.0
35	10.4	7.3	6.0	5.2	4.6	3.3	2.3	1.9	1.6	1.5
50	14.8	10.5	8.6	7.4	6.6	4.7	3.3	2.7	2.3	2.1
70	20.7	14.7	12.0	10.4	9.3	6.6	4.6	3.8	3.3	2.9
95	28.1	19.9	16.3	14.1	12.6	8.9	6.3	5.1	4.5	4.0
120	35.6	25.1	20.5	17.8	15.9	11.2	8.0	6.5	5.6	5.0
150	44.4	31.4	25.7	22.2	19.9	14.1	9.9	8.1	7.0	6.3
185	54.8	38.8	31.6	27.4	24.5	17.3	12.3	10.0	8.7	7.8
240	71.1	50.3	41.1	35.6	31.8	22.5	15.9	13.0	11.2	10.1
300	88.9	62.9	51.3	44.4	39.8	28.1	19.9	16.2	14.1	12.6
400	118.2	83.8	68.4	59.3	53.0	37.5	26.5	21.6	18.7	16.8
500	148.2	104.8	85.5	74.1	66.3	46.9	33.1	27.0	23.4	21.0
630	186.7	132.0	107.8	93.3	83.5	59.0	41.7	34.1	29.2	26.4
800	237.0	167.6	136.9	118.2	106.0	75.0	53.0	43.3	37.5	33.5
1000	296.3	209.5	171.1	148.2	132.5	93.7	66.3	54.1	46.9	41.9
1200	355.6	251.4	205.3	117.8	159.0	112.4	79.5	64.9	56.2	50.3
1600	474.1	335.2	273.7	237	212	149.9	106	86.6	75	67
2000	592.6	419	342.1	296.3	265	187.4	132.5	108.2	93.7	83.8
2500	741.2	524.1	427.9	370.6	331.5	234.4	165.7	135.3	117.2	104.8

Table 16

KA Short Circuit Current Copper Screen

C.S.A. mm2	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	7.5	5.3	4.3	3.7	3.3	2.4	1.7	1.4	1.2	1.1
25	11.7	8.3	6.8	5.9	5.2	3.7	2.6	2.1	1.9	1.7
35	16.4	11.6	9.5	8.3	7.3	5.2	3.7	3.0	2.6	2.3

Conductor temperature before short circuit = 90°C

Maximum conductor temperature during short circuit = 250°C

Maximum screen temperature before short circuit = 80°C

Table 17

Voltage Drop for Single Core L.V Cables

C.S.A. mm2	Copper Conductor Voltage Drop (mv / AMP / Meter)			
	PVC Insulation & PVC Sheathed		XLPE Insulation & PVC Sheathed	
	Flat ○○○	Trefoil ⁂	Flat ○○○	Trefoil ⁂
4	7.830	7.770	8.337	8.277
6	5.287	5.226	5.628	5.568
10	3.184	3.124	3.401	3.341
16	2.068	2.008	2.203	2.142
25	1.357	1.297	1.440	1.380
35	1.034	0.971	1.085	1.024
50	0.793	0.732	0.836	0.776
70	0.595	0.534	0.624	0.564
95	0.469	0.408	0.490	0.430
120	0.410	0.349	0.417	0.357
150	0.354	0.294	0.366	0.305
185	0.312	0.252	0.322	0.262
240	0.272	0.211	0.278	0.218
300	0.247	0.187	0.253	0.192
400	0.224	0.164	0.220	0.159
500	0.208	0.148	0.211	0.150
630	0.194	0.134	0.191	0.131

C.S.A. mm2	Aluminium Conductor Voltage Drop (mv / AMP / Meter)			
	PVC Insulation & PVC Sheathed		XLPE Insulation & PVC Sheathed	
	Flat ○○○	Trefoil ⁂	Flat ○○○	Trefoil ⁂
16	3.343	3.283	3.561	3.500
25	2.161	2.100	2.296	2.235
35	1.602	1.542	1.700	1.640
50	1.222	1.162	1.291	1.230
70	0.890	0.830	0.937	0.877
95	0.686	0.623	0.719	0.655
120	0.569	0.509	0.594	0.534
150	0.490	0.430	0.511	0.451
185	0.420	0.360	0.437	0.377
240	0.353	0.293	0.367	0.307
300	0.312	0.252	0.322	0.262
400	0.274	0.214	0.278	0.218
500	0.245	0.185	0.260	0.199
630	0.222	0.162	0.233	0.163

The above data are based on:

- Max. operating temp: 90°C for XLPE & 70°C for PVC
- Power factor: 0.8 Rated frequency: 50 HZ
- Cables are touched in flat formation

Table 18

Voltage Drop for Multi Core L.V Cables

C.S.A. mm2	Copper Conductor Voltage Drop (mv / AMP / Meter)	
	PVC Insulation & PVC Sheathed	XLPE Insulation & PVC Sheathed
1.5	20.345	20.341
2.5	12.397	13.197
4	7.741	7.731
6	5.199	5.191
10	3.101	3.094
16	1.988	1.982
25	1.280	1.276
35	0.959	0.955
50	0.720	0.715
70	0.524	0.520
95	0.398	0.394
120	0.341	0.337
150	0.285	0.282
185	0.244	0.241
240	0.204	0.201
300	0.180	0.177
400	0.157	0.155

C.S.A. mm2	Aluminium Conductor Voltage Drop (mv / AMP / Meter)	
	PVC Insulation & PVC Sheathed	XLPE Insulation & PVC Sheathed
16	3.263	3.479
25	2.084	2.218
35	1.527	1.624
50	1.150	1.217
70	0.819	0.865
95	0.613	0.645
120	0.500	0.524
150	0.421	0.442
185	0.352	0.369
240	0.286	0.299
300	0.245	0.255
400	0.208	0.211

The above data are based on:

- Max. operating temp: 90°C for XLPE & 70°C for PVC
- Power factor: 0.8 Rated frequency: 50 HZ
- Cables are touched in flat formation

Multiply	By	To obtain
Weight-Imperial		
Ounces	28.3495	grams
Pounds (Av)	453.59	grams
Pounds (Av)	0.45359	Kilograms
Tons (short)	907.19	Kilograms
Tons (long)	1016.05	Kilograms
Weight-Metric		
Grams	0.03527	Ounces
Grams	0.002205	Pounds
Kilograms	35.274	Ounces
Kilograms	2.2046	Pounds
Kilograms	0.001102	Tons (short)
Kilograms	0.0009842	Tons (long)
Miscellaneous-Imperial		
Pounds per 1000 feet	1.48816	Kg/km
Pounds per mile	0.28185	Kg/km
Pounds per square inch	0.0007031	Kg. per square mm.
Pounds per square inch	0.07031	Kg. per square cm.
Pounds per cubic	27.68	Grams per cubic cm.
feet per second	18.288	Meters per minute.
feet per second	1.09728	Kilometers per hour.
Miles per hour	1.60935	Kilometers per hour.
Ohms per 1000 feet	3.28083	Ohms per kilometer.
Ohms per mile	0.62137	Ohms per kilometer.
Decibels per 1000 feet	3.28083	Decibels per kilometer.
Decibels per mile	0.62137	Decibels per kilometer.
Decibels	0.1153	Nepers.
Miscellaneous-Metric		
Kg/km	0.67197	Pounds per 1000 feet
Kg/km	3.54795	Pounds per mile
Kg.per square mm	1422.34	Pounds per square inch
Kg.per square cm	14.2234	Pounds per square inch
Grams per cubic cm	0.03613	Pounds per square inch
Meters per minute	0.05468	feet per second
Kilometers per hour	0.91134	feet per second
Kilometers per hour	0.62137	Miles per hour
Ohms per kilometer	0.3048	Ohms per 1000 feet
Ohms per kilometer	1.6093	Ohms per mile
Decibels per kilometer	0.3048	Decibels per 1000 feet
Decibels per kilometer	1.6093	Decibels per mile
Temperature		
	5/9 (oF)-32	oCelsius
	9/5(oC)+32	oFahrenheit
Length-Imperial		
Mils	0.001	Inches.
Mils	0.0254	mm.
Inches	1000	Mils.

Multiply	By	To obtain
Inches	25.40	mm.
Inches	2.54	cm.
Feet	30.48	cm.
Feet	0.3048	Meters.
Feet (thousands of)	0.3048	Kilometers.
Yards	0.9144	Meters.
Miles	1.6093	Kilometers
Length- Metric		
millimeters	39.37	Mils.
millimeters	0.03937	Inches.
centimeters	0.3937	Inches.
centimeters	0.032808	Feet.
meters	39.37	Inches.
meters	3.2808	Feet.
meters	1.0936	Yards.
kilometers	3280.83	Feet.
kilometers	0.62137	Miles.
Area-Imperial		
Square mils	1.2732	Circular mils
Square mils	0.000001	Square inches
Circular mils	0.7854	Circular mils
Circular mils	0.0000007854	
Square mils	0.0005067	Square mm.
Square inches	1000000	Circular mils
Square inches	1273240	Circular mils
Square inches	654.16	Square mm.
Square inches	6.4516	Square cm.
Square feet	0.09290	Square meters.
Square yards	0.8361	Square meters.
Area-Metric		
Square millimeters	1973.52	Circular mils
Square millimeters	0.00155	Square inches
Square centimeters	0.155	Square inches
Square meters	10.7638	Square feet
Square meters	1.19599	Square yards
Volume-Imperial		
Cubic inches	16.38716	Cubic cm.
Cubic feet	0.028317	Cubic meters
Volume-U.S.		
Quarts (liquid)	0.9463	liters
Guarts	3.7854	liters.
Volume-Metric		
Cubic cm	0.06102	Cubic inches.
Cubic meters	35.3145	Cubic feet.
Liters	1.05668	Quarts (liquid u.s)
Liters	0.26417	Gallons (U.S.)

Copper screening machine
SB 0029

OVERHEAD CONDUCTORS

Product Types

2.1 Bare Overhead Conductors

2.1.1 Bare Soft & Hard Drawn Copper

2.1.2 All Aluminum conductor (A.A.C)

2.1.3 All Aluminum alloy conductor (A.A.A.C.)

2.1.4 All Aluminum conductor steel reinforced (A.C.S.R)

2.2 Aerial Bundled Cables

Cable Construction

1- Conductor

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

2- Insulation

In case of service drop cables, an extruded layer of PVC or XLPE or HDPE with 2.5% of Carbon black as UV protector is applied upon the conductor

Designation Code for Over Head Conductors
You can order our product by giving the following informations

1- cable codes as per the catalogue
2- if your requirements is out of our catalogue product range, you can use the following map to identify the code

0	0	00	0	0	00

Conductor Material

C	Stranded Soft Copper
H	Stranded Hard Copper
B	All Aluminum Conductor - H14
L	All Aluminum Alloy
S	Aluminum Conductor Steel Reinforced - ACSR

Grease

0	No Grease
C	Steel Core only Greased
I	Internal layers only Greased
A	all layers greased

C.S.A mm2

14	10	47	95/15	68	490/65
15	16	48	95/55	69	495/35
16	25	49	105/75	70	510/45
17	35	50	120/20	71	550/70
18	50	51	120/70	72	560/50
19	70	52	125/30	73	570/40
20	95	53	150/25	74	650/45
21	120	54	170/40	75	680/85
22	150	55	185/30		
23	185	56	210/35		
24	240	57	210/50		
25	300	58	230/30		
26	400	59	240/40		
27	500	60	265/35		
40	16/2.5	61	300/50		
41	25/4	62	305/40		
42	35/6	63	340/30		
43	44/32	64	380/50		
44	50/8	65	385/35		
45	50/30	66	435/55		
46	70/12	67	450/40		

Insulation Type

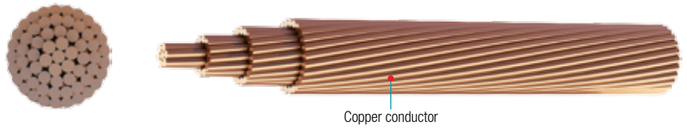
B	Bare
W	XLPE+2.5 % C.B
H	HDPE + 2.5 % C.B
M	PVC+2.5 % C.B

Voltage Grade

X	No Voltage
1	450/750 V
2	0.6/1 (1.2) KV

No. of Cores

01	1
02	2
03	3
04	4
05	5
A1	1 PH+MESS
A2	2 PH+MESS
A3	3 PH+MESS
A4	4 PH+MESS
A5	3 PH+MESS+LIGHT
A6	3 PH+MESS+2 LIGHT



Copper Conductors

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

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

Product-Code	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires	Max. DC Resistance at 20 °C	Approx. Overall Diameter	Approx. Weight
	mm²	No x ø (mm)	Ω / km	mm	kg / km
a - Bare soft drawn					
C014BX01	10	7 x 1.33	1.8300	3.99	86
C015BX01	16	7 x 1.67	1.1500	5.01	136
C016BX01	25	7 x 2.1	0.7270	6.3	215
C017BX01	35	7 x 2.48	0.5240	7.44	298
C018BX01	50	19 x 1.77	0.3870	8.85	418
C019BX01	70	19 x 2.1	0.2680	10.5	595
C020BX01	95	19 x 2.48	0.1930	12.4	820
C021BX01	120	37 x 2	0.1530	14	1040
C022BX01	150	37 x 2.23	0.1240	15.61	1295
C023BX01	185	37 x 2.48	0.0991	17.36	1600
C024BX01	240	61 x 2.23	0.0754	20.07	2140
C025BX01	300	61 x 2.48	0.0601	22.31	2640
C026BX01	400	61 x 2.82	0.0470	25.38	3415
C027BX01	500	61 x 3.2	0.0366	28.8	4400
b - Bare hard drawn					
H014BX01	10	7 x 1.35	1.8290	4.1	90
H015BX01	16	7 x 1.70	1.1540	5.1	143
H016BX01	25	7 x 2.10	0.7563	6.3	218
H017BX01	35	7 x 2.50	0.5337	7.5	310
H018BX01	50	7 x 3.00	0.3706	9.0	446
H018BX01	50	19 x 1.80	0.3819	9.0	437
H019BX01	70	19 x 2.10	0.2806	10.5	596
H020BX01	95	19 x 2.50	0.1980	12.5	845
H021BX01	120	19 x 2.80	0.1578	14.0	1060
H022BX01	150	37 x 2.25	0.1264	15.8	1337
H023BX01	185	37 x 2.50	0.1024	17.5	1649
H024BX01	240	61 x 2.25	0.07528	20.3	2209
H025BX01	300	61 x 2.50	0.06097	22.5	2725
H026BX01	400	61 x 2.89	0.0456	26.0	3640
H027BX01	500	61 x 3.23	0.0365	29.1	4545

The above data is approximate and subjected to manufacturing tolerance.

All Aluminum Conductors (A.A.C).

Description

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

Application

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

Product-Code	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires	Max. DC Resistance at 20 °C	Rated Strenghth	Approx. Overall Diameter	Approx Weight
	mm²	No x ø (mm)	/ km	kn	mm	kg / km
a – According to BS EN 50182 – Germany						
B015BX01	16	7 x 1.70	1.7986	3.02	5.10	43.4
B016BX01	25	7 x 2.10	1.1787	4.36	6.30	66.3
B017BX01	35	7 x 2.50	0.8317	6.01	7.50	93.9
B018BX01	50	7 x 3.00	0.5776	8.41	9.00	135.2
B018BX01	50	19 x 1.80	0.5944	8.94	9.00	132.9
B019BX01	70	19 x 2.10	0.4367	11.85	10.5	180.9
B020BX01	95	19 x 2.50	0.3081	16.32	12.5	256.3
B021BX01	120	19 x 2.80	0.2456	19.89	14.0	321.5
B022BX01	150	37 x 2.25	0.1960	26.48	15.8	405.7
B023BX01	185	37 x 2.50	0.1588	31.78	17.5	500.9
B024BX01	240	61 x 2.25	0.1193	43.66	20.3	671.1
B025BX01	300	61 x 2.50	0.0966	52.40	22.5	828.5
B026BX01	400	61 x 2.89	0.0723	68.02	26.0	1107.1
B027BX01	500	61 x 3.23	0.0579	82.47	29.1	1382.9

The above data is approximate and subjected to manufacturing tolerance.

All Aluminum Conductors (A.A.C)

Name	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires	Max. DC resistance at 20 °C	Rated strenghth	Approx. Overall Diameter	Approx Weight
	mm²	No x ø (mm)	/ km	kn	mm	kg / km
b – According to BS EN 50182 – United Kingdom						
MIDGE	23.3	7 x 2.06	1.2249	4.20	6.18	63.8
GNAT	26.9	7 x 2.21	1.0643	4.83	6.63	73.4
MOSQUITO	36.9	7 x 2.59	0.7749	6.27	7.77	100.8
LADYBIRD	42.8	7 x 2.79	0.6678	7.28	8.37	117.0
ANT	52.8	7 x 3.10	0.5409	8.72	9.30	144.4
FLY	63.6	7 x 3.40	0.4497	10.49	10.2	173.7
BLUEBOTTLE	73.6	7 x 3.66	0.3880	11.78	11.0	201.3
EARWIG	78.6	7 x 3.78	0.3638	12.57	11.3	214.7
GRASSHOPPER	84.1	7 x 3.91	0.3400	13.45	11.7	229.7
CLEGG	95.6	7 x 4.17	0.2989	15.30	12.5	261.3
WASP	106.0	7 x 4.39	0.2697	16.95	13.2	289.6
BEETLE	106.4	19 x 2.67	0.2701	18.08	13.4	292.4
BEE	132.0	7 x 4.90	0.2165	21.12	14.7	360.8
HORNET	157.6	19 x 3.25	0.1823	26.01	16.3	433.2
CATERPILLAR	185.9	19 x 3.53	0.1546	29.75	17.7	511.1
CHAFER	213.2	19 x 3.78	0.1348	34.12	18.9	586.0
SPIDER	237.6	19 x 3.99	0.1210	38.01	20.0	652.9
COCKROACH	265.7	19 x 4.22	0.1081	42.52	21.1	730.4
BUTTERFLY	322.7	19 x 4.65	0.0891	51.63	23.3	886.8
MOTH	373.1	19 x 5.00	0.0770	59.69	25.0	1025.3
DRONE	372.4	37 x 3.58	0.0774	59.59	25.1	1027.1
CENTIPEDE	415.2	37 x 3.78	0.0695	66.43	26.5	1145.1
MAYBUG	486.1	37 x 4.09	0.0593	77.78	28.6	1340.6
SCORPION	529.8	37 x 4.27	0.0544	84.77	29.9	1461.2
CICADA	628.3	37 x 4.65	0.0459	100.54	32.6	1732.9

The above data is approximate and subjected to manufacturing tolerance.

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

Description

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

Application

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

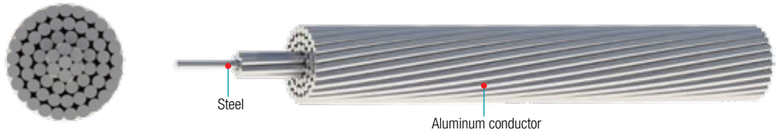
Product – Code	Nominal cross sectional area	Number and nominal diameter of wires	Max. DC, resistance at 20oC	Rated strength	Approx. Overall Diameter	Approx. Weight
	mm²	No x ø (mm)	Ω / km	kn	mm	kg / km
a – According to BS EN 50182 – Germany						
L015BX01	16	7 x 1.70	2.0701	4.69	5.10	43.4
L016BX01	25	7 x 2.10	1.3566	7.15	6.30	66.2
L017BX01	35	7 x 2.50	0.9572	10.14	7.50	93.8
L018BX01	50	7 x 3.00	0.6647	14.60	9.00	135.1
L019BX01	70	19 x 2.10	0.5026	19.41	10.5	180.7
L020BX01	95	19 x 2.50	0.3546	27.51	12.5	256.0
L021BX01	120	19 x 2.80	0.2827	34.51	14.0	321.2
L022BX01	150	37 x 2.25	0.2256	43.40	15.8	405.3
L023BX01	185	37 x 2.50	0.1827	53.58	17.5	500.3
L024BX01	240	61 x 2.25	0.1373	71.55	20.3	670.3
L025BX01	300	61 x 2.50	0.1112	88.33	22.5	827.5
L026BX01	400	61 x 2.89	0.0832	118.04	26.0	1105.9
L027BX01	500	61 x 3.23	0.0666	147.45	29.1	1381.4

The above data is approximate and subjected to manufacturing tolerance.

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

Name	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires	Max. DC resistance at 20 °C	Rated strength	Approx. Overall Diameter	Approx Weight
	mm²	No x ø (mm)	Ω / km	kn	mm	kg / km
b – According to BS EN 50182 – United Kingdom						
BOX	18.8	7 x 1.85	1.7480	5.55	5.55	51.4
ACACIA	23.8	7 x 2.08	1.3828	7.02	6.24	64.9
ALMOND	30.1	7 x 2.34	1.0926	8.88	7.02	82.2
CEDAR	35.5	7 x 2.54	0.9273	10.46	7.62	96.8
DEODAR	42.2	7 x 2.77	0.7797	12.44	8.31	115.2
FIR	47.8	7 x 2.95	0.6875	14.11	8.85	130.6
HAZEL	59.9	7 x 3.30	0.5494	17.66	9.90	163.4
PINE	71.6	7 x 3.61	0.4591	21.14	10.8	195.6
HOLLY	84.1	7 x 3.91	0.3913	24.79	11.7	229.5
WILLOW	89.7	7 x 4.04	0.3665	26.47	12.1	245.0
OAK	118.9	7 x 4.65	0.2767	35.07	14.0	324.5
MULBERRY	150.9	19 x 3.18	0.2192	44.52	15.9	414.3
ASH	180.7	19 x 3.48	0.1830	53.31	17.4	496.1
ELM	211.0	19 x 3.76	0.1568	62.24	18.8	579.2
POPLAR	239.4	37 x 2.87	0.1387	70.61	20.1	659.4
SYCAMORE	303.2	37 x 3.23	0.1095	89.40	22.6	835.2
UPAS	362.1	37 x 3.53	0.0917	106.82	24.7	997.5
YEW	479.0	37 x 4.06	0.0693	141.31	28.4	1319.6
TOTARA	498.1	37 x 4.14	0.0666	146.93	29.0	1372.1
RUBUS	586.9	61 x 3.50	0.0567	173.13	31.5	1622.0
SORBUS	659.4	61 x 3.71	0.0505	194.53	33.4	1822.5
ARAUCARIA	821.1	61 x 4.14	0.0406	242.24	37.3	2269.4
REDWOOD	996.2	61 x 4.56	0.0334	293.88	41.0	2753.2

The above data is approximate and subjected to manufacturing tolerance.



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

Description

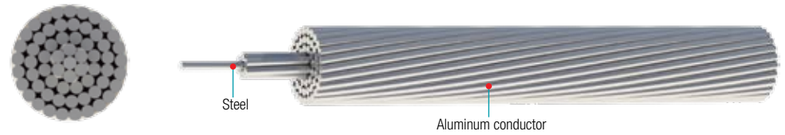
• An outer layer of Aluminium conductor concentrically stranded over the central core of galvanized solid or stranded steel wires to form Aluminium steel reinforced conductor. As per EN 50182 or ASTM B 232 or IEC 61089.

Application

• A.C.S.R conductors are widley used for electrical power transmision over long distances, since they are idealfor long overhead lines spans. They are also used a massenger for supporting overhead electrical cables.

Product-Code	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires		Max. DC Resistance at 20 °C	Rated Strength	Approx. Overall Diameter	Approx Weight
	mm²	Aluminium	Steel	Ω / km	kn	mm	kg / km
		No x ø (mm)	No x ø (mm)				
a – According to BS EN 50182-Germany							
SC40BX01	16/2.5	6 x 1.8	1 x 1.8	1.8769	5.8	5.4	61.6
SC41BX01	25/4	6 x 2.25	1 x 2.25	1.2012	8.95	6.75	96.3
SC42BX01	35/6	6 x 2.7	1 x 2.7	0.8342	12.37	8.1	138.7
SC43BX01	44/32	14 x 2	7 x 2.4	0.6574	44.24	11.2	369.3
SC44BX01	50/8	6 x 3.2	1 x 3.2	0.5939	16.81	9.6	194.8
SC45BX01	50/30	12 x 2.33	7 x 2.33	0.5644	42.98	11.7	374.7
SC46BX01	70/12	26 x 1.85	7 x 1.44	0.4132	26.27	11.7	282.2
SC47BX01	95/15	26 x 2.15	7 x 1.67	0.306	34.93	13.6	380.6
SC48BX01	95/55	12 x 3.2	7 x 3.2	0.2992	77.85	16	706.8
SC49BX01	105/75	14 x 3.1	19 x 2.25	0.2742	105.82	17.5	885.3
SC50BX01	120/20	26 x 2.44	7 x 1.9	0.2376	44.5	15.5	491
SC51BX01	120/70	12 x 3.6	7 x 3.6	0.2364	97.92	18	894.5
SC52BX01	125/30	30 x 2.33	7 x 2.33	0.226	56.41	16.3	587
SC53BX01	150/25	26 x 2.7	7 x 2.1	0.194	53.67	17.1	600.8
SC54BX01	170/40	30 x 2.7	7 x 2.7	0.1683	74.89	18.9	788.2
SC55BX01	185/30	26 x 3	7 x 2.33	0.1571	65.27	19	741
SC56BX01	210/35	26 x 3.2	7 x 2.49	0.1381	73.36	20.3	844.1
SC57BX01	210/50	30 x 3	7 x 3	0.1363	92.46	21	973.1
SC58BX01	230/30	24 x 3.5	7 x 2.33	0.125	72.13	21	870.9
SC59BX01	240/40	26 x 3.45	7 x 2.68	0.1188	85.12	21.8	980.1
SC60BX01	265/35	24 x 3.74	7 x 2.49	0.1095	81.04	22.4	994.4
SC61BX01	300/50	26 x 3.86	7 x 3	0.0949	105.09	24.4	1227.3
SC62BX01	305/40	54 x 2.68	7 x 2.68	0.0949	96.8	24.1	1151.2
SC63BX01	340/30	48 x 3	7 x 2.33	0.0852	91.71	25	1171.2
SC64BX01	380/50	54 x 3	7 x 3	0.0758	121.3	27	1442.5
SC65BX01	385/35	48 x 3.2	7 x 2.49	0.0749	102.56	26.7	1333.6
SC66BX01	435/55	54 x 3.2	7 x 3.2	0.0666	133.59	28.8	1641.3
SC67BX01	450/40	48 x 3.45	7 x 2.68	0.0644	119.05	28.7	1549.1
SC68BX01	490/65	54 x 3.4	7 x 3.4	0.059	150.81	30.6	1852.9
SC69BX01	495/35	45 x 3.74	7 x 2.49	0.0584	117.96	29.9	1632.6
SC70BX01	510/45	48 x 3.68	7 x 2.87	0.0566	133.31	30.7	1765.3
SC71BX01	550/70	54 x 3.6	7 x 3.6	0.0526	166.32	32.4	2077.2
SC72BX01	560/50	48 x 3.86	7 x 3	0.0515	146.28	32.2	1939.5
SC73BX01	570/40	45 x 4.02	7 x 2.6	0.0506	136.4	32.2	1887.1
SC74BX01	650/45	45 x 4.3	7 x 2.87	0.0442	156.18	34.4	2159.9
SC75BX01	680/85	54 x 4	19 x 2.4	0.0426	206.56	36	2549.7

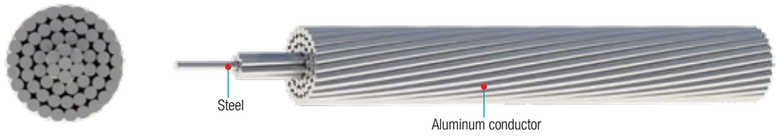
The above data is approximate and subjected to manufacturing tolerance.



Aluminum Conductors Steel Reinforced (A.C.S.R.)

Name	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires		Max. DC Resistance at 20 °C	Rated Strength	Approx. Overall Diameter	Approx Weight
	mm²	Aluminium	Steel	Ω / km	kn	mm	kg / km
		No x ø (mm)	No x ø (mm)				
B - According to BS EN 50182 - UNITED KINGDOM							
MOLE	12.4	6 X 1.50	1 X 1.50	2.7027	4.14	4.50	42.8
SQUIRREL	24.5	6 X 2.11	1 X 2.11	1.3659	7.78	6.33	84.7
GOPHER	30.6	6 X 2.36	1 X 2.36	1.0919	9.58	7.08	106.0
WEASEL	36.9	6 X 2.59	1 X 2.59	0.9065	11.38	7.77	127.6
FOX	42.8	6 X 2.79	1 X 2.79	0.7812	13.21	8.37	148.1
FERRET	49.5	6 X 3.00	1 X 3.00	0.6757	15.27	9.00	171.2
RABBIT	61.7	6 X 3.35	1 X 3.35	0.5419	18.42	10.1	213.5
MINK	73.6	6 X 3.66	1 X 3.66	0.4540	21.67	11.0	254.9
SKUNK	100.1	12 X 2.59	7 X 2.59	0.4568	52.79	13.0	463.0
BEAVER	87.5	6 X 3.99	1 X 3.99	0.3820	25.76	12.0	302.9
HORSE	116.2	12 X 2.79	7 X 2.79	0.3936	61.26	14.0	537.3
RACOON	92.0	6 X 4.09	1 X 4.09	0.3635	27.06	12.3	318.3
OTTER	97.9	6 X 4.22	1 X 4.22	0.3415	28.81	12.7	338.8
CAT	111.3	6 X 4.50	1 X 4.50	0.3003	32.76	13.5	385.3
HARE	122.5	6 X 4.72	1 X 4.72	0.2730	36.04	14.2	423.8
DOG	118.5	6 X 4.72	7 X 1.57	0.2733	32.65	14.2	394.0
COYOTE	151.8	26 X 2.54	7 X 1.91	0.2192	45.86	15.9	520.7
COUGAR	138.8	18 X 3.05	1 X 3.05	0.2188	29.74	15.3	418.8
TIGER	161.9	30 X 2.36	7 X 2.36	0.2202	57.87	16.5	602.2
WOLF	194.9	30 X 2.59	7 X 2.59	0.1829	68.91	18.1	725.3
DINGO	167.5	18 X 3.35	1 X 3.35	0.1814	35.87	16.8	505.2
LYNX	226.2	30 X 2.79	7 X 2.79	0.1576	79.97	19.5	841.6
CARACAL	194.5	18 X 3.61	1 X 3.61	0.1562	40.74	18.1	586.7
PANTHER	261.5	30 X 3.00	7 X 3.00	0.1363	92.46	21.0	973.1
JAGUAR	222.3	18 X 3.86	1 X 3.86	0.1366	46.57	19.3	670.8
LION	293.9	30 X 3.18	7 X 3.18	0.1213	100.47	22.3	1093.4
BEAR	326.1	30 X 3.35	7 X 3.35	0.1093	111.50	23.5	1213.4
GOAT	400.0	30 X 3.71	7 X 3.71	0.0891	135.13	26.0	1488.2
SHEEP	462.6	30 X 3.99	7 X 3.99	0.0771	156.30	27.9	1721.3
ANTELOPE	422.6	54 X 2.97	7 X 2.97	0.0773	118.88	26.7	1413.8
BISON	431.2	54 X 3.00	7 X 3.00	0.0758	121.30	27.0	1442.5
DEER	529.8	30 X 4.27	7 X 4.27	0.0673	179.00	29.9	1971.4
ZEBRA	484.5	54 X 3.18	7 X 3.18	0.0674	131.92	28.6	1620.8
ELK	588.5	30 X 4.50	7 X 4.50	0.0606	198.80	31.5	2189.5
CAMEL	538.7	54 X 3.35	7 X 3.35	0.0608	146.40	30.2	1798.8
MOOSE	597.0	54 X 3.53	7 X 3.53	0.0547	159.92	31.8	1997.3

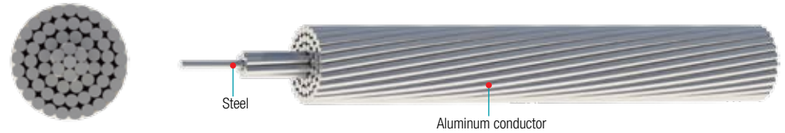
The above data is approximate and subjected to manufacturing tolerance.



Aluminum Conductors Steel Reinforced (A.C.S.R.)

Name	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires		Calculated DC Resistance at 20 °C	Calculated Rated Tensil Strength	Approx. Overall Diameter	Approx Weight	
	mm²	Aluminium	Steel				Aluminium	Steel
		No x ø (mm)	No x ø (mm)	Ω / km	kn	mm	kg/km	kg/km
c- According to ASTM B 232								
Grouse	40.5	8 x 2.54	1 x 4.24	0.7112	23.1	9.3	112	110
Petrel	51.6	12 x 2.34	7 x 2.34	0.5614	46.2	11.7	143	235
Minorca	56.1	12 x 2.44	7 x 2.44	0.5163	50.2	12.2	156	256
Leghorn	68.2	12 x 2.69	7 x 2.69	0.4248	60.7	13.5	189	311
Guinea	80.4	12 x 2.92	7 x 2.92	0.3605	71.1	14.6	223	367
Dotterel	89.4	12 x 3.08	7 x 3.08	0.3240	76.7	15.4	248	409
Dorking	96.5	12 x 3.20	7 x 3.20	0.3002	82.8	16.0	268	441
Brahma	102.8	16 x 2.86	19 x 2.48	0.2819	126.5	18.1	285	722
Cochin	107.1	12 x 3.37	7 x 3.37	0.2707	91.8	16.9	297	488
Turkey	13.3	6 x 1.68	1 x 1.68	0.1570	5.3	5.0	36	17
Swan	21.2	6 x 2.12	1 x 2.12	1.3545	8.3	6.4	58	27
Swanate	21.1	7 x 1.96	1 x 2.61	1.3583	10.5	6.5	58	42
Sparrow	33.6	6 x 2.67	1 x 2.67	0.8530	12.7	8.0	92	44
Sparate	33.5	7 x 2.47	1 x 3.30	0.8553	16.1	8.3	92	67
Robin	42.4	6 x 3.00	1 x 3.00	0.6764	15.8	9.0	117	55
Raven	53.5	6 x 3.37	1 x 3.37	0.5364	19.5	10.1	147	69
Quail	67.4	6 x 3.78	1 x 3.78	0.4255	23.6	11.4	185	87
Pigeon	85.1	6 x 4.25	1 x 4.25	0.3370	29.5	12.7	233	110
Penguin	107.2	6 x 4.77	1 x 4.77	0.2676	37.1	14.3	294	139
Waxwing	135.0	18 x 3.09	1 x 3.09	0.2133	30.3	15.5	373	59
Partridge	134.9	26 x 2.57	7 x 2.00	0.2142	50.2	16.3	373	172
Ostrich	152.2	26 x 2.73	7 x 2.12	0.1906	56.6	17.3	421	193
Merilin	170.2	18 x 3.47	1 x 3.47	0.1692	38.2	17.4	470	74
Linnet	170.6	26 x 2.89	7 x 2.25	0.1699	62.8	18.3	472	217
Oriole	170.5	30 x 2.69	7 x 2.69	0.1704	77.4	18.8	473	311
Chickadee	200.9	18 x 3.77	1 x 3.77	0.1432	44.3	18.9	555	87
Brant	201.6	24 x 3.27	7 x 2.18	0.1437	64.7	19.6	558	204
Ibis	201.3	26 x 3.14	7 x 2.44	0.1438	72.1	19.9	558	256
Lark	200.9	30 x 2.92	7 x 2.92	0.1442	88.7	20.5	559	367
Pelican	242.3	18 x 4.14	1 x 4.14	0.1193	52.3	20.7	667	105
Flickler	241.6	24 x 3.58	7 x 2.39	0.1199	76.8	21.5	670	245
Hawk	241.7	26 x 3.44	7 x 2.67	0.1199	86.4	21.8	670	308
Hen	241.3	30 x 3.20	7 x 3.20	0.1202	105.9	22.4	672	440
Osprey	282.5	18 x 4.47	1 x 4.47	0.1022	61.0	22.3	777	122
Parakeet	282.3	24 x 3.87	7 x 2.58	0.1026	88.3	23.2	782	285
Dove	282.6	26 x 3.72	7 x 2.89	0.1025	101.1	23.5	`781	359
Eagle	282.1	30 x 3.46	7 x 3.46	0.1030	122.9	24.2	783	514
Peacock	306.1	24 x 4.03	7 x 2.69	0.0945	95.9	24.2	850	311
Squab	305.8	26 x 3.87	7 x 3.01	0.0945	108.1	24.5	849	390
Wood duck	307.1	30 x 3.61	7 x 3.61	0.0947	129.0	25.3	851	559
Teal	307.1	30 x 3.61	19 x 2.16	0.0947	133.4	25.3	851	547
Swift	323.0	36 x 3.38	1 x 3.38	0.0893	60.7	23.7	888	70
Kingbird	323.0	18 x 4.78	1 x 4.78	0.0894	69.7	23.9	889	139
Rook	323.1	24 x 4.14	7 x 2.76	0.0899	101.0	24.8	893	326

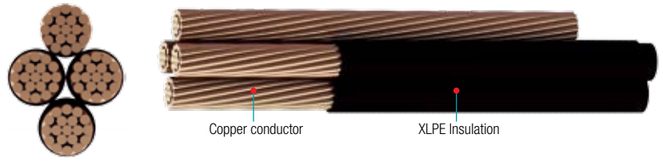
The above data is approximate and subjected to manufacturing tolerance.



Aluminum Conductors Steel Reinforced (A.C.S.R.)

Name	Nominal Cross Sectional Area	Number and Nominal Diameter of Wires		Calculated DC Resistance at 20 °C	Calculated Rated Tensil Strength	Approx. Overall Diameter	Approx Weight	
	mm²	Aluminium	Steel				Aluminium	Steel
		No x ø (mm)	No x ø (mm)	Ω / km	kn	mm	kg/km	kg/km
c- According to ASTM B 232								
Grosbeak	321.8	26 x 3.97	7 x 3.09	0.0900	111.9	25.2	893	409
Scoter	322.6	30 x 3.70	7 x 3.70	0.0900	135.5	25.9	895	588
Egret	322.6	30 x 3.70	19 x 2.22	0.0900	140.6	25.9	895	574
Flamingo	337.3	24 x 4.23	7 x 2.82	0.0859	105.5	25.4	936	342
Gannet	338.3	26 x 4.07	7 x 3.16	0.0857	117.3	25.8	936	429
Stilt	363.3	24 x 4.39	7 x 2.92	0.0798	113.3	26.3	1005	367
Starling	361.9	26 x 4.21	7 x 3.28	0.0800	126.0	26.7	1004	461
Redwing	362.1	30 x 3.92	19 x 2.35	0.0801	154.0	27.5	1006	646
Cuckoo	402.3	24 x 4.62	7 x 3.08	0.0720	124.5	27.7	1116	408
Drake	402.6	26 x 4.44	7 x 3.45	0.0720	139.7	28.1	1117	511
Tern	403.8	45 x 3.38	7 x 2.25	0.0720	97.5	27.0	1115	217
Coot	401.9	36 x 3.77	1 x 3.77	0.0717	74.7	26.4	1111	87
Condor	402.3	54 x 3.08	7 x 3.08	0.0720	124.3	27.7	1115	407
Mallard	403.8	30 x 4.14	19 x 2.48	0.0721	171.2	29.0	1119	718
Ruddy	455.5	45 x 3.59	7 x 2.40	0.0636	109.4	28.7	1263	246
Canary	456.3	54 x 3.28	7 x 3.28	0.0635	141.0	29.5	1263	461
Rail	483.8	45 x 3.70	7 x 2.47	0.0599	116.1	29.6	1339	261
Catbird	484.6	36 x 4.14	1 x 4.14	0.0595	87.9	29.0	1335	105
Cardinal	484.5	54 x 3.38	7 x 3.38	0.0599	149.7	30.4	1338	490
Ortlan	523.9	45 x 3.85	7 x 2.57	0.0553	123.3	30.8	1450	283
Tanager	522.8	36 x 4.30	1 x 4.30	0.0551	94.8	30.1	1444	113
Curlew	522.5	54 x 3.51	7 x 3.51	0.0553	161.8	31.6	1450	529
Bluejay	565.5	45 x 4.00	7 x 2.66	0.0513	132.7	32.0	1562	304
Finch	565.0	54 x 3.65	19 x 2.19	0.0516	174.6	32.8	1571	558
Bunting	605.8	45 x 4.14	7 x 2.76	0.0479	142.4	33.1	1674	326
Grackle	602.8	19 x 2.27	19 x 2.27	0.0483	186.9	34.0	1681	599
Bittern	644.4	7 x 2.85	7 x 2.85	0.0450	151.6	34.2	1786	348
Pheasant	645.1	19 x 2.34	19 x 2.34	0.0452	194.1	35.1	1795	639
Skylark	643.3	1 x 4.77	1 x 4.77	0.0448	116.7	33.4	1777	140
Dipper	684.2	7 x 2.93	7 x 2.93	0.0423	160.7	35.2	1897	370
Martin	684.5	19 x 2.41	19 x 2.41	0.0425	206.1	36.2	1906	679
Bobolink	725.2	7 x 3.02	7 x 3.02	0.0399	170.5	36.3	2010	392
Plover	726.9	19 x 2.48	19 x 2.48	0.0401	218.4	37.2	2019	719
Nuthatch	746.2	7 x 3.10	7 x 3.10	0.0379	177.6	37.2	2120	413
Parrot	766.1	54 x 4.25	19 x 2.55	0.0380	230.5	38.2	2129	758
Lapwing	807.5	45 x 4.77	7 x 3.18	0.0359	187.4	38.2	2232	435
Falcon	806.2	54 x 4.36	19 x 2.62	0.0361	243.0	39.2	2242	799

The above data is approximate and subjected to manufacturing tolerance.



Copper Conductors & XLPE +2.5 % C.B

Description

• They are composed of one or more insulated conductors and one neutral (bare or insulated) conductor. They are required as two (Duplex) or three (Triplex) or four (Quadru-plex) conductors, XLPE with 2.5% Carbon black insulated.
• As per NEMA WC 7/IEC60228

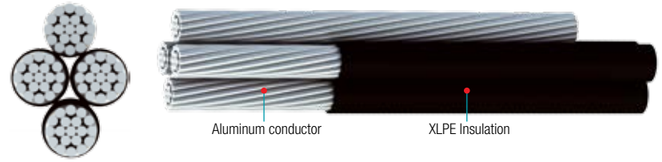
Application

• They are used for secondary over head lines (in circuits not exceeding 1000 volts phase to phase) on poles or as feeders to residential premises.

Copper conductors with bare neutral adopted from IEC 60228.

Product – Code	Phase		Max. DC, resistance at 20°C	Approx. Overall Diameter	Approx. Weight
	Nominal cross sectional area	Insulation thickness			
	mm²	mm	Ω / km	kn	mm
Two conductors (Duplex)					
H014W202	10	1.2	1.830	10.7	198
H015W202	16	1.2	1.150	12.8	307
H016W202	25	1.2	0.727	15.3	469
H017W202	35	1.2	0.524	17.6	650
H018W202	50	1.5	0.387	21.2	898
H019W202	70	1.5	0.268	24.5	1247
H020W202	95	1.5	0.193	28.3	1736
H021W202	120	1.7	0.153	31.8	2170
Three conductors (Triplex)					
H014W203	10	1.2	1.830	13.7	305
H015W203	16	1.2	1.150	15.8	471
H016W203	25	1.2	0.727	18.5	719
H017W203	35	1.2	0.524	20.7	991
H018W203	50	1.5	0.387	25.0	1357
H019W203	70	1.5	0.268	28.7	1900
H020W203	95	1.5	0.193	32.4	2631
H021W203	120	1.7	0.153	36.6	3285
Four conductors (Quadruplex)					
H014W204	10	1.2	1.830	16.3	413
H015W204	16	1.2	1.150	18.8	634
H016W204	25	1.2	0.727	22.0	970
H017W204	35	1.2	0.524	24.6	1332
H018W204	50	1.5	0.387	29.8	1821
H019W204	70	1.5	0.268	34.2	2553
H020W204	95	1.5	0.193	38.6	3526
H021W204	120	1.7	0.153	43.5	4579

The above data is approximate and subjected to manufacturing tolerance.



Aluminum Conductors & XLPE +2.5 % C.B

Description

• They are composed of one or more insulated conductors and one neutral (bare or insulated) conductor. They are required as two (Duplex) or three (Triplex) or four (Quadru-plex) conductors, XLPE with 2.5% Carbon black insulated.
• As per NEMA WC 7/IEC60228.

Application

• They are used for secondary over head lines (in circuits not exceeding 1000 volts phase to phase) on poles or as feeders to residential premises.

Alluminium conductors with bare neutral adopted from IEC 60228.

Product – Code	Phase		Max. DC, resistance at 20°C	Approx. Overall Diameter	Approx. Weight
	Nominal cross sectional area	Insulation thickness			
	mm²	mm	Ω / km	kn	mm
Two conductors (Duplex)					
B015W202	16	1.2	1.910	12.9	115
B016W202	25	1.2	1.200	15.3	168
B017W202	35	1.2	0.868	17.7	229
B018W202	50	1.5	0.641	21.4	322
B019W202	70	1.5	0.443	24.4	428
B020W202	95	1.5	0.320	28.4	626
B021W202	120	1.7	0.253	31.8	734
Three conductors (Triplex)					
B015W203	16	1.2	1.910	15.6	185
B016W203	25	1.2	1.200	18.0	267
B017W203	35	1.2	0.868	20.4	364
B018W203	50	1.5	0.641	25.2	519
B019W203	70	1.5	0.443	28.2	674
B020W203	95	1.5	0.320	32.2	928
B021W203	120	1.7	0.253	36.6	1245
Four conductors (Quadruplex)					
B015W204	16	1.2	1.910	19.0	256
B016W204	25	1.2	1.200	22.0	367
B017W204	35	1.2	0.868	24.9	499
B018W204	50	1.5	0.641	30.3	710
B019W204	70	1.5	0.443	33.9	920
B020W204	95	1.5	0.320	38.8	1263
B021W204	120	1.7	0.253	43.5	1556

The above data is approximate and subjected to manufacturing tolerance.

Operating Voltage (Up to 450/750 V)
Cable Construction

1. **Conductor**
   Copper or Aluminium conductors, solid, stranded or flexible with round conductors.

2. **Insulation**
   An extruded layer of PVC is applied over the conductor.
   PVC insulated cables are suitable for maximum conductor operating temperature of 70° C or 85° C.

PVC INSULATED BUILDING WIRES

Designation Code for PVC Insulated Building Wires You can order our product by giving the following informations

1- cable codes as per the catalogue
2- if your requirements is out of our catalogue product range, you can use the following map to identify the code

0 | 00 | 0 | 0 | 00

Conductor Material

C	Copper
D	Solid Copper
F	Flexible Copper
A	Aluminum

No. of Cores

01	1

C.S.A mm2

03	0.5	17	35
05	0.75	18	50
07	1	19	70
08	1.5	20	95
09	2	21	120
10	2.5	22	150
11	3	23	185
12	4	24	240
13	6	25	300
14	10		
15	16		
16	25		

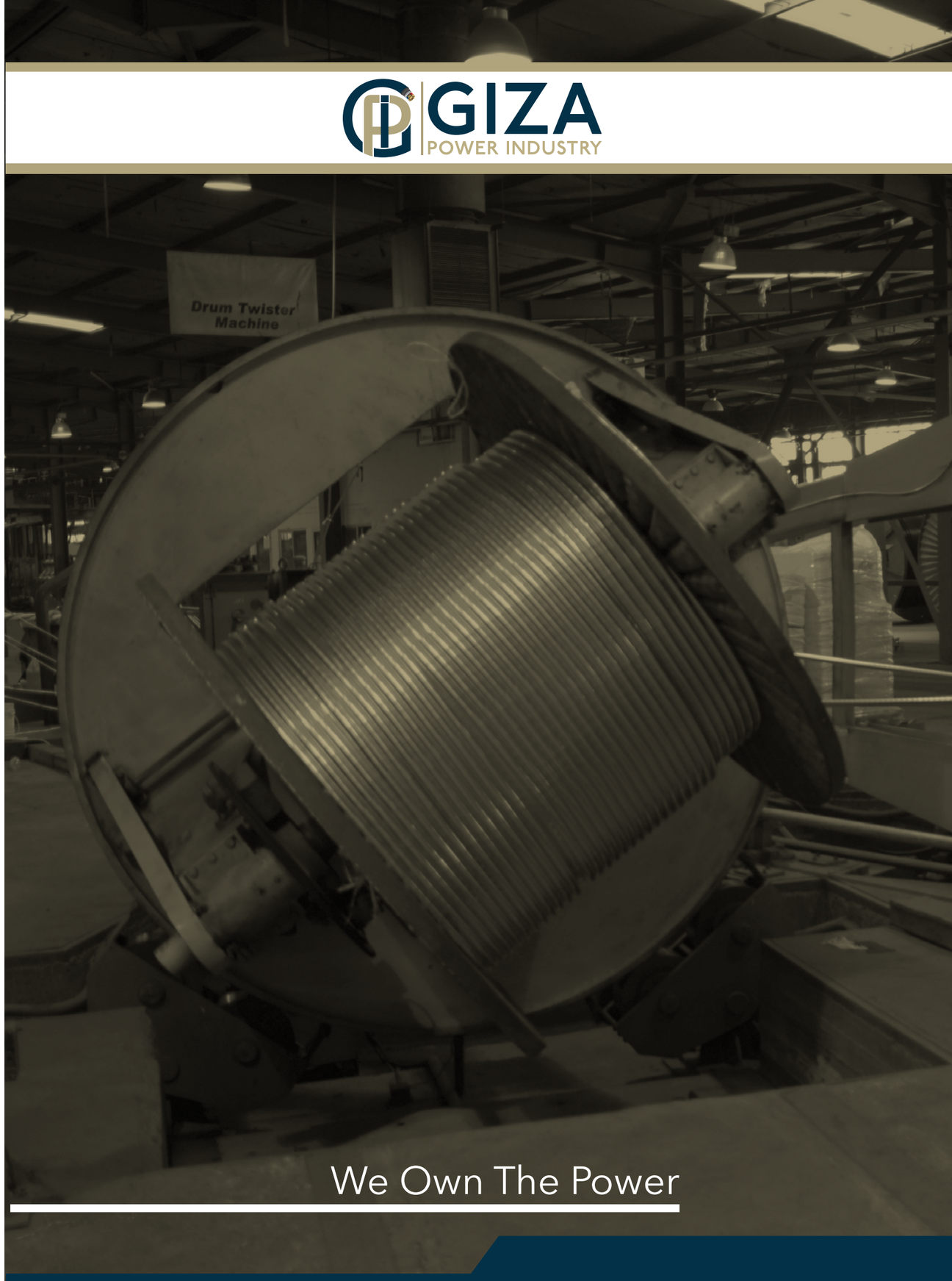
Insulation Type

P	PVC / A
F	PVC / FR

Voltage Grade

0	300 / 500 V
1	450/750 V

GIZA POWER INDUSTRY



We Own The Power

450 / 750 V

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

Description

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

Application

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

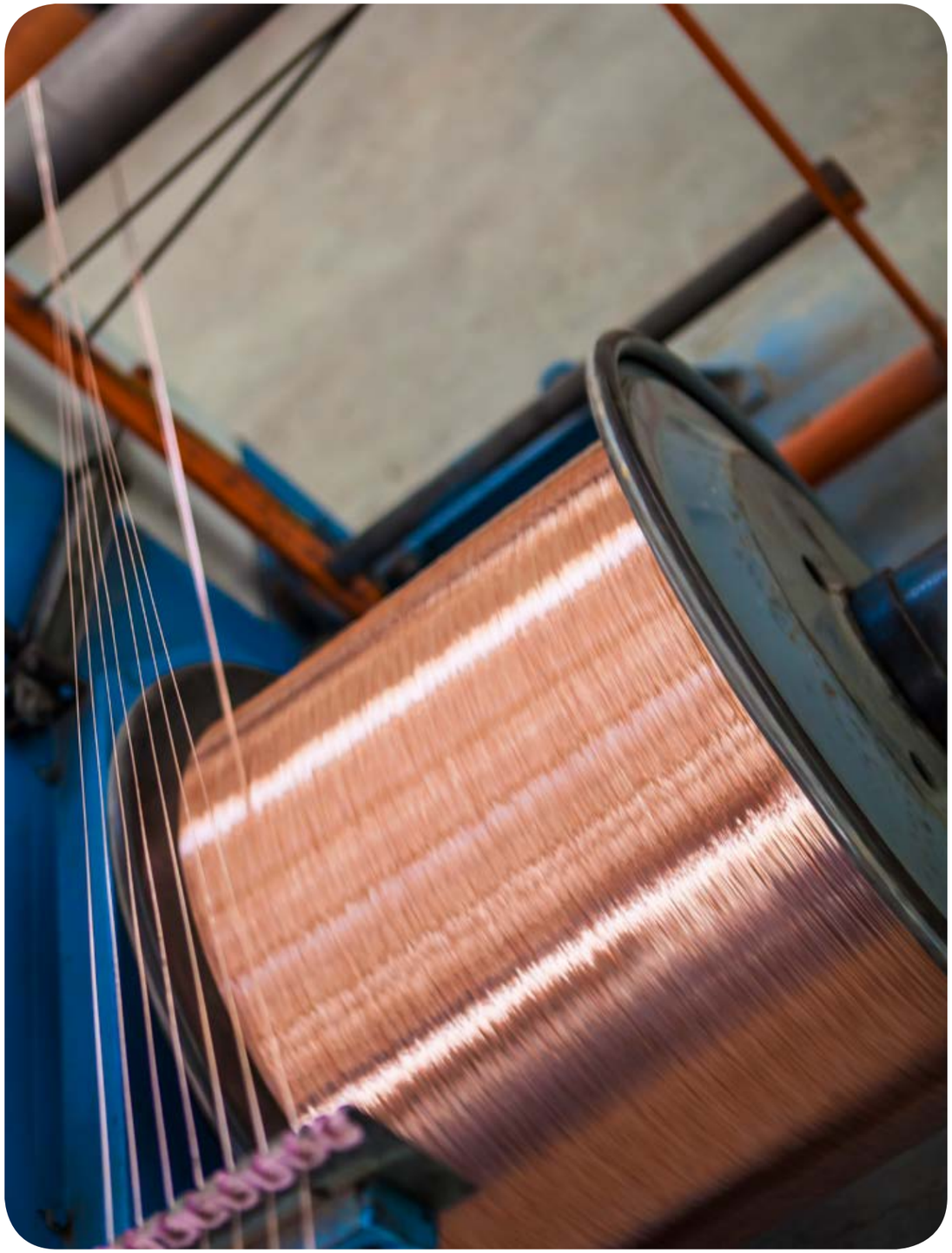
Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating in Air		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Free	In Pipes		
	mm²	Ω/km	Ω/km	A	A	mm	kg / km
D08P101	1.5 re	12.1000	14.6000	17	13	2.8	20
C08P101	1.5 rm	12.1000	14.6000	17	13	3.0	21
D09P101	2 re	9.1500	10.9000	19	15	3.2	27
C09P101	2 rm	9.1500	10.9000	19	15	3.4	28
D10P101	2.5 re	7.4100	8.8900	24	19	3.4	31
C10P101	2.5 rm	7.4100	8.8900	24	19	3.6	33
D11P101	3 re	6.1000	7.4100	27	21	3.6	37
C11P101	3 rm	6.1000	7.4100	27	21	3.8	39
D12P101	4 re	4.6100	5.5100	32	23	3.9	47
C12P101	4 rm	4.6100	5.5100	32	23	4.2	50
D13P101	6 re	3.0800	3.6800	40	29	4.4	68
C13P101	6 rm	3.0800	3.6800	40	29	4.7	71
C14P101	10 rm	1.8300	2.1700	57	41	6.1	117
C15P101	16 rm	1.1500	1.3700	76	54	7.1	177
C16P101	25 rm	0.7270	0.8600	103	70	8.8	278
C17P101	35 rm	0.5240	0.6300	128	87	9.9	371
C18P101	50 rm	0.3870	0.4600	156	106	11.8	514
C19P101	70 rm	0.2680	0.3200	200	131	13.5	711
C20P101	95 rm	0.1930	0.2300	251	166	15.7	967
C21P101	120 rm	0.1530	0.1900	293	190	17.4	1240
C22P101	150 rm	0.1240	0.1500	335	219	19.4	1500
C23P101	185 rm	0.0991	0.1200	390	250	21.5	1852
C24P101	240 rm	0.0754	0.0920	471	300	24.7	2457
C25P101	300 rm	0.0601	0.0750	540	340	27.2	2977

The above data is approximate and subjected to manufacturing tolerance.

300 / 500 V

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating in Air		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Free	In Pipes		
	mm²	Ω/km	Ω/km	A	A	mm	kg / km
C03P001	0.5 rm	36	41.4	2	2	2.5	12
C05P001	0.75 rm	24.5	28.3	11	9	2.8	15
C07P001	1 rm	18.1	22.8	14	12	2.9	17

re:round ,solid
rm:round stranded



450 / 750 V

Single Core Cables with Flexible Copper Conductors and PVC Insulated

Description

- Soft annealed Copper fine wires, bunched together in subunits or stranded bunched groups into a main units, which forms the flexible conductor. Insulated with soft PVC 70 °C Compound.
- Cables are produced according to IEC 60227 or BS 6004.

Application

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

Product-Code	Nominal Cross Sectional Area	Maximum Diameter of Wires	Max. Conductor Resistance		Current Rating in Air		Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 70 °C	Free	In Pipes		
	mm²	mm	Ω/km	Ω/km	A	A	mm	kg / km
F08P101	1.5	0.26	13.3000	15.9500	17	13	3.0	21
F09P101	2	0.26	7.9800	9.5600	24	19	3.7	34
F10P101	2.5	0.31	4.9500	5.9300	32	23	4.5	50
F11P101	3	0.31	3.3000	3.9500	40	29	5.1	71
F12P101	4	0.41	1.9100	2.2900	57	41	6.9	120
F13P101	6	0.41	1.2100	1.4500	76	54	7.6	179
F14P101	10	0.41	0.7800	0.9400	103	70	9.5	276
F15P101	16	0.41	0.5540	0.6630	128	87	11.0	375
F16P101	25	0.41	0.3860	0.4620	156	106	12.6	542
F17P101	35	0.51	0.2720	0.3260	200	131	14.6	733
F18P101	50	0.51	0.2060	0.2470	251	166	16.8	957
F19P101	70	0.51	0.1610	0.1930	293	190	18.9	1243
F20P101	95	0.51	0.1290	0.1550	335	219	21.2	1548
F21P101	120	0.51	0.1060	0.1270	390	250	23.4	1895
F22P101	150	0.51	0.0801	0.0960	471	300	26.7	2400

The above data is approximate and subjected to manufacturing tolerance.

300 / 500 V

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating in Air		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Free	In Pipes		
	mm²	Ω/km	Ω/km	A	A	mm	kg / km
F03P001	0.5	39	46.7	2	2	2.3	10
F05P001	0.75	26	31.6	10	7	2.5	13
F07P001	1	19.5	23.4	13	10	2.7	16

450 / 750 V

Single Core Cables with Stranded Aluminium Conductors and PVC Insulated

Description

• stranded Aluminium conductors insulated with PVC compound rated 70 °C according to IEC 60227.

Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating in Air		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Free	In Pipes		
	mm²	Ω/km	Ω/km	A	A	mm	kg / km
A14P101	10 rm	3.08	3.3	50	44	5.8	49
A15P101	16 rm	1.91	2.3	68	52	6.8	69
A16P101	25 rm	1.2	1.44	87	96	8.4	108
A17P101	35 rm	0.868	1.043	104	84	9.5	137
A18P101	50 rm	0.641	0.771	123	103	11.2	189
A19P101	70 rm	0.443	0.533	151	130	13	258
A20P101	95 rm	0.32	0.385	181	161	15	352
A21P101	120 rm	0.253	0.305	206	188	16.4	430
A22P101	150 rm	0.206	0.249	230	215	18	534
A23P101	185 rm	0.164	0.199	261	250	20.5	663
A24P101	240 rm	0.125	0.153	303	298	23.4	859
A25P101	300 rm	0.1	0.123	345	342	25.8	1069

The above data is approximate and subjected to manufacturing tolerance.

rm:round stranded

LOW VOLTAGE POWER CABLES

Operating Voltage (Up to 0.6/1kv)
Cable Construction

1. Conductor

Copper or Aluminium conductors, stranded with round or sectoral shaped conductors.

2. Insulation

An extruded layer of PVC or XLPE is applied over the conductor.
PVC insulated cables are suitable for maximum conductor operating temperature of 70o C or 85o C and 90o C for XLPE.

3. Assembly

In case of multicore cobles' cores are assembled together using non hygroscopic filler (if needed) to fill space between cores wrapped with suitable binder tape to form a round cable.

4. Bedding

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

5. Armouring

a. Steel Tape: Double layers of steel tapes are applied helically.
b. Steel Wire: Galvanized steel wires are applied helically.

6. Sheath

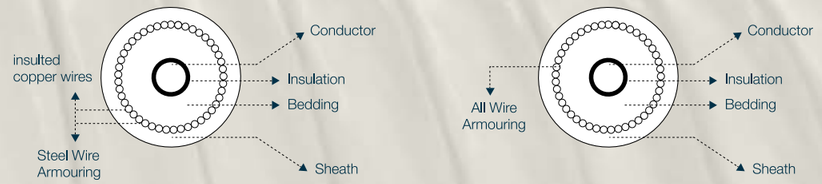
An extruded layer of PVC is applied as an outer sheath, or according to the client special requirements.

Option

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

Armouring of Single Core Cable

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



Armouring of Single Core Cable

Designation Code for Low Voltage power Cables
You can order our product by giving the following informations

1- cable codes as per the catalogue
2- if your requirements is out of our catalogue product range, you can use the following map to identify the code

0 00 0 0 00 0 0

Conductor Material

C	Copper
A	Aluminum
G	Copper + Swelling Powder + S.C Tape
R	Copper + Mica Tape
E	Aluminum + Swelling Powder + S.C Tape

C.S.A mm2

03	0.5	17	35
05	0.75	18	50
07	1	19	70
08	1.5	20	95
09	2	21	120
10	2.5	22	150
11	3	23	185
12	4	24	240
13	6	25	300
14	10	26	400
15	16	27	500
16	25	28	630
		29	800

Insulation Type

P	PVC / A
X	XLPE
F	PVC / FR
S	LSHF

Voltage Grade

2	0.6/1 (1.2) KV
3	1.8/3 (3.6) KV

No. of Cores

01	1
02	2
03	3
04	4
05	5
06	6
R2	2 & half
R3	3 & half
R4	4 & half

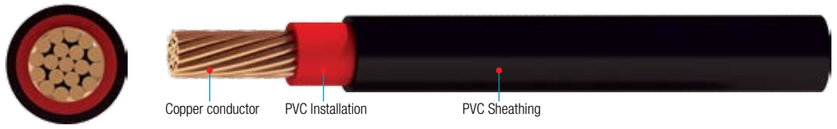
Armoring & Shielding

U	Unarmored
I	Steel Tapes Armored
H	Galavanized Steel Wires Armored
K	Aluminum Tapes Armored
J	Aluminum Wires Armored
Z	Galvanized Steel Tapes Armored
D	Lead + Galvanized Steel Wires Armored
F	Lead + Aluminum Wires Armored
E	Lead + Steel Tapes Armored
Y	Lead + Galvanized Steel Tapes Armored
G	Lead + Aluminum Tapes Armored
L	Copper Wires Shield
M	Copper Tapes Shield

Outer Sheathing Type

P	PVC
H	HDPE
M	MDPE
L	LDPE
E	LLDPE
F	PVC / FR
S	LSHF

0.6/1 (1.2) KV



Single Core Cables with stranded circular copper Conductors, PVC insulated and PVC Sheathed

Description

- Soft annealed stranded copper or Aluminium conductor.
  Insulated with PVC compound rated 70 °C and sheathed with PVC compound layer.
- Cables are produced according to IEC 60502..

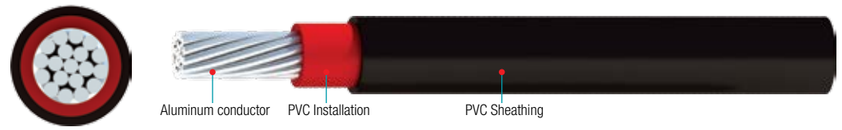
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating in Air						Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid in Ground			Laid in free Air				
	mm²	Ω/km	Ω/km	A	A	A	A	A	A	mm	kg / km
C08P201UP	1.5	12.1	14.5	25	24	20	25	24	18	6.6	49
C10P201UP	2.5	7.41	8.87	33	32	27	33	32	23	7	62
C12P201UP	4	4.6100	5.5100	42	40	32	37	33	29	7.0	86
C13P201UP	6	3.0800	3.6800	52	50	40	48	42	38	7.9	115
C14P201UP	10	1.8300	2.1700	70	67	52	66	58	51	8.9	165
C15P201UP	16	1.1500	1.3700	90	85	65	80	75	65	9.9	231
C16P201UP	25	0.7270	0.8600	115	110	85	105	95	90	11.6	343
C17P201UP	35	0.5240	0.6300	135	130	105	130	125	110	12.7	445
C18P201UP	50	0.3870	0.4600	160	155	125	160	150	135	14.6	600
C19P201UP	70	0.2680	0.3200	200	190	155	200	190	170	16.3	805
C20P201UP	95	0.1930	0.2300	235	225	185	250	240	210	18.7	1085
C21P201UP	120	0.1530	0.1900	270	255	210	285	275	245	20.4	1350
C22P201UP	150	0.1240	0.1500	300	285	235	330	320	280	22.6	1654
C23P201UP	185	0.0991	0.1200	345	325	270	380	370	320	24.9	2030
C24P201UP	240	0.0754	0.0920	400	375	310	480	460	385	28.3	2675
C25P201UP	300	0.0601	0.0750	450	420	350	550	530	450	31.1	3280
C26P201UP	400	0.0470	0.0590	515	475	390	630	615	520	35.3	4350
C27P201UP	500	0.0366	0.0480	580	525	435	720	700	600	38.8	5355
C28P201UP	630	0.0283	0.0390	660	590	495	830	810	680	42.7	6685
C29P201UP	800	0.0221	0.0290	740	650	555	940	920	775	47.2	8600

The above data is approximate and subjected to manufacturing tolerance.

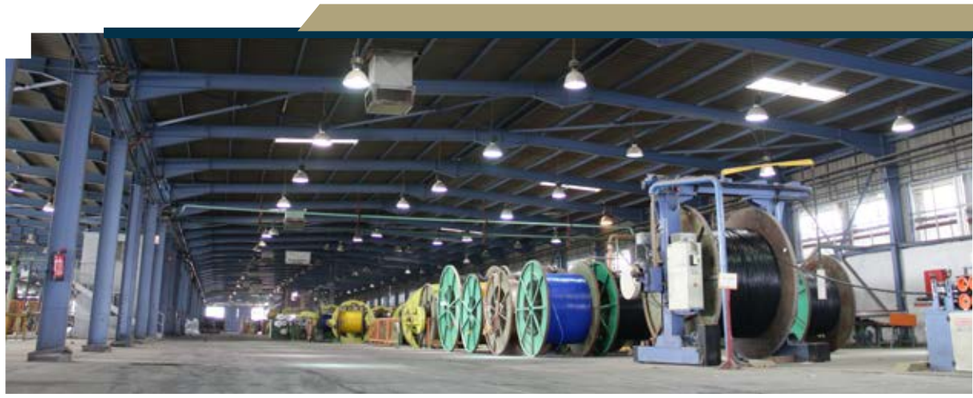
0.6/1 (1.2) KV



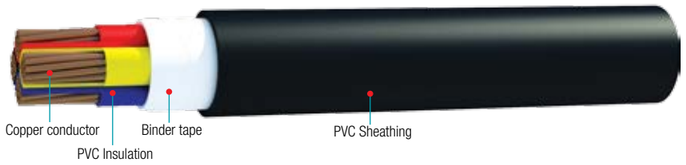
Single Core Cables with stranded circular Aluminum Conductors, PVC insulated and PVC Sheathed

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating in Air						Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid in Ground			Laid in free Air				
	mm²	Ω/km	Ω/km	A	A	A	A	A	A	mm	kg / km
A15P201UP	16	1.9100	2.2900	65	63	50	65	60	45	9.9	132
A16P201UP	25	1.2000	1.4400	85	83	65	85	80	65	11.6	185
A17P201UP	35	0.8680	1.0400	105	102	80	105	100	85	12.7	250
A18P201UP	50	0.6410	0.7700	125	120	95	125	120	105	14.6	295
A19P201UP	70	0.4430	0.5330	155	145	120	165	155	125	16.3	375
A20P201UP	95	0.3200	0.3850	185	175	135	205	195	160	18.7	500
A21P201UP	120	0.2530	0.3050	210	200	165	235	225	185	20.4	605
A22P201UP	150	0.2060	0.2480	235	225	180	265	255	210	22.6	725
A23P201UP	185	0.1640	0.1980	265	255	205	310	300	245	24.8	900
A24P201UP	240	0.1250	0.1510	310	295	240	365	355	290	28.3	1150
A25P201UP	300	0.1000	0.1220	355	335	270	420	405	335	31.1	1420
A26P201UP	400	0.0778	0.0954	410	380	310	500	480	390	35.3	1750
A27P201UP	500	0.0605	0.0751	465	430	355	580	560	460	38.8	2220
A28P201UP	630	0.0469	0.0595	535	490	405	680	660	535	42.7	2750
A29P201UP	800	0.0367	0.0470	600	530	450	765	745	620	47.2	3450

The above data is approximate and subjected to manufacturing tolerance.



0.6/1 (1.2) kV



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

Description

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

Application

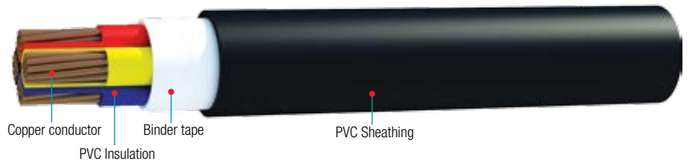
• For outdoor and indoor installations in damp and wet locations.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
C08P202UP	1.5 rm	12.1000	14.600	24	19	20	10.1	120
C10P202UP	2.5 rm	7.4100	8.870	30	25	28	10.9	145
C12P202UP	4 rm	4.6100	5.540	40	32	39	12.9	205
C13P202UP	6 rm	3.0800	3.690	50	40	50	13.9	255
C14P202UP	10 rm	1.8300	2.190	65	55	66	15.0	425
C15P202UP	16 rm	1.1500	1.390	85	65	88	17.0	580
C16P202UP	25 rm	0.7270	0.870	110	85	116	20.0	845
C17P202UP	35 rm	0.5240	0.628	130	105	143	22.2	1090
Three Core Cables								
C08P203UP	1.5 rm	12.1000	14.600	21	18	18	10.6	145
C10P203UP	2.5 rm	7.4100	8.870	27	23	22	11.5	190
C12P203UP	4 rm	4.6100	5.540	35	30	31	13.6	270
C13P203UP	6 rm	3.0800	3.690	45	36	39	14.7	340
C14P203UP	10 rm	1.8300	2.190	60	48	53	16.4	485
C15P203UP	16 rm	1.1500	1.390	75	60	72	18.6	685
C16P203UP	25 rm	0.7270	0.870	100	80	94	21.8	995
C17P203UP	35 rm	0.5240	0.628	120	95	110	24.2	1300
Four Core Cables								
C08P204UP	1.5 rm	12.1000	14.6000	21	18	18	11.4	180
C10P204UP	2.5 rm	7.4100	8.8700	27	23	22	12.4	230
C12P204UP	4 rm	4.6100	5.5400	35	30	31	14.8	335
C13P204UP	6 rm	3.0800	3.6900	45	36	39	16.0	425
C14P204UP	10 rm	1.8300	2.1900	60	48	53	17.9	635
C15P204UP	16 rm	1.1500	1.3900	75	60	72	20.3	880
C16P204UP	25 sm	0.7270	0.8700	100	80	94	23.9	1295
C17P204UP	35 sm	0.5240	0.6280	120	95	110	26.6	1700
C18P204UP	50 sm	0.3870	0.4640	145	115	138	29.3	2225
C19P204UP	70 sm	0.2680	0.3220	175	145	171	32.9	3065
C20P204UP	95 sm	0.1930	0.2320	210	165	209	37.8	4175
C21P204UP	120 sm	0.1530	0.1850	240	195	242	41.2	5205
C22P204UP	150 sm	0.1240	0.1510	270	220	275	45.9	6400
C23P204UP	185 sm	0.0991	0.1210	300	245	314	50.7	7960
C24P204UP	240 sm	0.0754	0.0840	345	290	374	57.0	10330
C25P204UP	300 sm	0.0601	0.0770	390	320	440	63.3	12915

The above data is approximate and subjected to manufacturing tolerance.

rm:round ,stranded
sm,sector,stranded

0.6/1 (1.2) kV

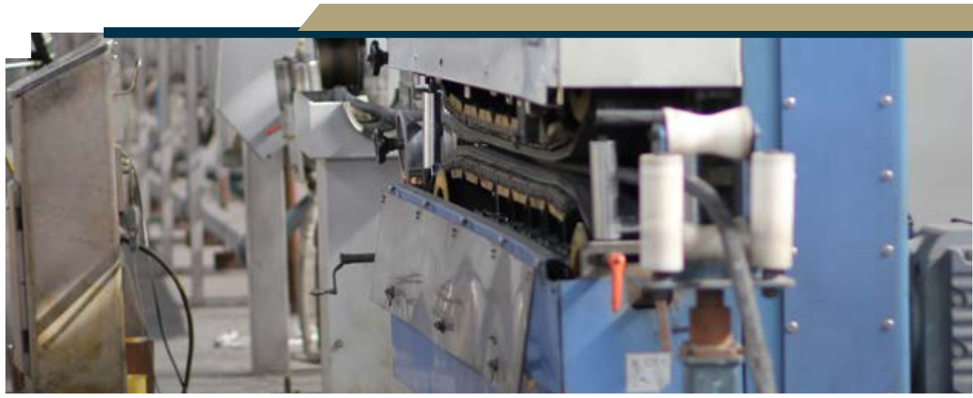


Multicore Cables, with Stranded Copper Conductors PVC Insulated and PVC Sheathed

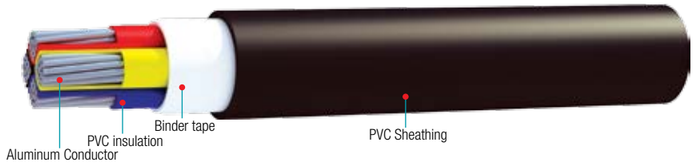
Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
C17P2R3UP	35 sm	16 rm	0.5240/1.1500	0.6280/1.3900	120	95	110	25.0	1505
C18P2R3UP	50 sm	25 sm	0.3870/0.7270	0.4640/0.8700	145	115	138	28.1	2115
C19P2R3UP	70 sm	35 sm	0.2680/0.5240	0.3220/0.6280	175	145	171	31.4	2725
C20P2R3UP	95 sm	50 sm	0.1930/0.3870	0.2320/0.4640	210	165	209	36.1	3690
C21P2R3UP	120 sm	70 sm	0.1530/0.2680	0.1850/0.3220	240	195	242	39.5	4675
C22P2R3UP	150 sm	70 sm	0.1240/0.2680	0.1510/0.3220	270	220	275	43.5	5580
C23P2R3UP	185 sm	95 sm	0.0991/0.1930	0.1210/0.2320	300	245	314	48.2	7025
C24P2R3UP	240 sm	120 sm	0.0754/0.1530	0.0840/0.1850	345	290	374	54.2	9060
C25P2R3UP	300 sm	150 sm	0.0601/0.1240	0.0770/0.1510	390	320	440	60.0	11280

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV



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

Description

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

Application

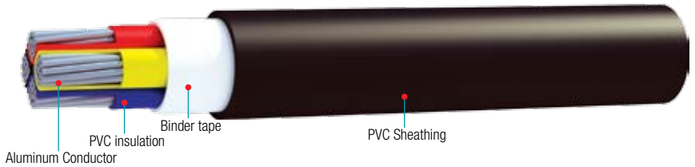
- For outdoor and indoor installations in damp and wet locations.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
A14P202UP	10 rm	3.080	3.300	46	39	46	15.0	295
A15P202UP	16 rm	1.910	2.290	60	46	62	17.0	385
A16P202UP	25 rm	1.200	1.440	77	60	81	20.0	540
A17P202UP	35 rm	0.868	1.040	103	83	114	22.2	670
Three Core Cables								
A14P203UP	10 rm	3.080	3.300	42	34	37	16.4	305
A15P203UP	16 rm	1.910	2.290	53	42	50	18.6	400
A16P203UP	25 rm	1.200	1.440	70	56	66	21.8	550
A17P203UP	35 rm	0.868	1.040	95	75	88	24.2	680
Four Core Cables								
A14P204UP	10 rm	3.0800	3.3000	42	34	37	17.9	395
A15P204UP	16 rm	1.9100	2.2900	53	42	50	20.3	495
A16P204UP	25 sm	1.2000	1.4400	70	56	66	23.9	700
A17P204UP	35 sm	0.8680	1.0400	95	75	88	26.6	870
A18P204UP	50 sm	0.6410	0.7710	115	85	105	29.3	1060
A19P204UP	70 sm	0.4430	0.5330	135	110	132	32.9	1380
A20P204UP	95 sm	0.3200	0.3850	165	130	160	37.8	1865
A21P204UP	120 sm	0.2530	0.3050	185	150	187	41.2	2300
A22P204UP	150 sm	0.2060	0.2490	210	170	215	45.9	2760
A23P204UP	185 sm	0.1640	0.1990	235	195	248	50.7	3400
A24P204UP	240 sm	0.1250	0.1510	275	225	292	57.0	4345
A25P204UP	300 sm	0.1000	0.1230	310	260	347	63.3	5400

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV

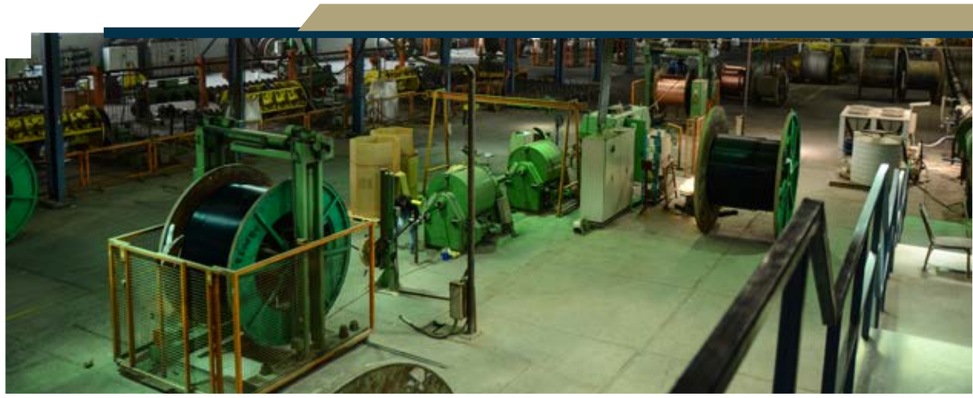


Multicore Cables, with Stranded Aluminum Conductors PVC Insulated and PVC Sheathed

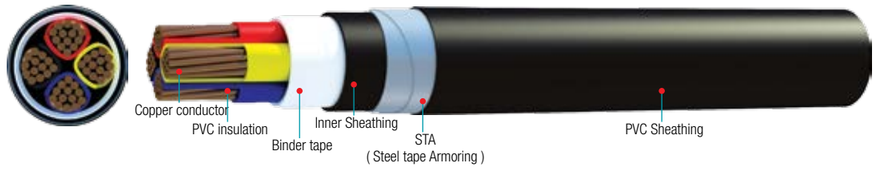
Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
A17P2R3UP	35 sm	16 rm	0.8680/1.9100	1.0430/2.2900	95	75	88	25.0	720
A18P2R3UP	50 sm	25 sm	0.6410/1.2000	0.7710/1.4400	115	85	105	28.1	970
A19P2R3UP	70 sm	35 sm	0.4430/0.8680	0.5330/1.0400	135	110	132	31.4	1240
A20P2R3UP	95 sm	50 sm	0.3200/0.6410	0.3850/0.7710	165	130	160	36.1	1660
A21P2R3UP	120 sm	70 sm	0.2530/0.4430	0.3050/0.5330	185	150	187	39.5	2040
A22P2R3UP	150 sm	70 sm	0.2060/0.4430	0.2490/0.5330	210	170	215	43.5	2435
A23P2R3UP	185 sm	95 sm	0.1640/0.3200	0.1990/0.3850	235	195	248	48.2	3025
A24P2R3UP	240 sm	120 sm	0.1250/0.2530	0.1510/0.3050	275	225	292	54.2	3830
A25P2R3UP	300 sm	150 sm	0.1000/0.2060	0.1230/0.2490	310	260	347	60.0	4720

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV



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

Description

• Multicore cables of stranded copper conductors are insulated with PVC compound rated 70 °C, assembled together, armoured with steel tape and covered with overall jacket of PVC compound.
• Cables are produced according to IEC 60502.

Application

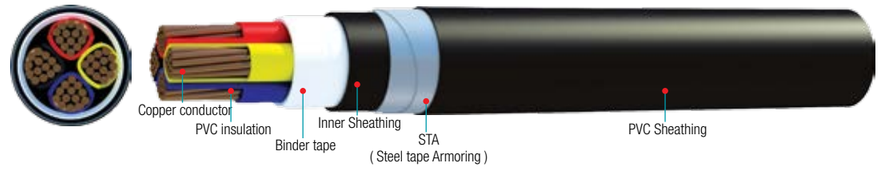
• For outdoor installations in damp and wet locations. where mechanical damages are expected to occur.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
C13P202IP	6 rm	3.0800	3.6900	50	40	50	16.9	460
C14P202IP	10 rm	1.8300	2.1900	65	55	66	17.0	560
C15P202IP	16 rm	1.1500	1.3900	85	65	88	19.0	740
C16P202IP	25 rm	0.7270	0.8700	110	85	116	22.0	1030
C17P202IP	35 rm	0.5240	0.6280	130	105	143	24.2	1295
Three Core Cables								
C12P203IP	4 rm	4.6100	5.5400	35	30	31	16.4	440
C13P203IP	6 rm	3.0800	3.6900	45	36	39	17.5	525
C14P203IP	10 rm	1.8300	2.1900	60	48	53	18.4	640
C15P203IP	16 rm	1.1500	1.3900	75	60	72	20.6	860
C16P203IP	25 rm	0.7270	0.8700	100	80	94	23.8	1200
C17P203IP	35 rm	0.5240	0.6280	120	95	110	26.2	1530
Four Core Cables								
C12P204IP	4 rm	4.6100	5.5400	35	30	31	17.6	520
C13P204IP	6 rm	3.0800	3.6900	45	36	39	18.8	630
C14P204IP	10 rm	1.8300	2.1900	60	48	53	19.9	805
C15P204IP	16 rm	1.1500	1.3900	75	60	72	22.3	1070
C16P204IP	25 sm	0.7270	0.8700	100	80	94	25.9	1520
C17P204IP	35 sm	0.5240	0.6280	120	95	110	28.6	1950
C18P204IP	50 sm	0.3870	0.4640	145	115	138	32.7	2640
C19P204IP	70 sm	0.2680	0.3220	175	145	171	37.5	3915
C20P204IP	95 sm	0.1930	0.2320	210	165	209	42.4	5140
C21P204IP	120 sm	0.1530	0.1850	240	195	242	46.2	6310
C22P204IP	150 sm	0.1240	0.1510	270	220	275	50.9	7615
C23P204IP	185 sm	0.0991	0.1210	300	245	314	56.1	9365
C24P204IP	240 sm	0.0754	0.0840	345	290	374	62.6	12790
C25P204IP	300 sm	0.0601	0.0770	390	320	440	68.7	14645

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV



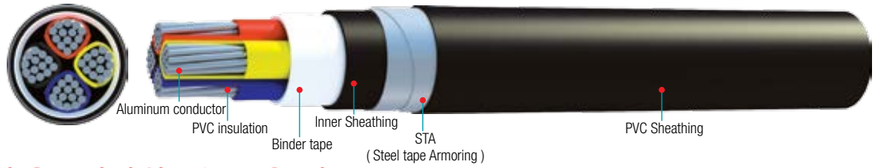
Multicore Cables, with Stranded Copper Conductors, PVC Insulated, Steel Tape Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
C17P2R3IP	35 sm	16 rm	0.5240/1.1500	0.6280/1.3900	120	95	110	27.0	1740
C18P2R3IP	50 sm	25 sm	0.3870/0.7270	0.4640/0.8700	145	115	138	30.9	2365
C19P2R3IP	70 sm	35 sm	0.2680/0.5240	0.3220/0.6280	175	145	171	34.6	3155
C20P2R3IP	95 sm	50 sm	0.1930/0.3870	0.2320/0.4640	210	165	209	40.7	4625
C21P2R3IP	120 sm	70 sm	0.1530/0.2680	0.1850/0.3220	240	195	242	44.5	5730
C22P2R3IP	150 sm	70 sm	0.1240/0.2680	0.1510/0.3220	270	220	275	48.5	6740
C23P2R3IP	185 sm	95 sm	0.0991/0.1930	0.1210/0.2320	300	245	314	53.2	8300
C24P2R3IP	240 sm	120 sm	0.0754/0.1530	0.0840/0.1850	345	290	374	59.6	10550
C25P2R3IP	300 sm	150 sm	0.0601/0.1240	0.0770/0.1510	390	320	440	65.4	12920

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV



Multicore Cables, with Stranded Aluminum Conductors, PVC Insulated, Steel Tape Armored and PVC Sheathed

Description

- Multicore cables of stranded Aluminium conductors are insulated with PVC compound rated 70 °C, assembled together, armoured with steel tape and covered with overall jacket of PVC compound.
- Cables are produced according to IEC 60502.

Application

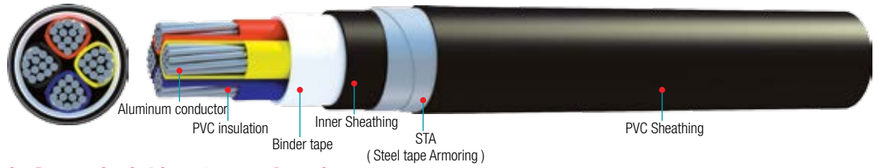
- For outdoor installations in damp and wet locations. where mechanical damages are expected to occur.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
A10P202IP	10 rm	3.080	3.300	46	39	46	17.0	435
A15P202IP	16 rm	1.910	2.290	60	46	62	19.0	545
A16P202IP	25 rm	1.200	1.440	77	60	81	22.0	730
A17P202IP	35 rm	0.868	1.040	103	83	115	24.2	880
Three Core Cables								
A10P203IP	10 rm	3.080	3.300	42	34	37	18.4	460
A15P203IP	16 rm	1.910	2.290	53	42	50	20.6	570
A16P203IP	25 rm	1.200	1.440	70	56	66	23.8	750
A17P203IP	35 rm	0.868	1.040	95	75	88	26.2	905
Four Core Cables								
A10P204IP	10 rm	3.0800	3.3000	42	34	37	19.9	560
A15P204IP	16 rm	1.9100	2.2900	53	42	50	22.3	680
A16P204IP	25 sm	1.2000	1.4400	70	56	66	25.9	920
A17P204IP	35 sm	0.8680	1.0430	95	75	88	28.6	1120
A18P204IP	50 sm	0.6410	0.7710	115	85	105	32.7	1475
A19P204IP	70 sm	0.4430	0.5530	135	110	132	37.5	2225
A20P204IP	95 sm	0.3200	0.3850	165	130	160	42.4	2830
A21P204IP	120 sm	0.2530	0.3050	185	150	187	46.2	3360
A22P204IP	150 sm	0.2060	0.2490	210	170	215	50.9	3975
A23P204IP	185 sm	0.1640	0.1990	235	195	248	56.1	4815
A24P204IP	240 sm	0.1250	0.1510	275	225	292	62.6	5925
A25P204IP	300 sm	0.1000	0.1230	310	260	347	68.7	7125

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV

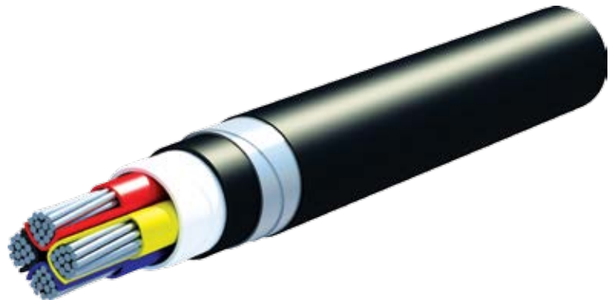


Multicore Cables, with Stranded Aluminum Conductors, PVC Insulated, Steel Tape Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
A17P2R3IP	35 sm	16 rm	0.8680/1.9100	1.0430/2.2900	95	75	88	27.0	1020
A18P2R3IP	50 sm	25 sm	0.6410/1.2000	0.7710/1.4400	115	85	105	30.9	1330
A19P2R3IP	70 sm	35 sm	0.4430/0.8680	0.5330/1.0400	135	110	132	34.6	1675
A20P2R3IP	95 sm	50 sm	0.3200/0.6410	0.3850/0.7710	165	130	160	40.7	2585
A21P2R3IP	120 sm	70 sm	0.2530/0.4430	0.3050/0.5330	185	150	187	44.5	3100
A22P2R3IP	150 sm	70 sm	0.2060/0.4430	0.2490/0.5330	210	170	215	48.5	3590
A23P2R3IP	185 sm	95 sm	0.1640/0.3200	0.1990/0.3850	235	195	248	53.2	4300
A24P2R3IP	240 sm	120 sm	0.1250/0.2530	0.1510/0.3050	275	225	292	59.6	5325
A25P2R3IP	300 sm	150 sm	0.1000/0.2060	0.1230/0.2490	310	260	347	65.4	6365

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV

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

Description

- Multicore cables of stranded copper conductors are insulated with PVC compound rated 70 °C, assembled together, armoured with steel wires and covered with overall jacket of PVC compound.
- Cables are produced according to IEC 60502. or BS 6346

Application

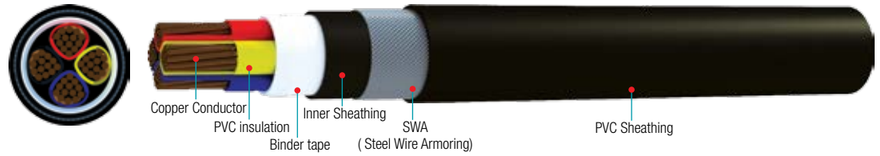
- For outdoor installations in damp and wet locations. where mechanical damages are expected to occur.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
C12P202HP	4 rm	4.6100	5.5400	40	32	39	17.8	645
C13P202HP	6 rm	3.0800	3.6900	50	40	50	18.8	735
C14P202HP	10 rm	1.8300	2.1900	65	55	66	19.2	815
C15P202HP	16 rm	1.1500	1.3900	85	65	88	21.2	1030
C16P202HP	25 rm	0.7270	0.8700	110	85	116	25.3	1535
C17P202HP	35 rm	0.5240	0.6280	130	105	143	27.5	1790
Three Core Cables								
C12P203HP	4 rm	4.6100	5.5400	35	30	31	18.5	730
C13P203HP	6 rm	3.0800	3.6900	45	36	39	19.6	835
C14P203HP	10 rm	1.8300	2.1900	60	48	53	20.6	920
C15P203HP	16 rm	1.1500	1.3900	75	60	72	22.8	1175
C16P203HP	25 rm	0.7270	0.8700	100	80	94	27.1	1765
C17P203HP	35 rm	0.5240	0.6280	120	100	110	29.5	2145
Four Core Cables								
C12P204HP	4 rm	4.6100	5.5400	37	29	29	19.7	840
C13P204HP	6 rm	3.0800	3.6900	47	37	37	20.9	965
C14P204HP	10 rm	1.8300	2.1900	63	50	50	22.1	1115
C15P204HP	16 rm	1.1500	1.3900	79	68	68	25.6	1590
C16P204HP	25 sm	0.7270	0.8700	105	89	89	29.2	2125
C17P204HP	35 sm	0.5240	0.6280	120	95	116	32.1	2635
C18P204HP	50 sm	0.3870	0.4640	145	115	143	37.1	3870
C19P204HP	70 sm	0.2680	0.3220	175	145	176	40.7	4900
C20P204HP	95 sm	0.1930	0.2320	210	165	215	46.6	6665
C21P204HP	120 sm	0.1530	0.1850	240	195	248	50.6	7990
C22P204HP	150 sm	0.1240	0.1510	270	220	281	55.1	9445
C23P204HP	185 sm	0.0991	0.1210	300	245	319	60.5	11425
C24P204HP	240 sm	0.0754	0.0840	345	290	380	66.8	14205
C25P204HP	300 sm	0.0601	0.0770	390	320	446	72.9	17870

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV

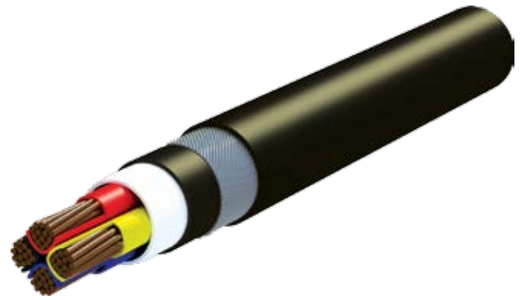


Multicore Cables, with Stranded Copper Conductors, PVC Insulated, Steel Wire Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
C17P2R3HP	35 sm	16 rm	0.5240/1.1500	0.6280/1.3900	120	95	116	28.7	2310
C18P2R3HP	50 sm	25 sm	0.3870/0.7270	0.4640/0.8700	145	115	143	35.5	3550
C19P2R3HP	70 sm	35 sm	0.2680/0.5240	0.3220/0.6280	175	145	176	39.2	4480
C20P2R3HP	95 sm	50 sm	0.1930/0.3870	0.2320/0.4640	210	165	215	42.6	5475
C21P2R3HP	120 sm	70 sm	0.1530/0.2680	0.1850/0.3220	240	195	248	48.9	7385
C22P2R3HP	150 sm	70 sm	0.1240/0.2680	0.1510/0.3220	270	220	281	52.7	8505
C23P2R3HP	185 sm	95 sm	0.0991/0.1930	0.1210/0.2320	300	245	319	57.6	10260
C24P2R3HP	240 sm	120 sm	0.0754/0.1530	0.0840/0.1850	345	290	380	64.0	12755
C25P2R3HP	300 sm	150 sm	0.0601/0.1240	0.0770/0.1510	390	320	446	69.8	15330

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminum Conductors, PVC Insulated, Steel Wire Armored and PVC Sheathed

Description

- Multicore cables of stranded Aluminum conductors are insulated with PVC compound rated 70 °C, assembled together, armoured with steel wires and covered with overall jacket of PVC compound.
- Cables are produced according to IEC 60502 or BS 6346.

Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
A14P202HP	10 rm	3.0800	3.3000	46	39	46	19.2	695
A15P202HP	16 rm	1.9100	2.2900	60	46	62	21.2	835
A16P202HP	25 rm	1.2000	1.4400	77	60	81	25.3	1235
A17P202HP	35 rm	0.8680	1.0400	103	83	115	27.5	1370
Three Core Cables								
A14P203HP	10 rm	3.0800	3.3000	42	34	37	20.6	740
A15P203HP	16 rm	1.9100	2.2900	53	42	50	22.8	885
A16P203HP	25 rm	1.2000	1.4400	70	56	66	27.1	1315
A17P203HP	35 rm	0.8680	1.0400	95	75	88	29.5	1525
Four Core Cables								
A14P204HP	10 rm	3.0800	3.3000	42	34	37	22.1	870
A15P204HP	16 rm	1.9100	2.2900	53	42	50	25.6	1205
A16P204HP	25 sm	1.2000	1.4400	70	56	66	29.2	1525
A17P204HP	35 sm	0.8680	1.0430	95	75	94	32.1	1805
A18P204HP	50 sm	0.6410	0.7710	115	85	110	37.1	3040
A19P204HP	70 sm	0.4430	0.5530	135	110	138	40.7	3750
A20P204HP	95 sm	0.3200	0.3850	165	130	165	46.6	4730
A21P204HP	120 sm	0.2530	0.3050	185	150	193	50.6	5570
A22P204HP	150 sm	0.2060	0.2490	210	170	220	55.1	6430
A23P204HP	185 sm	0.1640	0.1990	235	195	253	60.5	7790
A24P204HP	240 sm	0.1250	0.1510	275	225	297	66.8	9180
A25P204HP	300 sm	0.1000	0.1230	310	260	352	72.9	10590

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV

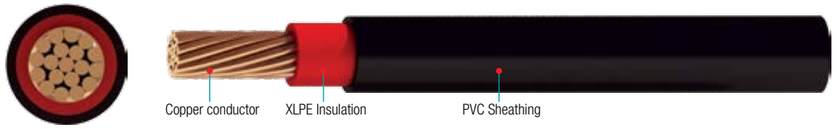
Multicore Cables, with Stranded Aluminum Conductors, PVC Insulated, Steel Wire Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 70 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
A17P2R3HP	35 sm	16 rm	0.8680/1.9100	1.0430/2.2900	95	75	94	28.7	1585
A18P2R3HP	50 sm	25 rm	0.6410/1.2000	0.7710/1.4400	115	85	110	35.5	2300
A19P2R3HP	70 sm	35 rm	0.4430/0.8680	0.5330/1.0400	135	110	138	39.2	2820
A20P2R3HP	95 sm	50 rm	0.3200/0.6410	0.3850/0.7710	165	130	165	42.6	3410
A21P2R3HP	120 sm	70 sm	0.2530/0.4430	0.3050/0.5330	185	150	193	48.9	4370
A22P2R3HP	150 sm	70 sm	0.2060/0.4430	0.2490/0.5330	210	170	220	52.7	5080
A23P2R3HP	185 sm	95 sm	0.1640/0.3200	0.1990/0.3850	235	195	253	57.6	5950
A24P2R3HP	240 sm	120 sm	0.1250/0.2530	0.1510/0.3050	275	225	297	64.0	7230
A25P2R3HP	300 sm	150 sm	0.1000/0.2060	0.1230/0.2490	310	260	352	69.8	8540

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV



Single Core Cables with stranded circular Copper Conductors, XLPE insulated and PVC Sheathed

Description

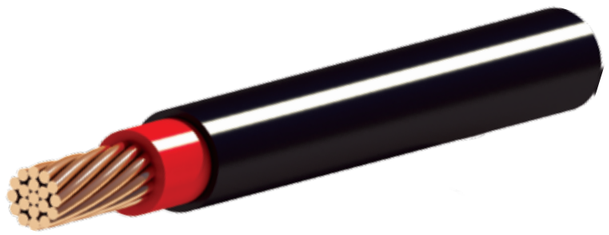
- Soft annealed stranded Copper or Aluminium conductor, insulated with XLPE compound covered with a layer of PVC compound to form the overall jacket.
- Cables are produced according to IEC 60502 or BS 7889.

Application

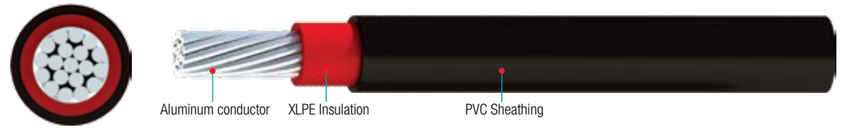
- For outdoor and indoor installations in damp and wet locations. They are normally used for power distribution in urban networks, in industrial plants, as well as in thermopower and hydropower stations.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating						Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid in Ground			Laid in free Air				
	mm²	Ω/km	Ω/km	A	A	A	A	A	A	mm	kg / km
a – Copper Conductors											
C08X201UP	1.5	12.1	15.4	31	29	22	27	26	22	6.2	43
C10X201UP	2.5	7.41	9.45	40	37	29	36	35	29	6.6	57
C12X201UP	4	4.6100	5.8800	55	51	40	53	47	40	6.8	80
C13X201UP	6	3.0800	3.9300	68	65	53	65	59	53	7.3	102
C14X201UP	10	1.8300	2.3300	98	86	68	84	79	68	8.3	150
C15X201UP	16	1.1500	1.4700	116	111	87	116	110	95	9.3	210
C16X201UP	25	0.7270	0.9270	150	142	110	143	137	121	11.0	315
C17X201UP	35	0.5240	0.6690	179	172	137	179	173	152	12.1	410
C18X201UP	50	0.3870	0.4940	210	200	163	221	210	184	13.8	555
C19X201UP	70	0.2680	0.3430	263	247	200	278	268	236	15.7	760
C20X201UP	95	0.1930	0.2480	310	294	242	347	336	289	17.7	1015
C21X201UP	120	0.1530	0.1970	357	336	273	404	394	341	19.6	1280
C22X201UP	150	0.1240	0.1600	394	373	310	457	446	389	21.8	1570
C23X201UP	185	0.0991	0.1290	452	425	352	530	520	441	23.9	1920
C24X201UP	240	0.0754	0.0990	520	488	404	651	641	536	27.1	2530
C25X201UP	300	0.0601	0.0810	588	546	457	824	756	620	29.7	3105
C26X201UP	400	0.0470	0.0638	672	620	515	893	872	714	33.9	4135
C27X201UP	500	0.0366	0.0517	761	693	572	1008	987	814	37.4	5110
C28X201UP	630	0.0283	0.0425	872	777	651	1155	1134	956	41.9	6455
C29X201UP	800	0.0221	0.0292	957	861	735	1313	1292	1092	46.8	8260

The above data is approximate and subjected to manufacturing tolerance.



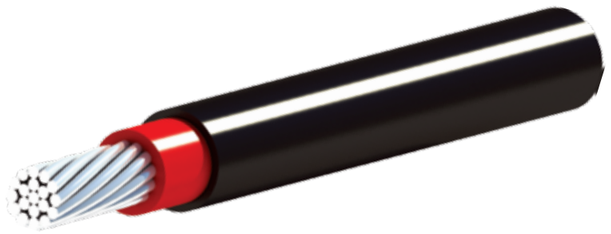
0.6/1 (1.2) kV



Single Core Cables with stranded circular Aluminum Conductors, XLPE insulated and PVC Sheathed

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating in Air						Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid in Ground			Laid in free Air				
	mm²	Ω/km	Ω/km	A	A	A	A	A	A	mm	kg / km
b – Aluminium Conductors											
A15X201UP	16	1.9100	2.4500	89	87	66	89	84	63	9.3	115
A16X201UP	25	1.2000	1.5400	113	110	84	116	110	95	11.0	165
A17X201UP	35	0.8680	1.1130	137	131	105	142	137	121	12.1	205
A18X201UP	50	0.6410	0.8220	163	155	121	173	168	147	13.8	260
A19X201UP	70	0.4430	0.5690	200	189	152	221	215	179	15.7	340
A20X201UP	95	0.3200	0.4110	236	226	179	284	273	215	17.7	450
A21X201UP	120	0.2530	0.3250	278	263	215	326	315	242	19.6	550
A22X201UP	150	0.2060	0.2650	310	294	236	373	362	299	21.8	670
A23X201UP	185	0.1640	0.2120	352	336	267	436	420	336	23.9	830
A24X201UP	240	0.1250	0.1630	410	389	315	515	499	399	27.1	1050
A25X201UP	300	0.1000	0.1310	467	436	357	578	567	462	29.7	1300
A26X201UP	400	0.0778	0.1000	541	504	410	693	677	541	33.9	1610
A27X201UP	500	0.0605	0.0870	609	567	467	809	788	630	37.4	2000
A28X201UP	630	0.0469	0.0620	698	646	536	945	924	746	41.9	2520
A29X201UP	800	0.0367	0.0560	788	704	599	1071	1050	851	46.8	3150

The above data is approximate and subjected to manufacturing tolerance.



0.6/1 (1.2) kV

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

Description

• Multicore cables of stranded copper conductors are insulated with XLPE compound rated 90oC, assembled together and covered with an overall jacket of PVC compound.
• Cables are produced according to IEC 60502.

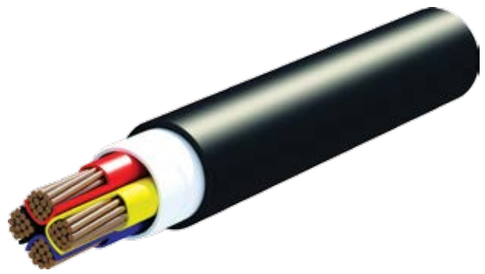
Application

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

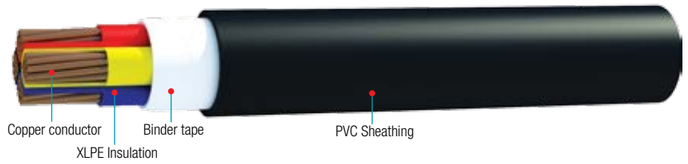
Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
C08X202UP	1.5 rm	12.1000	15.4000	30	25	25	9.6	105
C10X202UP	2.5 rm	7.4100	9.4500	37	32	34	10.5	135
C12X202UP	4 rm	4.6100	5.8800	50	40	46	11.7	175
C13X202UP	6 rm	3.0800	3.9300	63	52	60	12.7	225
C14X202UP	10 rm	1.8300	2.3300	82	69	79	13.8	360
C15X202UP	16 rm	1.1500	1.4700	106	83	105	15.8	505
C16X202UP	25 rm	0.7270	0.9270	139	107	139	18.8	750
C17X202UP	35 rm	0.5240	0.6690	166	134	166	21.0	980
Three Core Cables								
C08X203UP	1.5 rm	12.1000	15.4000	26	23	22	10.1	130
C10X203UP	2.5 rm	7.4100	9.4500	35	29	32	11.0	165
C12X203UP	4 rm	4.6100	5.8800	45	36	41	12.3	225
C13X203UP	6 rm	3.0800	3.9300	57	45	50	13.4	295
C14X203UP	10 rm	1.8300	2.3300	75	60	68	15.1	430
C15X203UP	16 rm	1.1500	1.4700	97	75	89	17.3	620
C16X203UP	25 rm	0.7270	0.9270	128	102	120	20.3	910
C17X203UP	35 rm	0.5240	0.6690	155	120	145	22.9	1205

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV

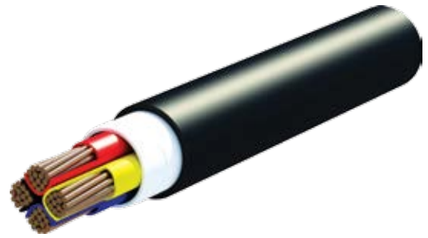


Multicore Cables with Stranded, Copper Conductors, XLPE Insulated and PVC Sheathed

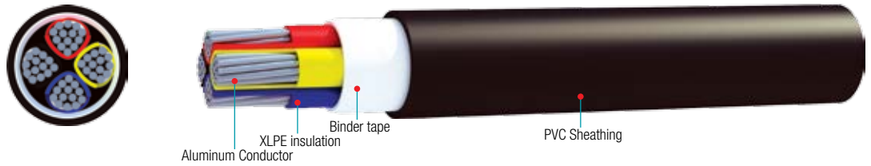
Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables									
C08X204UP	1.5 rm		12.1000	15.4000	26	23	22	10.6	150
C10X204UP	2.5 rm		7.4100	9.4500	35	29	32	11.9	205
C12X204UP	4 rm		4.6100	5.8800	45	36	41	13.4	280
C13X204UP	6 rm		3.0800	3.9300	57	45	50	14.6	365
C14X204UP	10 rm		1.8300	2.3300	75	60	68	16.4	565
C15X204UP	16 rm		1.1500	1.4700	97	75	89	18.9	795
C16X204UP	25 sm		0.7270	0.9270	128	102	120	22.5	1185
C17X204UP	35 sm		0.5240	0.6690	155	120	145	25.2	1575
C18X204UP	50 sm		0.3870	0.4940	185	145	179	27.1	2060
C19X204UP	70 sm		0.2680	0.3430	220	180	225	31.4	2905
C20X204UP	95 sm		0.1930	0.2480	265	210	268	35.1	3910
C21X204UP	120 sm		0.1530	0.1970	305	245	310	39.2	4915
C22X204UP	150 sm		0.1240	0.1600	335	275	352	43.7	6035
C23X204UP	185 sm		0.0991	0.1290	375	310	404	48.7	7540
C24X204UP	240 sm		0.0754	0.0990	435	365	483	54.5	9785
C25X204UP	300 sm		0.0601	0.0810	490	405	562	60.1	12190
Four Core Cables with Reduced Neutral									
C17X2R3UP	35 sm	16 rm	0.5240/1.1500	0.6690/1.4700	155	120	145	23.6	1390
C18X2R3UP	50 sm	25 sm	0.3870/0.7270	0.4940/0.9270	185	145	179	25.9	1835
C19X2R3UP	70 sm	35 sm	0.2680/0.5240	0.3430/0.6690	220	180	225	29.7	2540
C20X2R3UP	95 sm	50 sm	0.1930/0.3870	0.2480/0.4940	265	210	268	33.6	3435
C21X2R3UP	120 sm	70 sm	0.1530/0.2680	0.1970/0.3430	305	245	310	37.5	4400
C22X2R3UP	150 sm	70 sm	0.1240/0.2680	0.1600/0.3430	335	275	352	41.3	5255
C23X2R3UP	185 sm	95 sm	0.0991/0.1930	0.1290/0.2480	375	310	404	46.2	6640
C24X2R3UP	240 sm	120 sm	0.0754/0.1530	0.0990/0.1970	435	365	483	51.5	8555
C25X2R3UP	300 sm	150 sm	0.0601/0.1240	0.0810/0.1600	490	405	562	56.8	10640

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV



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

Description

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

Application

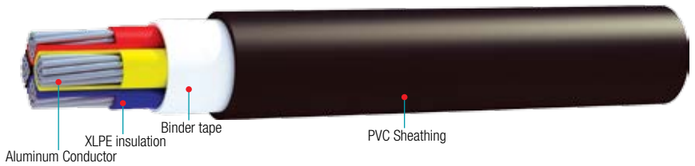
• For outdoor and indoor installations in damp and wet locations. They are normally used for power distribution in urban networks, in industrial plants, as well as in thermopower and hydropower stations.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
A14X202UP	10 rm	3.0800	3.9500	57	48	55	13.8	235
A15X202UP	16 rm	1.9100	2.4500	74	58	73	15.8	310
A16X202UP	25 rm	1.2000	1.5400	97	75	97	18.8	450
A17X202UP	35 rm	0.8680	1.1130	128	106	120	21.0	565
Three Core Cables								
A14X203UP	10 rm	3.0800	3.9500	52	42	48	15.1	250
A15X203UP	16 rm	1.9100	2.4500	68	52	62	17.3	330
A16X203UP	25 rm	1.2000	1.5400	90	71	84	20.5	460
A17X203UP	35 rm	0.8680	1.1130	120	95	105	22.9	580
Four Core Cables								
A14X204UP	10 rm	3.0800	3.9500	52	42	48	16.4	320
A15X204UP	16 rm	1.9100	2.4500	68	52	62	18.9	405
A16X204UP	25 sm	1.2000	1.5400	90	71	84	22.5	585
A17X204UP	35 sm	0.8680	1.1130	120	95	110	25.2	745
A18X204UP	50 sm	0.6410	0.8220	145	110	136	26.5	905
A19X204UP	70 sm	0.4430	0.5690	175	140	168	30.8	1260
A20X204UP	95 sm	0.3200	0.4110	210	165	205	33.5	1565
A21X204UP	120 sm	0.2530	0.3250	235	190	236	37.6	1950
A22X204UP	150 sm	0.2060	0.2650	265	215	278	42.1	2405
A23X204UP	185 sm	0.1640	0.2120	290	240	315	47.1	2930
A24X204UP	240 sm	0.1250	0.1630	340	280	378	52.9	3725
A25X204UP	300 sm	0.1000	0.1310	390	325	446	58.5	4625

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV

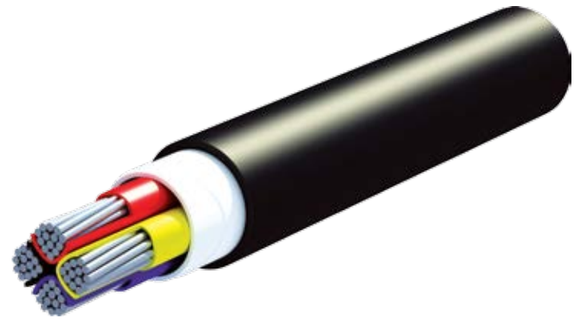


Multicore Cables, with Stranded Aluminum Conductors XLPE Insulated and PVC Sheathed

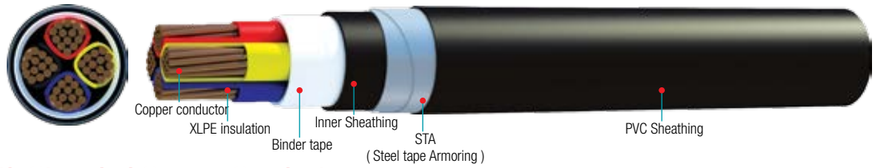
Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
A17X2R3UP	35 sm	16 rm	0.8680/1.9100	1.1130/2.4500	120	95	110	23.6	670
A18X2R3UP	50 sm	25 sm	0.6410/1.2000	0.8220/1.5400	145	110	136	25.3	830
A19X2R3UP	70 sm	35 sm	0.4430/0.8680	0.5690/1.1130	175	140	168	29.1	1120
A20X2R3UP	95 sm	50 sm	0.3200/0.6410	0.4110/0.8220	210	165	205	33.0	1415
A21X2R3UP	120 sm	70 sm	0.2530/0.4430	0.3250/0.5690	235	190	236	35.9	1770
A22X2R3UP	150 sm	70 sm	0.2060/0.4430	0.2650/0.5690	265	215	278	39.7	2120
A23X2R3UP	185 sm	95 sm	0.1640/0.3200	0.2120/0.4110	290	240	315	44.6	2590
A24X2R3UP	240 sm	120 sm	0.1250/0.2530	0.1630/0.3250	340	280	378	49.9	3260
A25X2R3UP	300 sm	150 sm	0.1000/0.2060	0.1310/0.2650	390	325	446	55.2	4065

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV



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

Description

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

Application

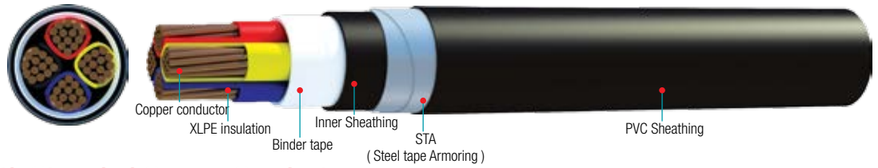
• For outdoor Installation in damp wet locations where mechanical damages are expected to occur.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
C13X202IP	6 rm	3.0800	3.9300	62	51	59	15.5	405
C14X202IP	10 rm	1.8300	2.3300	81	68	78	15.6	490
C15X202IP	16 rm	1.1500	1.4700	105	82	103	17.8	655
C16X202IP	25 rm	0.7270	0.9270	138	106	137	20.8	935
C17X202IP	35 rm	0.5240	0.6690	164	132	164	23.0	1185
Three Core Cables								
C13X203IP	6 rm	3.0800	3.9300	56	44	49	16.2	465
C14X203IP	10 rm	1.8300	2.3300	74	59	67	17.1	575
C15X203IP	16 rm	1.1500	1.4700	96	74	88	19.3	790
C16X203IP	25 rm	0.7270	0.9270	127	100	120	22.5	1105
C17X203IP	35 rm	0.5240	0.6690	153	119	143	24.9	1420
Four Core Cables								
C13X204IP	6 rm	3.0800	3.9300	56	44	49	17.4	555
C14X204IP	10 rm	1.8300	2.3300	74	59	67	18.4	720
C15X204IP	16 rm	1.1500	1.4700	96	74	88	20.9	975
C16X204IP	25 sm	0.7270	0.9270	127	100	120	24.5	1385
C17X204IP	35 sm	0.5240	0.6690	153	119	143	27.2	1775
C18X204IP	50 sm	0.3870	0.4940	185	145	178	30.1	2415
C19X204IP	70 sm	0.2680	0.3430	220	180	225	34.6	3335
C20X204IP	95 sm	0.1930	0.2480	265	210	268	39.7	4815
C21X204IP	120 sm	0.1530	0.1970	305	245	310	43.8	5910
C22X204IP	150 sm	0.1240	0.1600	335	275	352	48.7	7195
C23X204IP	185 sm	0.0991	0.1290	375	310	404	53.7	8830
C24X204IP	240 sm	0.0754	0.0990	435	365	483	60.0	11285
C25X204IP	300 sm	0.0601	0.0810	490	405	562	65.5	13835

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV



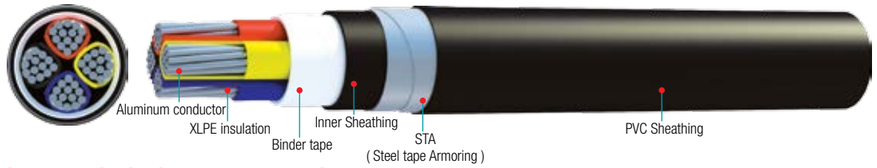
Multicore Cables, with Stranded Copper Conductors, XLPE Insulated, Steel Tape Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
C17X2R3IP	35 sm	16 rm	0.5240/1.1500	06690/1.4700	153	119	143	25.6	1615
C18X2R3IP	50 sm	25 sm	0.3870/0.7270	0.4940/0.9270	185	145	178	28.7	2160
C19X2R3IP	70 sm	35 sm	0.2680/0.5240	0.3430/0.6690	220	180	225	33.1	2960
C20X2R3IP	95 sm	50 sm	0.1930/0.3870	0.2480/0.4940	265	210	268	38.0	4280
C21X2R3IP	120 sm	70 sm	0.1530/0.2680	0.1970/0.3430	305	245	310	42.1	5365
C22X2R3IP	150 sm	70 sm	0.1240/0.2680	0.1600/0.3430	335	275	352	46.3	6355
C23X2R3IP	185 sm	95 sm	0.0991/0.1930	0.1290/0.2480	375	310	404	51.2	7865
C24X2R3IP	240 sm	120 sm	0.0754/0.1530	0.0990/0.1970	435	365	483	57.1	10000
C25X2R3IP	300 sm	150 sm	0.0601/0.1240	0.0810/0.1600	490	405	562	62.2	12205

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV



Multicore Cables, with Stranded Aluminum Conductors, XLPE Insulated, Steel Tape Armored and PVC Sheathed

Description

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

Application

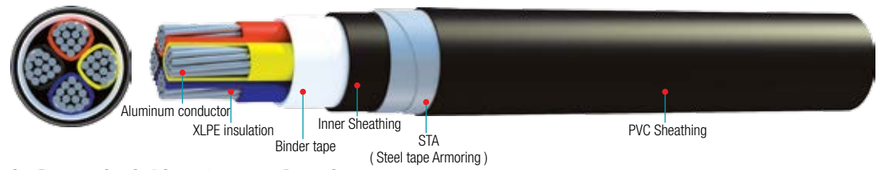
- For outdoor Installation in damp wet locations where mechanical damages are expected to occur.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
A14X202IP	10 rm	3.0800	3.9500	56	47	55	15.8	370
A15X202IP	16 rm	1.9100	2.4500	73	57	72	17.8	460
A16X202IP	25 rm	1.2000	1.5400	96	74	96	20.8	630
A17X202IP	35 rm	0.8680	1.1130	129	105	126	23.0	770
Three Core Cables								
A14X203IP	10 rm	3.0800	3.9500	52	41	47	17.1	390
A15X203IP	16 rm	1.9100	2.4500	67	52	62	19.3	495
A16X203IP	25 rm	1.2000	1.5400	89	70	84	22.5	650
A17X203IP	35 rm	0.8680	1.1130	120	95	110	24.9	795
Four Core Cables								
A14X204IP	10 rm	3.0800	3.9500	52	41	47	18.4	475
A15X204IP	16 rm	1.9100	2.4500	67	52	62	20.9	585
A16X204IP	25 sm	1.2000	1.5400	89	70	84	24.5	780
A17X204IP	35 sm	0.8680	1.1130	120	95	110	27.2	940
A18X204IP	50 sm	0.6410	0.8220	145	110	136	30.1	1300
A19X204IP	70 sm	0.4430	0.5690	175	140	168	34.6	1750
A20X204IP	95 sm	0.3200	0.4110	210	165	205	39.7	2540
A21X204IP	120 sm	0.2520	0.3250	235	190	236	43.8	3020
A22X204IP	150 sm	0.2060	0.2650	265	215	278	48.7	3670
A23X204IP	185 sm	0.1640	0.2120	290	240	315	53.7	4380
A24X204IP	240 sm	0.1250	0.1630	340	280	378	60.0	4430
A25X204IP	300 sm	0.1000	0.1310	390	325	446	65.5	6510

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV

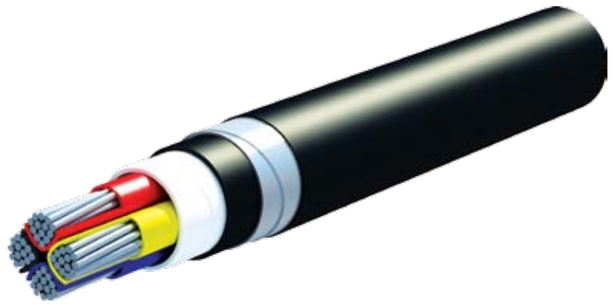


Multicore Cables, with Stranded Aluminum Conductors, XLPE Insulated, Steel Tape Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
A17X2R3IP	35 sm	16 rm	0.8680/1.9100	1.1130/2.4500	120	95	110	25.6	890
A18X2R3IP	50 sm	25 sm	0.6410/1.2000	0.8220/1.5400	145	110	136	28.7	1200
A19X2R3IP	70 sm	35 sm	0.4430/0.8680	0.5690/1.1130	175	140	168	33.1	1550
A20X2R3IP	95 sm	50 sm	0.3200/0.6410	0.4110/0.8220	210	165	205	38.0	1970
A21X2R3IP	120 sm	70 sm	0.2530/0.4430	0.3250/0.5690	235	190	236	42.1	2710
A22X2R3IP	150 sm	70 sm	0.2060/0.4430	0.2650/0.5690	265	215	278	46.3	3290
A23X2R3IP	185 sm	95 sm	0.1640/0.3200	0.2120/0.4110	290	240	315	51.2	3980
A24X2R3IP	240 sm	120 sm	0.1250/0.2530	0.1630/0.3250	340	280	378	57.1	4910
A25X2R3IP	300 sm	150 sm	0.1000/0.2060	0.1310/0.2650	390	325	446	62.2	5920

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV

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

Description

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

Application

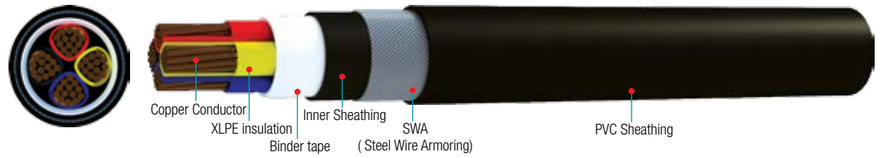
• For outdoor Installation in damp wet locations where mechanical damages are expected to occur.

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
C12X202HP	4 rm	4.6100	5.8800	51	41	47	16.6	580
C13X202HP	6 rm	3.0800	3.9300	64	53	61	17.6	660
C14X202HP	10 rm	1.8300	2.3300	83	70	80	18.0	730
C15X202HP	16 rm	1.1500	1.4700	107	84	106	20.0	925
C16X202HP	25 sm	0.7270	0.9270	140	108	140	24.1	1410
C17X202HP	35 sm	0.5240	0.6690	168	135	168	26.3	1715
Three Core Cables								
C12X203HP	4 rm	4.6100	5.8800	46	37	42	17.2	650
C13X203HP	6 rm	3.0800	3.9300	58	46	51	18.3	755
C14X203HP	10 rm	1.8300	2.3300	76	61	69	19.3	825
C15X203HP	16 rm	1.1500	1.4700	98	76	90	21.5	1070
C16X203HP	25 sm	0.7270	0.9270	130	103	120	25.8	1620
C17X203HP	35 sm	0.5240	0.6690	158	122	147	28.2	1990
Four Core Cables								
C12X204HP	4 rm	4.6100	5.8800	46	37	42	18.3	740
C13X204HP	6 rm	3.0800	3.9300	58	46	51	19.5	860
C14X204HP	10 rm	1.8300	2.3300	76	61	69	20.6	990
C15X204HP	16 rm	1.1500	1.4700	98	76	90	24.2	1450
C16X204HP	25 sm	0.7270	0.9270	130	103	122	27.8	1975
C17X204HP	35 sm	0.5240	0.6690	158	122	147	30.7	2465
C18X204HP	50 sm	0.3870	0.4940	185	145	184	33.1	3200
C19X204HP	70 sm	0.2680	0.3430	220	180	220	39.2	4645
C20X204HP	95 sm	0.1930	0.2480	265	210	273	42.9	5870
C21X204HP	120 sm	0.1530	0.1970	305	245	315	48.4	7555
C22X204HP	150 sm	0.1240	0.1600	335	275	375	53.1	8985
C23X204HP	185 sm	0.0991	0.1290	375	310	410	57.9	10760
C24X204HP	240 sm	0.0754	0.0990	435	365	488	64.1	13480
C25X204HP	300 sm	0.0601	0.0810	490	405	562	69.7	16215

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

0.6/1 (1.2) kV

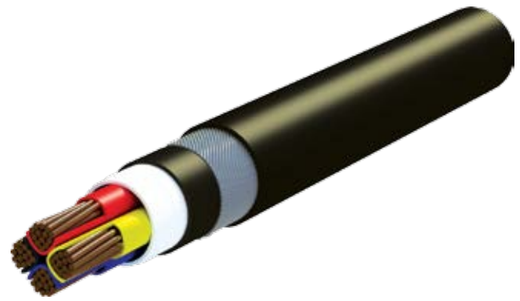


Multicore Cables, with Stranded Copper Conductors, XLPE Insulated, Steel Wire Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
C17X2R3HP	35 sm	16 rm	0.5240/1.1500	0.6690/1.4700	158	122	147	28.9	2210
C18X2R3HP	50 sm	25 sm	0.3870/0.7270	0.4940/0.9270	185	145	184	31.3	2860
C19X2R3HP	70 sm	35 sm	0.2680/0.5240	0.3430/0.6690	220	180	220	37.5	4240
C20X2R3HP	95 sm	50 sm	0.1930/0.3870	0.2480/0.4940	265	210	273	41.2	5290
C21X2R3HP	120 sm	70 sm	0.1530/0.2680	0.1970/0.3430	305	245	315	45.3	6475
C22X2R3HP	150 sm	70 sm	0.1240/0.2680	0.1600/0.3430	335	275	375	50.5	8055
C23X2R3HP	185 sm	95 sm	0.0991/0.1930	0.1290/0.2480	375	310	410	55.4	9735
C24X2R3HP	240 sm	120 sm	0.0754/0.1530	0.0990/0.1970	435	365	488	60.3	11780
C25X2R3HP	300 sm	150 sm	0.0601/0.1240	0.0810/0.1600	490	405	562	66.4	14435

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded



0.6/1 (1.2) kV

Multicore Cables, with Stranded Aluminum Conductors, XLPE Insulated, Steel Wire Armored and PVC Sheathed

Description

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

Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²	Ω/km	Ω/km	A	A	A	mm	kg / km
Two Core Cables								
A14X202HP	10 rm	3.0800	3.9500	56	47	60	18.0	610
A15X202HP	16 rm	1.9100	2.4500	73	57	79	20.0	735
A16X202HP	25 sm	1.2000	1.5400	96	74	101	24.1	1110
A17X202HP	35 sm	0.8680	1.1130	129	105	131	26.3	1300
Three Core Cables								
A14X203HP	10 rm	3.0800	3.9500	52	41	52	19.3	645
A15X203HP	16 rm	1.9100	2.4500	67	52	67	21.5	780
A16X203HP	25 sm	1.2000	1.5400	89	70	89	25.8	1170
A17X203HP	35 sm	0.8680	1.1130	120	95	115	28.2	1365
Four Core Cables								
A14X204HP	10 rm	3.0800	3.9500	52	41	52	20.6	750
A15X204HP	16 rm	1.9100	2.4500	67	52	67	24.2	1060
A16X204HP	25 sm	1.2000	1.5400	89	70	89	27.8	1370
A17X204HP	35 sm	0.8680	1.1130	120	95	115	30.7	1635
A18X204HP	50 sm	0.6410	0.8220	145	110	141	33.1	2330
A19X204HP	70 sm	0.4430	0.5690	175	140	173	39.2	2760
A20X204HP	95 sm	0.3200	0.4110	210	165	210	42.9	3340
A21X204HP	120 sm	0.2520	0.3250	235	190	241	48.4	4320
A22X204HP	150 sm	0.2060	0.2650	265	215	283	53.1	5080
A23X204HP	185 sm	0.1640	0.2120	290	240	320	57.9	5990
A24X204HP	240 sm	0.1250	0.1630	340	280	383	64.1	7220
A25X204HP	300 sm	0.1000	0.1310	390	325	451	69.7	8440

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded

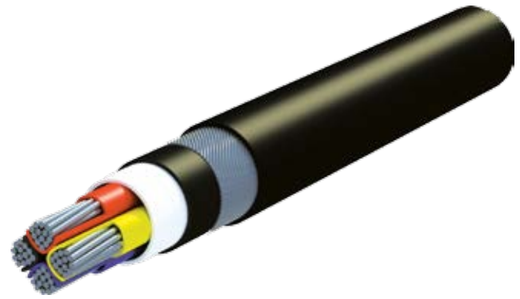
0.6/1 (1.2) kV

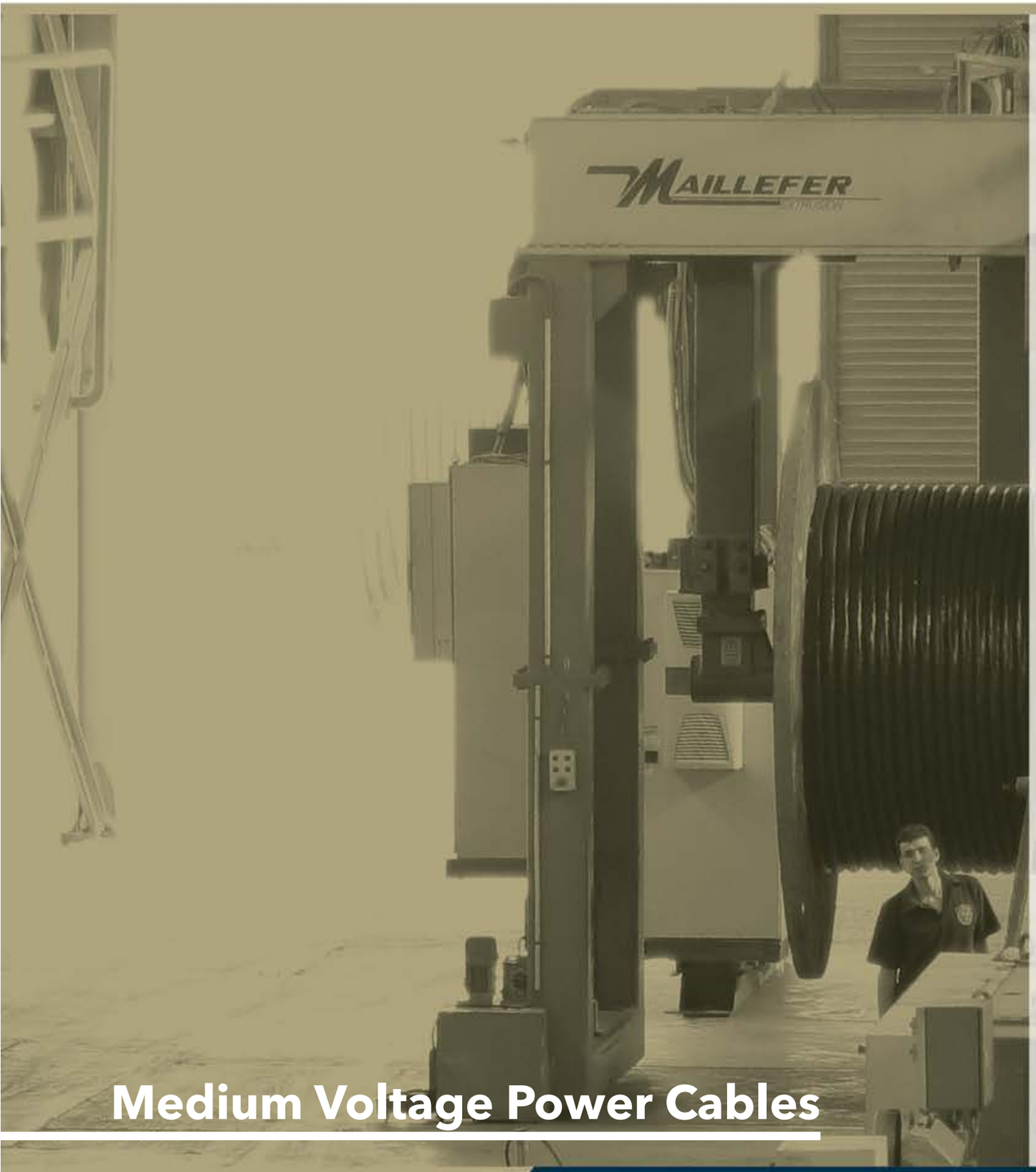
Multicore Cables, with Stranded Aluminum Conductors, XLPE Insulated, Steel Wire Armored and PVC Sheathed

Product-Code	Nominal Cross Sectional Area		Max. Conductor Resistance		Current Rating			Approx. Overall Diameter	Approx Weight
			DC at 20 °C	AC at 90 °C	Laid direct in Ground	Laid in Ducts	Laid in Free Air		
	mm²		Ω/km	Ω/km	A	A	A	mm	kg / km
Four Core Cables with Reduced Neutral									
A17X2R3HP	35 sm	16 rm	0.8680/1.9100	1.1130/2.4500	120	95	115	28.9	1490
A18X2R3HP	50 sm	25 sm	0.6410/1.2000	0.8220/1.5400	145	110	141	31.3	1870
A19X2R3HP	70 sm	35 sm	0.4430/0.8680	0.5690/1.1130	175	140	173	37.5	2600
A20X2R3HP	95 sm	50 sm	0.3200/0.6410	0.4110/0.8220	210	165	210	41.2	3090
A21X2R3HP	120 sm	70 sm	0.2530/0.4430	0.3250/0.5690	235	190	241	45.3	3690
A22X2R3HP	150 sm	70 sm	0.2060/0.4430	0.2650/0.5690	265	215	283	50.5	4700
A23X2R3HP	185 sm	95 sm	0.1640/0.3200	0.2120/0.4110	290	240	320	55.4	5550
A24X2R3HP	240 sm	120 sm	0.1250/0.2530	0.1630/0.3250	340	280	383	60.3	6560
A25X2R3HP	300 sm	150 sm	0.1000/0.2060	0.1310/0.2650	390	325	451	66.4	7820

The above data is approximate and subjected to manufacturing tolerance.

rm: round stranded
sm: sector stranded





Medium Voltage Power Cables

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

Cable Construction

1. Conductor

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

2. Conductor screen

An extruded layer of semi conducting material applied over the conductor as voltage stress control layer.

3. Insulation

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

4. Insulation Screen

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

5. Metallic Screen

a. Copper Tape: an annealed Copper tape is applied helically with a suitable overlap.

b. Copper Wire: helically applied and binded with a Copper tape to achieve electrical contact

c- Copper Tape and Wires: are also available

6. Assembly

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

7. Bedding

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

8. Armouring

a. Steel Tape: double layers of steel tapes are applied helically.

b. Steel Wire: galvanized steel wires are applied helically.

9. Sheath

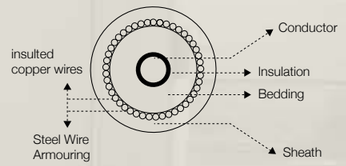
An extruded layer of PVC is applied with thickness as specified in IEC 60502.

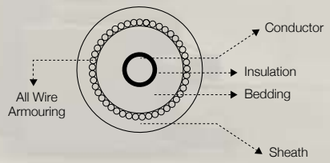
Option

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

Armouring of Single Core Cable

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





Designation Code for Medium Voltage Power Cables
You can order our product by giving the following informations

1- cable codes as per the catalogue
2- if your requirements is out of our catalogue product range, you can use the following map to identify the code

0	00	0	0	00	0	0

Conductor Material

C	Copper
A	Aluminum
G	Copper + Swelling Powder + S.C Tape
E	Aluminum + Swelling Powder + S.C Tape

C.S.A mm2

18	50
19	70
20	95
21	120
22	150
23	185
24	240
25	300
26	400
27	500
28	630
29	800
30	1000

Insulation Type

X	XLPE

Voltage Grade

4	3.6 / 6 (7.2) KV
5	6 / 10 (12) KV
6	8.7 / 15 (17.5) KV
7	12 / 20 (24) KV
8	18 / 30 (36) KV

No. of Cores

01	1
03	3

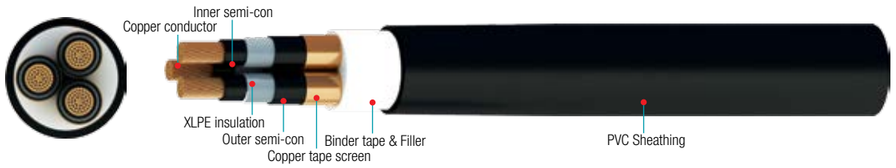
Armoring & Shielding

U	Unarmored
I	Steel Tapes Armored
H	Galavanized Steel Wires Armored
K	Aluminum Tapes Armored
J	Aluminum Wires Armored
Z	Galvanized Steel Tapes Armored
D	Lead + Galvanized Steel Wires Armored
F	Lead + Aluminum Wires Armored
E	Lead + Steel Tapes Armored
Y	Lead + Galvanized Steel Tapes Armored
G	Lead + Aluminum Tapes Armored
N	Aluminum foil Shield

Outer Sheathing Type

P	PVC
H	HDPE
M	MDPE
L	LDPE
E	LLDPE
F	PVC / FR
S	LSZH

6/10 (12) kV



Single & Three Cores Copper Conductors XLPE Insulated and PVC Sheathed

Description

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

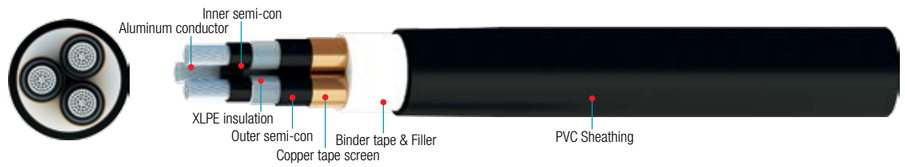
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Operating capacitance	Trefoil	Flat	Laid in Ground		Laid in free Air			
	mm²	Ω/km	Ω/km	µ f/km	A	A	A	A	A	A	mm	kg / km
Single Core Cable												
C18X501UP	50	0.3870	0.4937	0.251	0.393	0.578	197	206	209	255	22.5	905
C19X501UP	70	0.2680	0.3420	0.291	0.370	0.554	242	252	262	319	24.3	1135
C20X501UP	95	0.1930	0.2465	0.316	0.357	0.542	287	299	317	384	25.5	1390
C21X501UP	120	0.1530	0.1956	0.345	0.344	0.529	326	339	366	443	26.9	1655
C22X501UP	150	0.1240	0.1588	0.374	0.336	0.521	364	375	416	498	28.7	2015
C23X501UP	185	0.0991	0.1272	0.409	0.322	0.507	411	422	478	570	30.4	2390
C24X501UP	240	0.0754	0.0973	0.456	0.310	0.494	475	484	565	669	33.0	2950
C25X501UP	300	0.0601	0.0781	0.512	0.301	0.487	535	542	650	765	35.8	3590
C26X501UP	400	0.0470	0.0618	0.565	0.292	0.477	591	599	745	853	38.6	4510
C27X501UP	500	0.0366	0.0490	0.635	0.282	0.467	659	674	859	975	42.2	5610
C28X501UP	630	0.0283	0.0391	0.704	0.275	0.460	728	752	981	1103	45.9	6940
C29X501UP	800	0.0221	0.0319	0.795	0.268	0.453	869	979	1160	1480	50.8	9195
Three Core Cables												
C18X503UP	50	0.3870	0.4938	0.251	0.351	-	197	-	206	-	43.5	2655
C19X503UP	70	0.2680	0.3423	0.291	0.330	-	241	-	257	-	47.2	3390
C20X503UP	95	0.1930	0.2469	0.316	0.316	-	286	-	309	-	50.0	4165
C21X503UP	120	0.1530	0.1961	0.345	0.309	-	325	-	356	-	53.6	5140
C22X503UP	150	0.1240	0.1595	0.374	0.302	-	364	-	405	-	56.9	5965
C23X503UP	185	0.0991	0.1282	0.409	0.290	-	410	-	463	-	60.9	7210
C24X503UP	240	0.0754	0.0983	0.456	0.280	-	475	-	546	-	66.3	9020
C25X503UP	300	0.0601	0.0799	0.512	0.271	-	535	-	626	-	71.9	11095

This data is applicable for 6.35 / 11 KV cables
The ampacity for single core sizes 800 mm2 was based on a single end bonding
The above data is approximate and subjected to manufacturing tolerance.

6/10 (12) kV



Single & Three Cores Aluminum Conductors XLPE Insulated and PVC Sheathed

Description

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

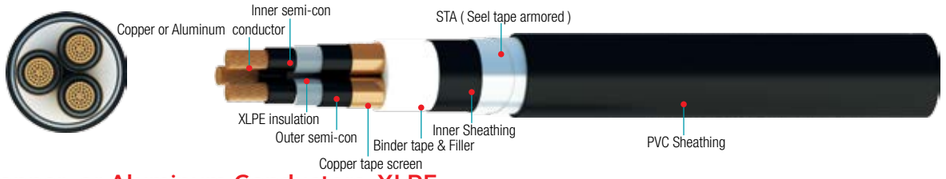
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Operating capacitance	Trefoil	Flat	Laid in Ground		Laid in free Air			
	mm²	Ω/km	Ω/km	µ f/km	A	A	A	A	A	A	mm	kg / km
Single Core Cable												
A18X501UP	50	0.6410	0.8220	0.251	0.393	0.578	153	160	162	198	22.4	610
A19X501UP	70	0.4430	0.5681	0.291	0.370	0.554	188	196	204	248	24.0	715
A20X501UP	95	0.3200	0.4105	0.316	0.357	0.542	222	233	246	299	25.5	815
A21X501UP	120	0.253.0	0.3247	0.345	0.344	0.529	254	265	284	346	26.9	915
A22X501UP	150	0.2060	0.2645	0.374	0.336	0.521	283	295	324	391	28.7	1115
A23X501UP	185	0.1640	0.2107	0.409	0.322	0.507	321	333	373	449	30.4	1250
A24X501UP	240	0.1250	0.1610	0.456	0.310	0.494	372	385	443	530	32.9	1475
A25X501UP	300	0.1000	0.1291	0.512	0.301	0.487	421	433	511	608	35.5	1700
A26X501UP	400	0.0778	0.1009	0.565	0.292	0.477	478	483	593	693	38.6	2120
A27X501UP	500	0.0605	0.0791	0.635	0.282	0.467	544	545	693	802	42.2	2505
A28X501UP	630	0.0469	0.0621	0.704	0.275	0.460	612	617	803	921	45.8	3000
A29X501UP	800	0.0367	0.0495	0.795	0.268	0.453	715	786	954	1188	50.8	3670
Three Core Cables												
A18X503UP	50	0.6410	0.8220	0.251	0.351	-	153	-	160	-	42.9	1800
A19X503UP	70	0.4430	0.5683	0.291	0.330	-	187	-	200	-	46.5	2100
A20X503UP	95	0.3200	0.4107	0.316	0.316	-	222	-	240	-	50.0	2440
A21X503UP	120	0.253.0	0.3250	0.345	0.309	-	253	-	277	-	53.2	2780
A22X503UP	150	0.2060	0.2649	0.374	0.302	-	283	-	314	-	56.9	3280
A23X503UP	185	0.1640	0.2114	0.409	0.290	-	320	-	361	-	60.9	3790
A24X503UP	240	0.1250	0.1618	0.456	0.280	-	371	-	427	-	66.1	4555
A25X503UP	300	0.1000	0.1302	0.512	0.271	-	420	-	491	-	71.3	5360

This data is applicable for 6.35 / 11 KV cables
The ampacity for single core sizes 800 mm2 was based on a single end bonding
The above data is approximate and subjected to manufacturing tolerance.

6/10 (12) kV



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

Description

• Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen. Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape, Covered with a layer of PVC compound as a bedding, steel tape armoured and PVC sheathed..

• Cables are produced according to IEC 60502 or BS 6622.

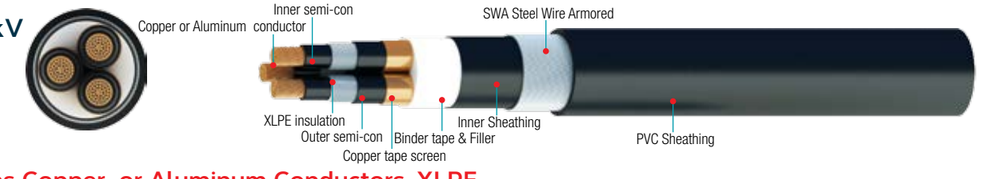
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μ f/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X503IP	50	0.3870	0.4938	0.251	0.352	185	192	47.9	3625
C19X503IP	70	0.2680	0.3423	0.291	0.330	226	237	51.8	4470
C20X503IP	95	0.1930	0.2469	0.316	0.316	269	286	54.6	5305
C21X503IP	120	0.1530	0.1961	0.345	0.311	306	328	57.8	6205
C22X503IP	150	0.1240	0.1595	0.374	0.302	342	371	61.7	7290
C23X503IP	185	0.0991	0.1282	0.409	0.290	386	424	65.5	8595
C24X503IP	240	0.0754	0.0986	0.456	0.280	446	497	71.3	10595
C25X503IP	300	0.0601	0.0799	0.512	0.272	502	566	77.1	12835
Three Cores Aluminium Conductor Cables									
A18X503IP	50	0.6410	0.8220	0.251	0.351	144	149	47.3	2760
A19X503IP	70	0.4430	0.5683	0.291	0.330	176	184	51.1	3170
A20X503IP	95	0.3200	0.4107	0.316	0.316	209	222	54.6	3585
A21X503IP	120	0.2530	0.3250	0.345	0.309	238	255	57.8	3995
A22X503IP	150	0.2060	0.2649	0.374	0.302	266	288	61.7	4605
A23X503IP	185	0.1640	0.2114	0.409	0.290	301	331	65.5	5175
A24X503IP	240	0.1250	0.1618	0.456	0.280	349	389	71.1	6120
A25X503IP	300	0.1000	0.1302	0.512	0.271	394	444	76.5	7085

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

6/10 (12) kV



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

Description

• Stranded circular compacted Copper or Aluminium conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen. Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, wrapped with binder tape, Covered with a layer of PVC compound as a bedding, steel wire armoured and PVC sheathed..

• Cables are produced according to IEC 60502 or BS 6622.

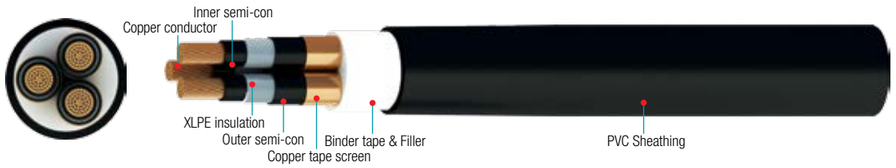
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μ f/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X503HP	50	0.3870	0.4938	0.251	0.352	187	195	51.1	5085
C19X503HP	70	0.2680	0.3423	0.291	0.330	227	241	55.0	6000
C20X503HP	95	0.1930	0.2469	0.316	0.316	269	289	57.8	6920
C21X503HP	120	0.1530	0.1961	0.345	0.311	305	331	61.4	8090
C22X503HP	150	0.1240	0.1595	0.374	0.302	340	372	64.9	9130
C23X503HP	185	0.0991	0.1282	0.409	0.290	381	423	68.9	10630
C24X503HP	240	0.754	0.0986	0.456	0.280	436	494	76.6	13700
C25X503HP	300	0.0601	0.799	0.512	0.272	485	556	82.2	16165
Three Cores Aluminium Conductor Cables									
A18X503HP	50	0.6410	0.8220	0.251	0.351	145	152	50.5	4185
A19X503HP	70	0.4430	0.5683	0.291	0.330	177	188	54.3	4705
A20X503HP	95	0.3200	0.4107	0.316	0.316	210	225	57.8	5195
A21X503HP	120	0.2530	0.3250	0.345	0.309	238	259	61.0	5725
A22X503HP	150	0.2060	0.2649	0.374	0.302	265	291	64.9	6445
A23X503HP	185	0.1640	0.2114	0.409	0.290	300	332	68.9	7160
A24X503HP	240	0.1250	0.1618	0.456	0.280	346	391	76.4	9130
A25X503HP	300	0.1000	0.1302	0.512	0.271	387	442	81.6	10315

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

8.7/15 (17.5) kV



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

Description

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

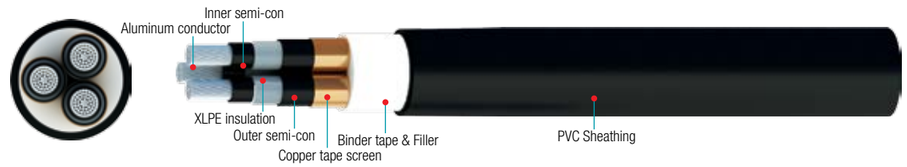
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Operating capacitance	Trefoil	Flat	Laid in ground		Laid in free air			
	mm²	Ω/km	Ω/km	µ f/km	mh/km	mh/km	A	A	A	A	mm	kg / km
Single Core Cable												
C18X601UP	50	0.3870	0.4937	0.204	0.412	0.597	197	206	209	255	24.7	999
C19X601UP	70	0.2680	0.3420	0.234	0.387	0.572	242	252	262	319	26.5	1230
C20X601UP	95	0.1930	0.2465	0.253	0.373	0.558	287	299	317	384	27.7	1479
C21X601UP	120	0.1530	0.1956	0.275	0.361	0.546	326	339	366	443	29.3	1761
C22X601UP	150	0.1240	0.1588	0.297	0.351	0.536	364	375	416	498	30.9	2111
C23X601UP	185	0.0991	0.1272	0.324	0.338	0.522	411	422	478	570	32.8	2512
C24X601UP	240	0.0754	0.0973	0.360	0.324	0.509	475	484	565	669	35.4	3083
C25X601UP	300	0.0601	0.0781	0.402	0.313	0.498	535	542	650	765	38.0	3718
C26X601UP	400	0.0470	0.0618	0.442	0.304	0.489	591	599	745	853	41.0	4661
C27X601UP	500	0.0366	0.0490	0.495	0.293	0.478	659	674	859	975	44.6	3808
C28X601UP	630	0.0283	0.0391	0.548	0.285	0.470	728	752	981	1103	48.3	7127
C29X601UP	800	0.0221	0.0319	0.616	0.277	0.462	869	979	1160	1480	53.2	9010
Three Core Cable												
C18X603UP	50	0.3870	0.4938	0.204	0.376	-	197	-	206	-	48.3	2990
C19X603UP	70	0.2680	0.3423	0.234	0.354	-	241	-	257	-	52.3	3725
C20X603UP	95	0.1930	0.2469	0.253	0.340	-	286	-	309	-	55.1	4505
C21X603UP	120	0.1530	0.1961	0.275	0.329	-	325	-	356	-	58.4	5410
C22X603UP	150	0.1240	0.1595	0.297	0.320	-	364	-	405	-	62.0	6415
C23X603UP	185	0.0991	0.1282	0.324	0.308	-	410	-	463	-	65.9	7685
C24X603UP	240	0.0754	0.0986	0.360	0.295	-	475	-	546	-	71.10	9540
C25X603UP	300	0.0601	0.0799	0.402	0.288	-	535	-	626	-	76.9	11590

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

8.7/15 (17.5) kV



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

Description

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

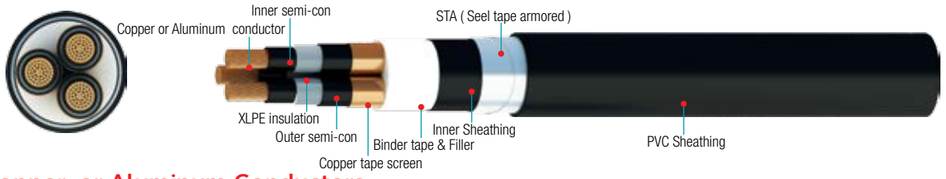
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C	Operating capacitance	Trefoil	Flat	Laid in ground		Laid in free air			
	mm²	Ω/km	Ω/km	µ f/km	mh/km	mh/km	A	A	A	A	mm	kg / km
Single Core Cable												
A18X601UP	50	0.6410	0.8220	0.204	0.412	0.597	153	160	162	198	24.6	700
A19X601UP	70	0.4430	0.5681	0.234	0.387	0.572	188	196	204	248	26.2	800
A20X601UP	95	0.3200	0.4105	0.253	0.373	0.558	222	233	246	299	27.7	905
A21X601UP	120	0.2530	0.3247	0.275	0.361	0.546	254	265	284	346	29.3	1020
A22X601UP	150	0.2060	0.2645	0.297	0.351	0.536	283	295	324	391	30.9	1215
A23X601UP	185	0.1640	0.2107	0.324	0.338	0.522	321	333	373	449	32.8	1370
A24X601UP	240	0.1250	0.1610	0.360	0.324	0.509	372	385	443	530	35.3	1595
A25X601UP	300	0.1000	0.1291	0.402	0.313	0.498	421	433	511	608	37.7	1825
A26X601UP	400	0.0778	0.1009	0.442	0.304	0.489	478	483	593	693	41	2270
A27X601UP	500	0.0605	0.0791	0.495	0.293	0.478	544	545	693	802	44.6	2670
A28X601UP	630	0.0469	0.0621	0.548	0.288	0.470	612	617	803	921	48.2	3180
A29X601UP	800	0.0367	0.0495	0.616	0.277	0.462	715	786	954	1188	53.2	3870
Three Core Cable												
A18X603UP	50	0.6410	0.8220	0.204	0.376		153		160		47.6	2040
A19X603UP	70	0.4430	0.5683	0.234	0.354		187		200		51.3	2375
A20X603UP	95	0.3200	0.4107	0.253	0.340		222		240		54.7	2730
A21X603UP	120	0.2530	0.3250	0.275	0.329		253		277		58	3120
A22X603UP	150	0.2060	0.2649	0.297	0.320		283		314		61.6	3645
A23X603UP	185	0.1640	0.2114	0.324	0.308		320		361		65.7	4205
A24X603UP	240	0.1250	0.1618	0.360	0.295		371		427		70.4	4975
A25X603UP	300	0.1000	0.1302	0.402	0.288		420		491		76	5775

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

8.7/15 (17.5) kV



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

Description

• Stranded circular compacted copper or aluminium conductor, semiconducting layer as conductor screen. XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as a metallic insulation screen, three cores assembled together with non hygroscopic polypropylene fillers,warpped with binder tape , covered with layer pf PVC compound as bedding , steel tape armoured and PVC sheathed

• Cables are produced according to IEC 60502 or BS 6622.

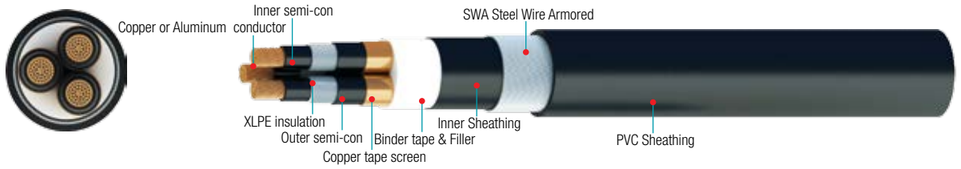
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in groung	Laid in Free Air		
	mm²	Ω/km	Ω/km	μ f/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X603IP	50	0.3870	0.4938	0.204	0.376	185	192	52.7	4055
C19X603IP	70	0.2680	0.3423	0.234	0.354	226	237	56.7	4875
C20X603IP	95	0.1930	0.2469	0.253	0.340	269	286	59.9	5790
C21X603IP	120	0.1530	0.1961	0.275	0.330	306	328	63.4	6790
C22X603IP	150	0.1240	0.1595	0.297	0.320	342	371	67	7865
C23X503IP	185	0.0991	0.1282	0.324	0.308	386	424	70.9	9220
C24X603IP	240	0.0754	0.0986	0.360	0.296	446	497	76.2	11225
C25X603IP	300	0.0601	0.0799	0.402	0.288	502	566	83.7	14265
Three Cores Aluminium Conductor Cables									
A18X603IP	50	0.6410	0.8220	0.204	0.376	144	149	52.4	3160
A19X603IP	70	0.4430	0.5683	0.234	0.354	176	184	56.1	3575
A20X603IP	95	0.3200	0.4107	0.253	0.340	209	222	59.7	4040
A21X603IP	120	0.2530	0.3250	0.275	0.329	238	255	63.2	4530
A22X603IP	150	0.2060	0.2649	0.279	0.320	266	288	67.0	5180
A23X603IP	185	0.1640	0.2114	0.324	0.308	301	331	70.9	5800
A24X603IP	240	0.1250	0.1618	0.360	0.295	349	389	76.0	6755
A25X603IP	300	0.1000	0.1302	0.402	0.288	394	444	83.0	8500

The above data is approximate and subjected to manufacturing tolerance.

8.7/15 (17.5) kV



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

Description

• Stranded circular compacted copper or aluminium conductor, semiconducting layer as conductor screen. XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as a metallic insulation screen, three cores assembled together with non hygroscopic polypropylene fillers,warpped with binder tape , covered with layer of PVC compound as bedding , steel wire armoured and PVC sheathed

• Cables are produced according to IEC 60502 or BS 6622.

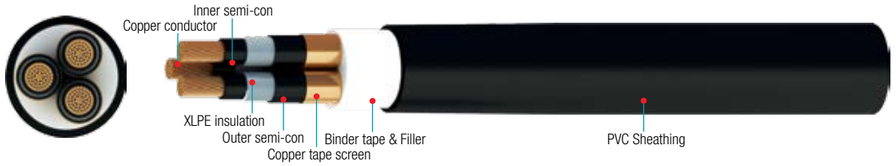
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in groung	Laid in Free Air		
	mm²	Ω/km	Ω/km	μ f/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X603HP	50	0.3870	0.4938	0.204	0.376	187	195	55.9	5715
C19X603HP	70	0.2680	0.3423	0.234	0.354	227	241	59.9	6650
C20X603HP	95	0.1930	0.2469	0.253	0.34	269	289	63.1	7655
C21X603HP	120	0.1530	0.1961	0.275	0.330	305	331	66.6	8765
C22X603HP	150	0.1240	0.1595	0.297	0.320	340	372	72.3	10935
C23X603HP	185	0.0991	0.1282	0.324	0.308	381	423	76.2	12450
C24X603HP	240	0.0754	0.0986	0.360	0.296	436	494	81.5	14735
C25X603HP	300	0.0601	0.0799	0.402	0.288	485	556	87.6	17230
Three Cores Aluminium Conductor Cables									
A18X603HP	50	0.6410	0.8220	0.204	0.376	145	152	55.6	4715
A19X603HP	70	0.4430	0.5683	0.234	0.354	177	188	59.3	5245
A20X603HP	95	0.3200	0.4107	0.253	0.340	210	225	62.9	5825
A21X603HP	120	0.2530	0.3250	0.275	0.329	238	259	66.4	6400
A22X603HP	150	0.2060	0.2649	0.279	0.320	265	291	72.3	8095
A23X603HP	185	0.1640	0.2114	0.324	0.308	300	332	76.2	8865
A24X603HP	240	0.1250	0.1618	0.360	0.295	346	391	81.1	9850
A25X603HP	300	0.1000	0.1302	0.402	0.288	387	442	86.9	11135

The above data is approximate and subjected to manufacturing tolerance.

12/20 (24) kV



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

Description

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

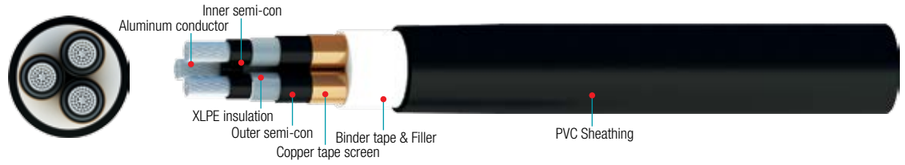
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat	Laid in ground		Laid in free Air			
	mm²	Ω/km	Ω/km	μ f/km	mh/km	mh/km	A	A	A	A	mm	kg / km
Single Core Cable												
C18X701UP	50	0.3870	0.4937	0.177	0.428	0.613	197	206	209	255	26.7	1070
C19X701UP	70	0.2680	0.3420	0.202	0.403	0.588	242	252	262	319	28.7	1320
C20X701UP	95	0.1930	0.2465	0.217	0.389	0.573	287	299	317	384	29.9	1575
C21X701UP	120	0.1530	0.1956	0.236	0.376	0.561	326	339	366	443	31.5	1860
C22X701UP	150	0.1240	0.1588	0.254	0.365	0.550	364	375	416	498	33.1	2220
C23X701UP	185	0.0991	0.1272	0.276	0.350	0.535	411	422	478	570	35.0	2625
C24X701UP	240	0.0754	0.0973	0.305	0.335	0.520	475	484	565	669	37.4	3185
C25X701UP	300	0.0601	0.0781	0.340	0.325	0.510	535	542	650	765	40.2	3845
C26X701UP	400	0.0470	0.618	0.373	0.313	0.498	591	599	745	853	43.0	4780
C27X701UP	500	0.0366	0.0490	0.417	0.302	0.487	659	674	859	975	46.6	5930
C28X701UP	630	0.0283	0.0391	0.460	0.293	0.478	728	752	981	1103	50.3	7265
C29X701UP	800	0.0221	0.0319	0.516	0.285	0.470	869	979	1160	1480	55.4	9200
Three Core Cable												
C18X703UP	50	0.3870	0.4938	0.177	0.394	-	197	-	206	-	52.8	3255
C19X703UP	70	0.2680	0.3423	0.202	0.370	-	241	-	257	-	56.9	4035
C20X703UP	95	0.1930	0.2469	0.217	0.357	-	286	-	309	-	59.7	4865
C21X703UP	120	0.1530	0.1961	0.236	0.345	-	325	-	356	-	63.1	5800
C22X703UP	150	0.1240	0.1595	0.254	0.336	-	364	-	405	-	66.7	6835
C23X703UP	185	0.0991	0.1282	0.276	0.321	-	410	-	463	-	70.2	8110
C24X703UP	240	0.0754	0.0986	0.305	0.308	-	485	-	546	-	75.6	9960
C25X703UP	300	0.0601	0.0799	0.340	0.299	-	535	-	626	-	81.6	12085

This data is applicable for 12.7 / 22 KV cables
The ampacity for single core sizes 800 mm2 was based on a single end bonding
The above data is approximate and subjected to manufacturing tolerance.

12/20 (24) kV



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

Description

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

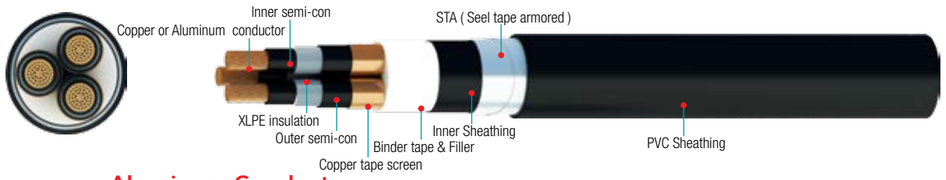
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat	Laid in ground		Laid in free Air			
	mm²	Ω/km	Ω/km	μ f/km	mh/km	mh/km	A	A	A	A	mm	kg / km
Single Core Cable												
A18X701UP	50	0.6410	0.8220	0.177	0.428	0.613	153	160	162	198	26.6	775
A19X701UP	70	0.4430	0.5681	0.202	0.403	0.588	188	196	204	248	28.4	890
A20X701UP	95	0.3200	0.4105	0.217	0.389	0.573	222	233	246	299	29.9	1000
A21X701UP	120	0.2530	0.3247	0.236	0.376	0.561	254	265	284	346	31.5	1125
A22X701UP	150	0.2060	0.2645	0.254	0.365	0.550	283	295	324	391	33.1	1320
A23X701UP	185	0.1640	0.2107	0.276	0.350	0.535	321	333	373	449	35.0	1475
A24X701UP	240	0.1250	0.1610	0.305	0.335	0.520	372	385	443	530	37.3	1700
A25X701UP	300	0.1000	0.1291	0.340	0.325	0.510	421	433	511	608	39.9	1945
A26X701UP	400	0.0778	0.1009	0.373	0.313	0.498	478	483	593	693	43.0	2390
A27X701UP	500	0.0605	0.0791	0.417	0.302	0.487	544	545	693	802	46.6	2800
A28X701UP	630	0.0469	0.0621	0.460	0.293	0.478	612	617	803	921	50.2	3325
A29X701UP	800	0.0367	0.0495	0.516	0.285	0.470	715	786	954	1188	55.4	4060
Three Core Cable												
A18X703UP	50	0.6410	0.8220	0.177	0.394	-	153	-	160	-	52.0	2295
A19X703UP	70	0.4430	0.5683	0.202	0.370	-	187	-	200	-	55.6	2650
A20X703UP	95	0.3200	0.4107	0.217	0.357	-	222	-	240	-	59.1	3060
A21X703UP	120	0.2530	0.3250	0.236	0.345	-	253	-	277	-	62.3	3470
A22X703UP	150	0.2060	0.2649	0.254	0.336	-	283	-	314	-	65.9	4025
A23X703UP	185	0.1640	0.2114	0.276	0.321	-	320	-	361	-	70.0	4605
A24X703UP	240	0.1250	0.1618	0.305	0.308	-	371	-	427	-	75.2	5420
A25X703UP	300	0.1000	0.1302	0.340	0.299	-	420	-	491	-	80.3	6175

This data is applicable for 12.7 / 22 KV cables
The ampacity for single core sizes 800 mm2 was based on a single end bonding
The above data is approximate and subjected to manufacturing tolerance.

12/20 (24) kV



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

Description

• Stranded circular compacted copper or aluminium conductor, semiconducting layer as conductor screen. XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as a metallic insulation screen, three cores assembled together with non hygroscopic polypropylene fillers,warpped with binder tape , covered with layer of PVC compound as bedding , steel tape armoured and PVC sheathed

• Cables are produced according to IEC 60502 or BS 6622.

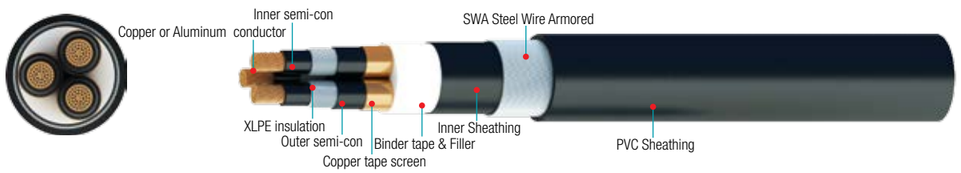
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μ f/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X703IP	50	0.3870	0.4938	0.177	0.394	185	192	57.6	4490
C19X703IP	70	0.2680	0.3423	0.202	0.370	226	237	61.6	5360
C20X703IP	95	0.1930	0.2469	0.217	0.357	269	286	64.7	6290
C21X703IP	120	0.1530	0.1961	0.236	0.345	306	328	67.9	7265
C22X703IP	150	0.1240	0.1595	0.254	0.336	342	371	71.5	8380
C23X703IP	185	0.0991	0.1282	0.276	0.321	386	424	75.4	9810
C24X703IP	240	0.0754	0.0986	0.305	0.308	446	497	82.4	12590
C25X703IP	300	0.0601	0.0799	0.340	0.299	502	566	88.4	14920
Three Cores Aluminium Conductor Cables									
A18X703IP	50	0.6410	0.8220	0.177	0.394	144	149	57.2	3570
A19X703IP	70	0.4430	0.5683	0.202	0.370	176	184	60.8	4010
A20X703IP	95	0.3200	0.4107	0.217	0.357	209	222	64.5	4535
A21X703IP	120	0.2530	0.3250	0.236	0.345	238	255	68.1	5085
A22X703IP	150	0.2060	0.2649	0.254	0.336	266	288	71.7	5730
A23X703IP	185	0.1640	0.2114	0.276	0.321	301	331	75.4	6390
A24X703IP	240	0.1250	0.1618	0.305	0.308	349	389	82.1	8110
A25X703IP	300	0.1000	0.1302	0.340	0.299	394	444	87.9	9180

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

12/20 (24) kV



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

Description

• Stranded circular compacted copper or aluminium conductor, semiconducting layer as conductor screen. XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as a metallic insulation screen, three cores assembled together with non hygroscopic polypropylene fillers,warpped with binder tape , covered with a layer pf PVC compound as bedding , steel wire armoured and PVC sheathed

• Cables are produced according to IEC 60502 or BS 6622.

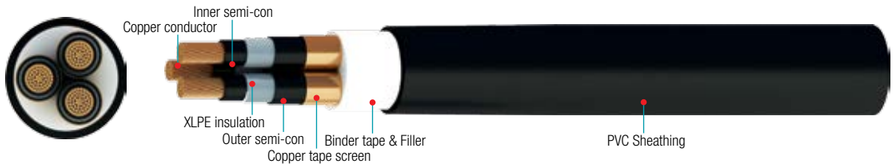
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μf/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X703HP	50	0.3870	0.4938	0.177	0.394	187	195	60.8	6295
C19X703HP	70	0.2680	0.3423	0.202	0.370	227	241	64.9	7280
C20X703HP	95	0.1930	0.2469	0.217	0.357	269	289	67.9	8300
C21X703HP	120	0.1530	0.1961	0.236	0.345	305	331	73.2	10350
C22X703HP	150	0.1240	0.1595	0.254	0.336	340	372	76.8	11670
C23X703HP	185	0.0991	0.1282	0.276	0.321	381	423	80.5	13225
C24X703HP	240	0.0754	0.0986	0.305	0.308	436	494	86.3	15515
C25X703HP	300	0.0601	0.0799	0.340	0.299	485	556	92.5	18095
Three Cores Aluminium Conductor Cables									
A18X703HP	50	0.6410	0.8220	0.177	0.394	145	152	60.4	5270
A19X703HP	70	0.4430	0.5683	0.202	0.370	177	188	64.0	5820
A20X703HP	95	0.3200	0.4107	0.217	0.357	210	225	67.7	6460
A21X703HP	120	0.2530	0.3250	0.236	0.345	238	259	73.2	8045
A22X703HP	150	0.2060	0.2649	0.254	0.336	265	291	76.8	8815
A23X703HP	185	0.1640	0.2114	0.276	0.321	300	332	81.1	9675
A24X703HP	240	0.1250	0.1618	0.305	0.308	346	391	86.0	10775
A25X703HP	300	0.1000	0.1302	0.340	0.299	387	442	91.8	12050

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

18/30 (36) kV



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

Description

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

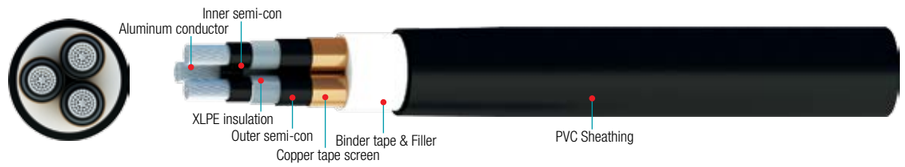
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat	Laid in ground		Laid in free Air			
	mm²	Ω/km	Ω/km	₩/km	mh/km	mh/km	A	A	A	A	mm	kg / km
Single Core Cable												
C18X801UP	50	0.3870	0.4937	0.138	0.465	0.649	197	206	209	255	32.1	1325
C19X801UP	70	0.2680	0.3420	0.156	0.436	0.621	242	252	262	319	33.9	1575
C20X801UP	95	0.1930	0.2465	0.167	0.422	0.607	287	299	317	384	35.3	1855
C21X801UP	120	0.1530	0.1956	0.180	0.406	0.591	326	339	366	443	36.7	2140
C22X801UP	150	0.1240	0.1588	0.192	0.395	0.580	364	375	416	498	38.5	2525
C23X801UP	185	0.0991	0.1272	0.208	0.378	0.563	411	422	478	570	40.2	2930
C24X801UP	240	0.0754	0.0973	0.228	0.362	0.547	475	484	565	669	42.8	3540
C25X801UP	300	0.0601	0.0781	0.252	0.350	0.535	535	542	650	765	45.6	4225
C26X801UP	400	0.0470	0.0618	0.275	0.337	0.522	591	599	745	853	48.4	5165
C27X801UP	500	0.0366	0.0490	0.306	0.324	0.509	659	674	859	975	52.0	6350
C28X801UP	630	0.0283	0.0391	0.336	0.313	0.498	728	752	981	1103	55.7	7715
C29X801UP	800	0.0221	0.0319	0.374	0.303	0.488	869	979	1160	1480	60.6	9660
Three Core Cable												
C18X803UP	50	0.3870	0.4938	0.138	0.436	-	197	-	206	-	63.0	3990
C19X803UP	70	0.2680	0.3423	0.156	0.410	-	241	-	257	-	67.1	4835
C20X803UP	95	0.1930	0.2469	0.167	0.395	-	286	-	309	-	69.9	5705
C21X803UP	120	0.1530	0.1961	0.180	0.381	-	325	-	356	-	73.1	6645
C22X803UP	150	0.1240	0.1595	0.192	0.368	-	364	-	405	-	76.3	7645
C23X803UP	185	0.0991	0.1282	0.208	0.353	-	410	-	463	-	82.2	9385
C24X803UP	240	0.0754	0.0986	0.228	0.338	-	475	-	546	-	85.8	10865
C25X803UP	300	0.0601	0.0799	0.252	0.327	-	535	-	626	-	91.8	13115

This data is applicable for 19 / 33 KV cables
The ampacity for single core sizes 800 mm2 was based on a single end bonding
The above data is approximate and subjected to manufacturing tolerance.

18/30 (36) kV



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

Description

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

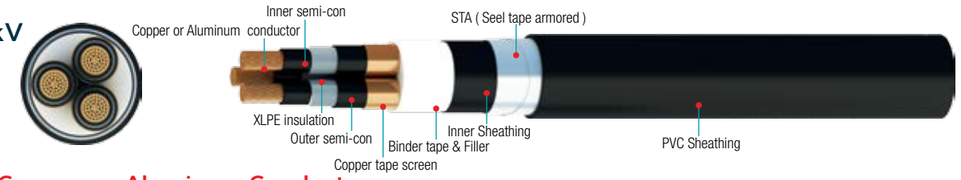
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat	Laid in ground		Laid in free Air			
	mm²	Ω/km	Ω/km	₩/km	mh/km	mh/km	A	A	A	A	mm	kg / km
Single Core Cable												
A18X801UP	50	0.6410	0.8220	0.138	0.465	0.649	153	160	162	198	32.0	1025
A19X801UP	70	0.4430	0.5681	0.156	0.436	0.621	188	196	204	248	33.6	1140
A20X801UP	95	0.3200	0.4105	0.167	0.422	0.607	222	233	246	299	35.3	1270
A21X801UP	120	0.2530	0.3247	0.180	0.406	0.591	254	265	284	346	36.7	1400
A22X801UP	150	0..2060	0.2645	0.192	0.395	0.580	283	295	324	391	38.5	1630
A23X801UP	185	0.1640	0.2107	0.208	0.378	0.563	321	333	373	449	40.2	1790
A24X801UP	240	0.1250	0.1610	0.228	0.362	0.547	372	385	443	530	42.7	2050
A25X801UP	300	0.1000	0.1291	0.252	0.350	0.535	421	433	511	608	45.3	2320
A26X801UP	400	0.0778	0.1009	0.275	0.337	0.522	478	483	593	693	48.4	2775
A27X801UP	500	0.0605	0.0791	0.306	0.324	0.509	544	545	693	802	52.0	3215
A28X801UP	630	0.0469	0.0621	0.336	0.313	0.498	612	617	803	921	55.6	3765
A29X801UP	800	0.0367	0.0495	0.374	0.303	0.488	715	786	954	1188	60.6	4515
Three Core Cable												
A18X803UP	50	0.6410	0.8220	0.138	0.436	-	153	-	160	-	62.8	3095
A19X803UP	70	0.4430	0.5683	0.156	0.410	-	187	-	200	-	66.4	3525
A20X803UP	95	0.3200	0.4107	0.167	0.395	-	222	-	240	-	69.9	3985
A21X803UP	120	0.2530	0.3250	0.180	0.381	-	253	-	277	-	73.1	4435
A22X803UP	150	0..2060	0.2649	0.192	0.368	-	283	-	314	-	76.3	4960
A23X803UP	185	0.1640	0.2114	0.208	0.353	-	320	-	361	-	80.4	5555
A24X803UP	240	0.1250	0.1618	0.228	0.338	-	371	-	427	-	85.5	6390
A25X803UP	300	0.1000	0.1302	0.252	0.327	-	420	-	491	-	91.1	7350

This data is applicable for 19 / 33 KV cables
The ampacity for single core sizes 800 mm2 was based on a single end bonding
The above data is approximate and subjected to manufacturing tolerance.

18/30 (36) kV



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

Description

• Stranded circular compacted copper or aluminium conductor, semiconducting layer as conductor screen. XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as a metallic insulation screen, three cores assembled together with non hygroscopic polypropylene fillers,warpped with binder tape , covered with a layer of PVC compound as bedding , steel tape armoured and PVC sheathed

• Cables are produced according to IEC 60502 or BS 6622.

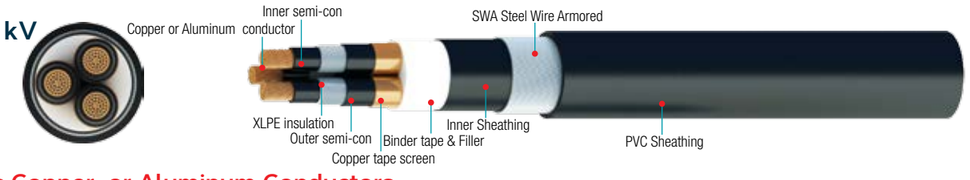
Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μ f/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X803IP	50	0.3870	0.4938	0.138	0.436	185	192	69.4	5730
C19X803IP	70	0.2680	0.3423	0.156	0.410	226	237	73.7	6725
C20X803IP	95	0.1930	0.2469	0.167	0.395	269	286	76.7	7705
C21X803IP	120	0.1530	0.1961	0.180	0.381	306	328	81.3	9720
C22X803IP	150	0.1240	0.1595	0.192	0.368	342	371	84.7	10680
C23X803IP	185	0.0991	0.1282	0.208	0.353	386	424	88.6	12120
C24X803IP	240	0.0754	0.0986	0.229	0.338	446	497	94.4	14310
C25X803IP	300	0.0601	0.0799	0.252	0.327	502	566	100.4	16790
Three Cores Aluminium Conductor Cables									
A18X803IP	50	0.6410	0.8220	0.138	0.436	144	149	69.2	4830
A19X803IP	70	0.4430	0.5683	0.156	0.410	176	184	73.0	5395
A20X803IP	95	0.3200	0.4107	0.167	0.395	209	222	76.7	5980
A21X803IP	120	0.2530	0.3250	0.180	0.381	238	255	81.3	7310
A22X803IP	150	0.2060	0.2649	0.192	0.368	266	288	84.7	7995
A23X803IP	185	0.1640	0.2114	0.208	0.353	301	331	88.6	8700
A24X803IP	240	0.1250	0.1618	0.228	0.338	349	389	94.1	9820
A25X803IP	300	0.1000	0.1302	0.252	0.327	394	444	99.7	11000

This data is applicable for 19 / 33 KV cables
The above data is approximate and subjected to manufacturing tolerance.

18/30 (36) kV



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

Description

• Stranded circular compacted copper or aluminium conductor, semiconducting layer as conductor screen. XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as a metallic insulation screen, three cores assembled together with non hygroscopic polypropylene fillers,warpped with binder tape , covered with a layer of PVC compound as bedding , steel wire armoured and PVC sheathed

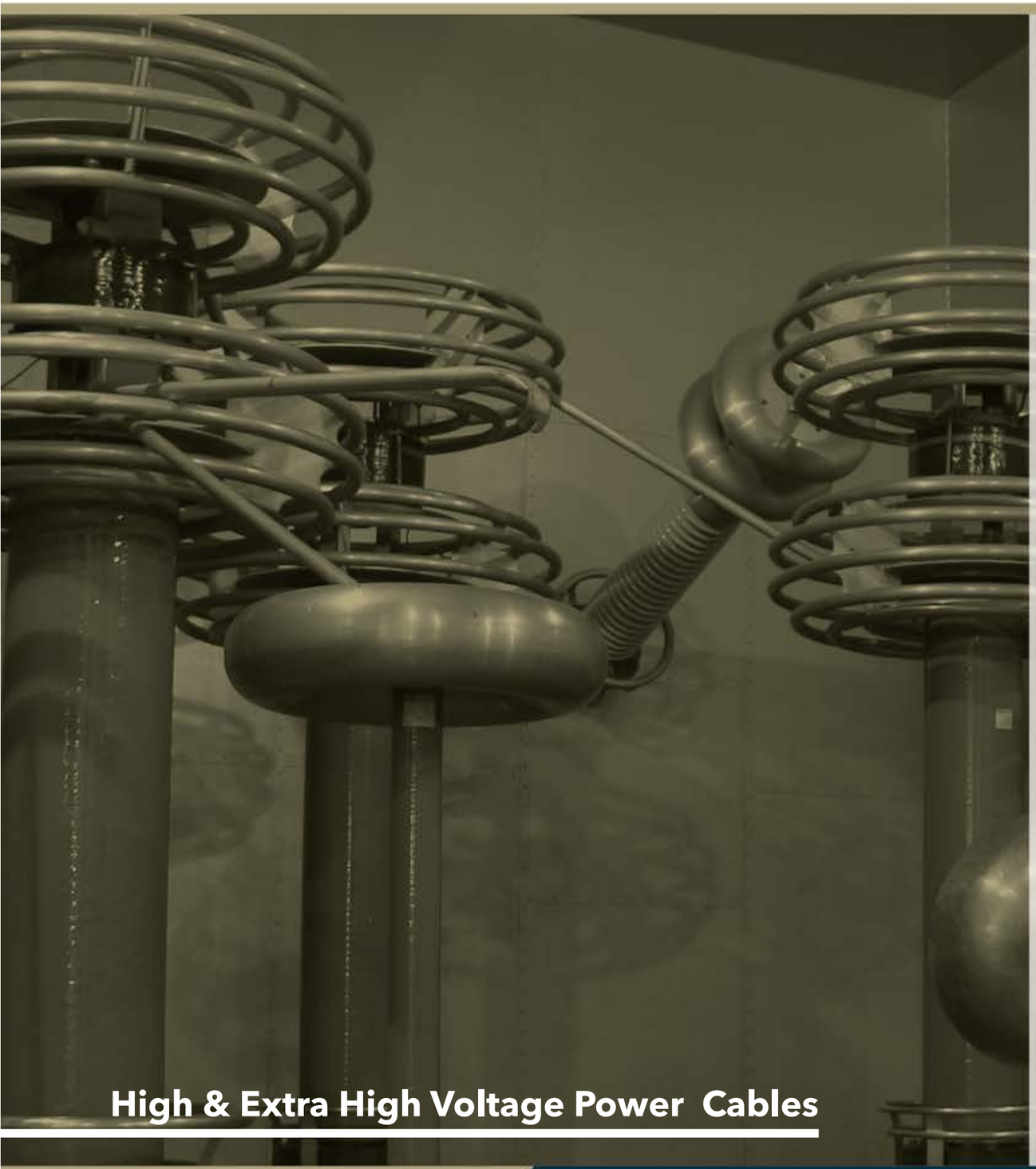
• Cables are produced according to IEC 60502 or BS 6622.

Application

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

Product-Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx Weight
		DC at 20 °C	AC at 90 °C			Laid in ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μf/km	mh/km	A	A	mm	kg / km
Three Cores Copper Conductor Cables									
C18X803HP	50	0.3870	0.4938	0.138	0.436	187	195	74.7	8910
C19X803HP	70	0.2680	0.3423	0.156	0.410	227	241	78.8	10025
C20X803HP	95	0.1930	0.2469	0.167	0.395	269	289	81.8	11175
C21X803HP	120	0.1530	0.1961	0.180	0.381	305	331	85.2	12500
C22X803HP	150	0.1240	0.1595	0.192	0.368	340	372	88.4	13595
C23X803HP	185	0.0991	0.1282	0.208	0.353	381	423	92.5	15255
C24X803HP	240	0.0754	0.0986	0.228	0.338	436	494	98.3	17665
C25X803HP	300	0.0601	0.0799	0.252	0.327	485	556	104.5	20405
Three Cores Aluminium Conductor Cables									
A18X803HP	50	0.6410	0.8220	0.138	0.436	145	152	74.3	7810
A19X803HP	70	0.4430	0.5683	0.156	0.410	177	188	78.3	8560
A20X803HP	95	0.3200	0.4107	0.167	0.395	210	225	81.8	9265
A21X803HP	120	0.2530	0.3250	0.180	0.381	238	259	85.2	9995
A22X803HP	150	0.2060	0.2649	0.192	0.368	265	291	88.6	10800
A23X803HP	185	0.1640	0.2114	0.208	0.353	300	332	92.5	11615
A24X803HP	240	0.1250	0.1618	0.228	0.338	346	391	98.0	12880
A25X803HP	300	0.1000	0.1302	0.252	0.327	387	442	103.8	14300

This data is applicable for 19 / 33 KV cables
The above data is approximate and subjected to manufacturing tolerance.



High & Extra High Voltage Power Cables

Operating Voltage

from 38 / 66 KV up to 127 / 220 KV

Cable Construction

1. Conductor

Conductor consists of stranded Aluminum or soft drawn copper that produced by two technologies:

a. Circular Compacted

Multi layers of stranded wires are assembled together to form a circular compacted conductor

b. Segmental Conductor (Applied from C.S.A = 1000 mm2 and above)

Five segments of compacted conductor in sector shape of 72o are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac

Water blocking:

Upon request, swelling powder should be applied between the conductor strands then Followed by swelling semi conductive water blocking tape over the complete conductor

2. Conductor Screen (Bonded to the inner layer of the insulation layer)

An extruded layer of cross linkable semi conducting applied over the conductor to reduce and control the electric stress beneath the (XLPE) insulation layer

3. Cross Linked Polyethylene (XLPE) Insulation

An extruded layer of XLPE of high grad is extruded in dry cooling & curing continuous vulcanizing line.

4. Insulation Screen (Bonded to the outer layer of the insulation layer)

An extruded layer of cross linkable semi conducting is applied over the insulation layer to insure that the electric stress is homogenous around the insulated core.

Conductor screen, insulation and insulation screen are applied in one process (triple extrusion process) to insure that all extruded layers are bonded together.

5. Metallic Screen / Sheath

One or multi layers of metallic screen / sheath such as copper wires, lead, aluminum, etc. shall be applied as a return path of earth fault current. Metallic sheaths may be used for water blocking protection and mechanical protection.

6. Overall Jacket (Outer Sheath)

An extruded layer of PVC, PE (HDPE, LDPE, and MDPE) shall be applied over the metallic layers for protection against chemical reaction & mechanical protection.

Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose

Designation Code for High & Extra High Voltage Power Cables
You can order our product by giving the following informations

1- cable codes as per the catalogue
2- if your requirements is out of our catalogue product range, you can use the following map to identify the code

0 | 00 | 0 | 0 | 00 | 0 | 0

Conductor Material

G	Copper + Swelling Powder + S.C Tape
E	Aluminum + Swelling Powder + S.C Tape
M	Copper Millikan + Swelling Powder + S.C Tape
N	Aluminum Millikan + Swelling Powder + S.C Tape

C.S.A mm2

25	300
26	400
27	500
28	630
29	800
30	1000
31	1200
32	1600
33	2000

Insulation Type

X	XLPE

Voltage Grade

9	26/45 (52) KV
A	38/66 (72.5) KV
B	64/115 (123) KV
C	76/132 (145) KV
D	87/150 (170) KV
E	127/220 (245) KV

No. of Cores

01	1

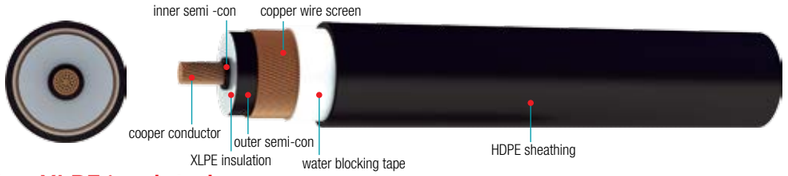
Armoring & Shielding

B	Lead Sheathed
P	Copper Screen + Aluminum foil Shield
R	Copper Screen + Lead
S	Copper Screen + Galavanized Steel Wires
A	Copper Screen + Aluminum Wires
C	Copper Screen + Aluminum Tapes

Outer Sheathing Type

P	PVC
F	PVC / FR
S	LSHF
H	HDPE
L	LDPE
E	LLDPE
M	MDPE

38 / 66 (72.5) kv



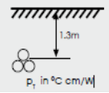
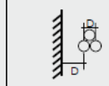
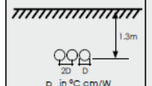
Single Core Copper Conductor, XLPE insulated, Copper Wire Screen and HDPE Sheathed

Stranded circular compacted copper conductor, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metalic insulation screen, Semi-conductive water blocking tape copper wire as metalic insulation screen to withstand the requierd earth fault current, non-conductive water blocking tape to protect the screen area from longitudinal water perettation. copolymer aluminium tape to protect the cable from radial water penetrafion and HDPE sheathed with graphite coating or extruded semi-conducting layer Cabels are designed and tested to comply with IEC 60228, 60840 and 60811.

Constructional Data

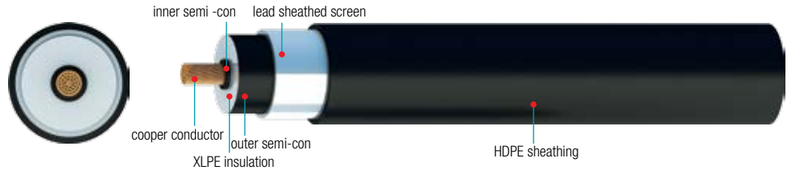
Product-Code	Cross Seational Area	Max. DC Conductor Resistance		Operating Capacitance	Inductance		Approx. overall diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat		
	mm²	(Ω/km)	(Ω/km)	(µf/km)	(mh/km)	(mh/km)	mm	kg/km
G25XA01PH	300 R	0.0601	0.0782	0.2241	0.4029	0.5415	59	5460
G26XA01PH	400 R	0.047	0.062	0.2434	0.3857	0.5243	61.7	6360
G27XA01PH	500 R	0.0366	0.0495	0.2669	0.3695	0.5081	65	7530
G28XA01PH	630 R	0.0283	0.0398	0.2924	0.3548	0.4934	68.6	8920
G29XA01PH	800 R	0.0221	0.0329	0.3214	0.3409	0.4795	72.7	10840
M30XA01PH	1000 S	0.0176	0.0236	0.3819	0.3279	0.4666	81.7	13680
M31XA01PH	1200 S	0.0151	0.0207	0.4002	0.3219	0.4605	84.3	15100

Continous Current Ratings Load Factor = 100% for one circuit in operation (Amperes)

Laying conditions: trefoil formation						Laying condition: flat formation				
Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)		Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)	
											
		"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C		mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C
Bonded at both end	300 R	514	430	738	665	Cross or single point bonding	300 R	561	471	871	787
	400 R	577	482	845	761		400 R	639	536	1010	913
	500 R	643	538	966	871		500 R	729	611	1175	1061
Cross or single point bonding	630 R	774	647	1168	1052		630 R	829	694	1363	1232
	800 R	863	720	1332	1199		800 R	935	782	1573	1421
	1000 S	1040	868	1658	1494		1000 S	1112	929	1926	1740
	1200 S	1119	933	1797	1618		1200 S	1200	1002	2095	1893

* R: Round Conductor
* S: Segmental Conductor

38 / 66 (72.5) kv



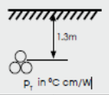
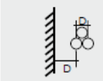
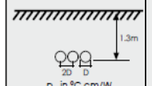
Single Core Copper Conductor, XLPE insulated, Lead Sheathed Screen and HDPE Sheathed

Stranded circular compacted copper conductor, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metalic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, lead sheathed with suitable thickness to withstand then reqired earth fault current and HDPE sheathed with graphite coating or extruded semi-conducting layer.
Cable are designed and tested to comply with IEC 60228, 60840 and 60811.

Constructional Data

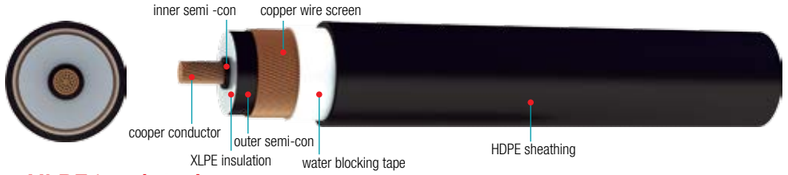
Product-Code	Cross Seational Area	Max. DC Conductor Resistance		Operating Capacitance	Inductance		Approx. overall diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat		
	mm²	(Ω/km)	(Ω/km)	(µf/km)	(mh/km)	(mh/km)	mm	kg/km
G25XA01BH	300 R	0.0601	0.0782	0.2241	0.3977	0.5363	57.5	8300
G26XA01BH	400 R	0.047	0.0621	0.2434	0.3814	0.52	60.4	9595
G27XA01BH	500 R	0.0366	0.0496	0.2669	0.3654	0.5041	63.7	11020
G28XA01BH	630 R	0.0283	0.0398	0.2924	0.351	0.4896	67.3	12690
G29XA01BH	800 R	0.0221	0.0329	0.3214	0.3372	0.4759	71.4	14935
M30XA01BH	1000 S	0.0176	0.0236	0.3819	0.3247	0.4633	80.4	18480
M31XA01BH	1200 S	0.0151	0.0207	0.4002	0.3188	0.4574	83	20100

Continous Current Ratings Load Factor = 100% for one circuit in operation (Amperes)

Laying conditions: trefoil formation						Laying condition: flat formation					
Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)		Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)	
											
		mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C		mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C
Bonded at both end	300 R	532	445	761	686	Cross or single point bonding	300 R	562	472	875	791
	400 R	600	502	876	789		400 R	640	537	1016	918
	500 R	674	563	1007	908		500 R	730	611	1181	1067
Cross or single point bonding	630 R	770	644	1171	1055		630 R	829	694	1369	1237
	800 R	856	715	1334	1202		800 R	934	780	1580	1427
	1000 S	1022	852	1646	1483		1000 S	1105	923	1927	1741
	1200 S	1095	913	1778	1602		1200 S	1190	994	2088	1886

* R: Round Conductor
* S: Segmental Conductor

76/132 (145) kV



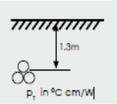
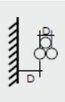
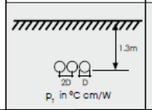
Single core copper conductor, XLPE insulated, Copper Wires Screen & HDPE sheathed

Stranded circular compacted or segmental conductor with copper or Aluminum material ,Semi-Conducting layer as conductor screen , XLPE insulation , Semi-Conducting layer as insulation screen, Semi-Conductive water blocking tape , to protect the metallic screen from longitudinal water penetration, copper wire as metallic screen to withstand the required earth fault current , non conductive water blocking tape to protect the metallic screen from longitudinal water penetration, copolymer aluminum tape to protect the cable from radial water penetration and HDPE Sheathed with graphit coating or extruded semi-conducting layer
Cables are designed and testing according to IEC 60228, 60840 and 60811.

Constructional Data

Product-Code	Cross Seational Area	Max. DC Conductor Resistance		Operating Capacitance	Inductance		Approx. overall diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat		
	mm²	(Ω/km)	(Ω/km)	(µf/km)	(mh/km)	(mh/km)	mm	kg/km
G29XC01PH	800 R	0.0221	0.0323	0.2247	0.377	0.5156	87.1	13390
M30XC01PH	1000 S	0.0176	0.0234	0.2612	0.3596	0.4982	95.7	16365
M31XC01PH	1200 S	0.0151	0.0205	0.2728	0.3526	0.4913	98.3	17835
M32XC01PH	1600 S	0.0113	0.016	0.2967	0.34	0.4786	103.7	22105
M33XC01PH	2000 S	0.009	0.0135	0.3276	0.3263	0.465	110.7	25630
M34XC01PH	2500 S	0.0072	0.0117	0.3606	0.3143	0.4529	118.2	31180

Continous Current Ratings Load Factor = 100% for one circuit in operation (Amperes)

Laying conditions: trefoil formation						Laying condition: flat formation					
Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)		Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)	
											
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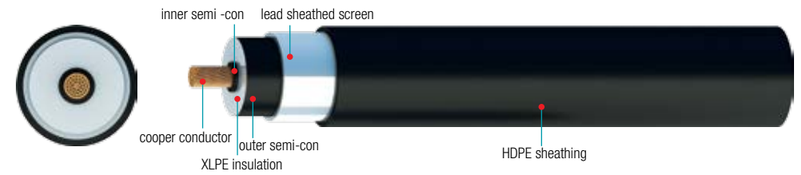
Cross or single point bonding	800 R	872	731	1329	1200	Cross or single point bonding	800 R	938	788	1521	1376
	1000 S	1045	875	1639	1479		1000 S	1115	935	1859	1682
	1200 S	1124	940	1777	1604		1200 S	1203	1009	2022	1829
	1600 S	1294	1081	2107	1901		1600 S	1399	1171	2424	2192
	2000 S	1424	1189	2359	2128		2000 S	1555	1301	2740	2479
	2500 S	1565	1306	2645	2385		2500 S	1703	1423	3141	2751

* R: Round Conductor
* S: Segmental Conductor

76/132 (145) kV



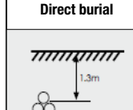
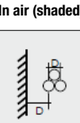
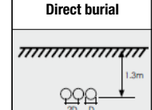
Single core copper conductor, XLPE insulated, Lead Sheathed Screen & HDPE sheathed

Stranded circular compacted or segmental conductor with copper or Aluminum material ,Semi-Conducting layer as conductor screen , XLPE insulation , Semi-Conducting layer as insulation screen, Semi-Conductive water blocking tape , to protect the screen area from longitudinal water penetration, lead sheathed with suitable thickness to withstand the required earth fault current and HDPE Sheathed with graphit coating or extruded semi-conducting layer
Cables are designed and testing according to IEC 60228, 60840 and 60811.

Constructional Data

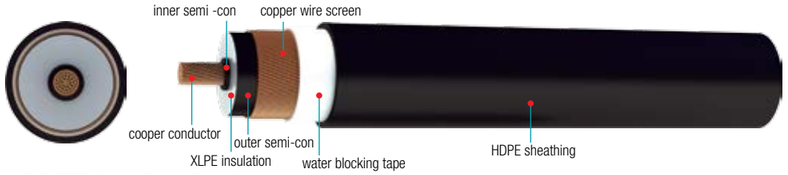
Product-Code	Cross Seational Area	Max. DC Conductor Resistance		Operating Capacitance	Inductance		Approx. overall diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat		
	mm²	(Ω/km)	(Ω/km)	(µf/km)	(mh/km)	(mh/km)	mm	kg/km
G29XC01BH	800 R	0.0221	0.0323	0.2247	0.3754	0.514	86.4	18410
M30XC01BH	1000 S	0.0176	0.0234	0.2612	0.3663	0.505	99	23785
M31XC01BH	1200 S	0.0151	0.0205	0.2728	0.3592	0.4979	101.6	25525
M32XC01BH	1600 S	0.0113	0.016	0.2967	0.3462	0.4849	107	30355
M33XC01BH	2000 S	0.009	0.0135	0.3276	0.3322	0.4708	114	34600
M34XC01BH	2500 S	0.0072	0.0116	0.3606	0.3198	0.4584	121.5	40915

Continous Current Ratings Load Factor = 100% for one circuit in operation (Amperes)

Laying conditions: trefoil formation						Laying condition: flat formation					
Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)		Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)	
											
	mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C		mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C
Cross or single point bonding	800 R	861	721	1324	1195	Cross or single point bonding	800 R	934	784	1522	1377
	1000 S	1019	853	1618	1460		1000 S	1105	925	1852	1676
	1200 S	1091	912	1744	1574		1200 S	1187	995	2011	1820
	1600 S	1229	1026	2043	1843		1600 S	1368	1145	2398	2170
	2000 S	1331	1110	2262	2040		2000 S	1507	1260	2697	2440
	2500 S	1431	1192	2497	2252		2500 S	1661	1387	2995	2651

* R: Round Conductor
* S: Segmental Conductor

127/220 (245) kV



Single core copper conductor, XLPE insulated, Copper Wires Screen & HDPE sheathed

Stranded circular compacted or segmental conductor with copper or Aluminum material ,Semi-Conducting layer as conductor screen , XLPE insulation , Semi-Conducting layer as insulation screen, Semi-Conductive water blocking tape , to protect the metallic screen from longitudinal water penetration, copper wire as metallic screen to withstand the required earth fault current , non conductive water blocking tape to protect the metallic screen from longitudinal water penetration, copolymer aluminum tape to protect the cable from radial water penetration and HDPE Sheathed with graphit coating or extruded semi-conducting layer
Cables are designed and testing according to IEC 60228, 62067 and 60811.

Constructional Data

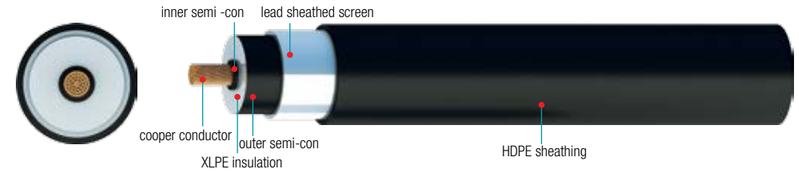
Product-Code	Cross Seational Area	Max. DC Conductor Resistance		Operating Capacitance	Inductance		Approx. overall diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat		
	mm²	(Ω/km)	(Ω/km)	(µf/km)	(mh/km)	(mh/km)	mm	kg/km
M30XE01PH	1000 S	0.0176	0.0234	0.1991	0.388	0.5266	110.3	18520
M31XE01PH	1200 S	0.0151	0.0204	0.2073	0.3803	0.5189	112.9	20050
M32XE01PH	1600 S	0.0113	0.0159	0.2242	0.3663	0.5049	118.3	24435
M33XE01PH	2000 S	0.009	0.0134	0.2459	0.3527	0.4913	126.3	28300
M34XE01PH	2500 S	0.0072	0.0114	0.2691	0.3391	0.4777	133.8	34020

Continous Current Ratings Load Factor = 100% for one circuit in operation (Amperes)

Laying conditions: trefoil formation						Laying condition: flat formation				
Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)		Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)	
		1.3m, ρ_1 in °C cm/W		D				1.3m, 2D D, ρ_1 in °C cm/W		D 2D D	
	mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C		mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C
Cross or single point bonding	1000 S	995	829	1583	1446	Cross or single point bonding	1000 S	1101	922	1781	1612
	1200 S	1065	883	1712	1568		1200 S	1188	995	1935	1752
	1600 S	1191	989	2022	1857		1600 S	1356	1131	2315	2096
	2000 S	1290	1072	2232	2072		2000 S	1535	1281	2616	2367
	2500 S	1389	1150	2480	2236		2500 S	1654	1376	2876	2603

* R: Round Conductor
* S: Segmental Conductor

127/220 (245) kV



Single core copper conductor, XLPE insulated, Lead Sheathed Screen & HDPE sheathed

Stranded circular compacted or segmental conductor with copper or Aluminum material ,Semi-Conducting layer as conductor screen , XLPE insulation , Semi-Conducting layer as insulation screen, Semi-Conductive water blocking tape , to protect the screen area from longitudinal water penetration, lead sheathed with suitable thickness to withstand the required earth fault current and HDPE Sheathed with graphit coating or extruded semi-conducting layer
Cables are designed and testing according to IEC 60228, 62067 and 60811.

Constructional Data

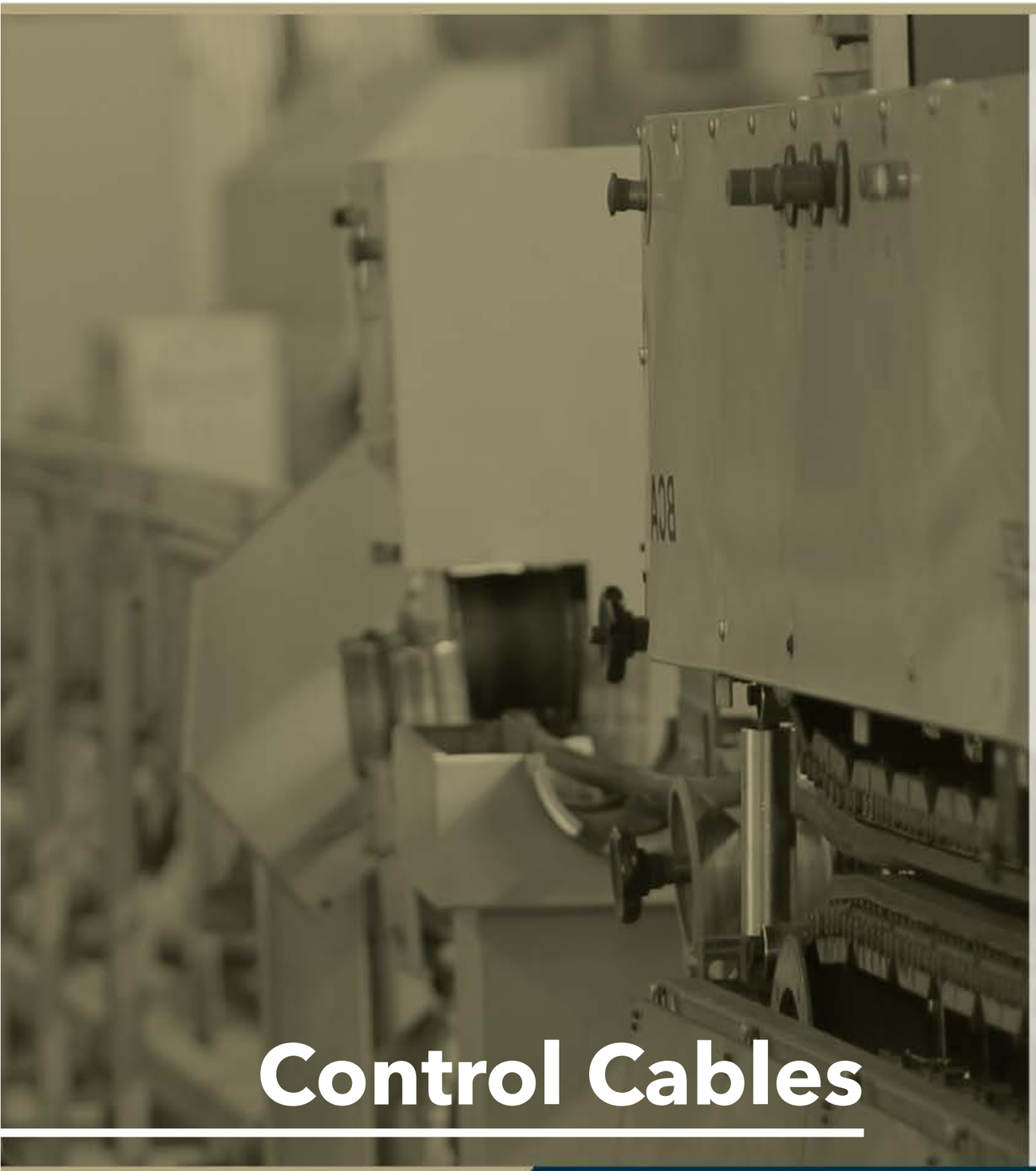
Product-Code	Cross Seational Area	Max. DC Conductor Resistance		Operating Capacitance	Inductance		Approx. overall diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C		Trefoil	Flat		
	mm²	(Ω/km)	(Ω/km)	(µf/km)	(mh/km)	(mh/km)	mm	kg/km
M30XE01BH	1000 S	0.0176	0.0234	0.1991	0.3939	0.5325	113.6	27455
M31XE01BH	1200 S	0.0151	0.0204	0.2073	0.3861	0.5247	116.2	29250
M32XE01BH	1600 S	0.0113	0.0159	0.2242	0.3735	0.5121	122.6	36225
M33XE01BH	2000 S	0.009	0.0133	0.2459	0.3594	0.498	130.6	40945
M34XE01BH	2500 S	0.0072	0.0114	0.2691	0.3454	0.484	138.1	47570

Continous Current Ratings Load Factor = 100% for one circuit in operation (Amperes)

Laying conditions: trefoil formation						Laying condition: flat formation					
Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)		Type of Earthing Bonding System	"Cross Sectional Area"	Direct burial		In air (shaded)	
		1.3m, ρ_1 in °C cm/W		D				1.3m, 2D D, ρ_1 in °C cm/W		D 2D D	
	mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C		mm2	"pT=120 T = 25 °C"	"pT=150 T = 35 °C"	T = 30 °C	T = 40 °C
Cross or single point bonding	1000 S	994	829	1573	1420	Cross or single point bonding	1000 S	1085	908	1773	1606
	1200 S	1061	883	1696	1531		1200 S	1166	975	1924	1742
	1600 S	1191	989	1979	1786		1600 S	1283	1068	2287	2070
	2000 S	1290	1070	2191	1977		2000 S	1475	1227	1229	2326
	2500 S	1383	1145	2416	2180		2500 S	1613	1454	2822	2548

* R: Round Conductor
* S: Segmental Conductor

Control Cables



Control Cables

Operating Voltage (Up to 0.6/1kv)

Cable Construction

1. **Conductor**
   Copper conductors, solid, stranded or flexible.

2. **Insulation**
   An extruded layer of PVC or XLPE is applied over the conductor.
   PVC insulated cables are suitable for maximum conductor operating temperature of 70 °C or 85 °C and 90 °C for XLPE.

3. **Assembly**
   Insulated Conductor are assembled in successive layers, to form cable cores.

4. **Identification**
   1- Colour for cores according to our standard colours and other colours are available on request.
   2- White numbers on black PVC insulation or black numbers on white PVC insulation

5. **Bedding**
   In case of armoured cables an extruded layer of PVC is applied as bedding.

6. **Armouring**
   a. Steel Tape: Double layers of steel tapes are applied helically.
   b. Steel Wire: Galvanized steel wires are applied helically.

7. **Screen (if required)**
   Over the bedded cores a layer of copper tape or wires is applied helically to form the screen.

8. **Sheath**
   An extruded layer of PVC is applied as an outer sheath, or according to the client special requirements.

Option

PVC may be flame retardant upon customer request.

Designation Code for Control Cables
You can order our product by giving the following informations

1- cable codes as per the catalogue
2- if your requirements is out of our catalogue product range, you can use the following map to identify the code

0 | 00 | 0 | 0 | 00 | 0 | 0

Conductor Material

C	Copper Soft Drawn
D	Solid Copper
F	Flexible Copper

C.S.A mm2

07	1
08	1.5
09	2
10	2.5
11	3
12	4
13	6

Insulation Type

P	PVC / A
X	XLPE
F	PVC / FR

Voltage Grade

0	300 / 500 V
1	450/750 V
2	0.6/1 (1.2) KV

No. of Cores

02	2
03	3
04	4
05	5
06	6
7	7
up to 58	58

Armoring & Shielding

U	Unarmored
I	Steel Tapes Armored
H	Galavanized Steel Wires Armored
Z	Galvanized Steel Tapes Armored
L	Copper Wires Shield
M	Copper Tapes Shield

Outer Sheathing Type

P	PVC
F	PVC / FR

600/1000V Control Cables with PVC insulation and PVC sheath

Description

Circular multi cores cables copper conductors, five up to fifty eight cores insulated and sheathed with PVC according to VDE 0271, IEC 60 502.

Construction

1- Conductors	Soft annealed copper, stranded or solid conductors
2- Insulation	PVC rated 70°C or 85°C for continuous operation
3- Sheath	PVC.

Identification

1- Colour for cores according to our standard colours and other colours are available on request.
2- White numbers on black PVC insulation or black numbers on white PVC insulation

Applications

Control cables are used as a traffic signals for indoor, in ducts and in the open. Also for power stations, industrial plants and switching stations.

0.6/1 kV

Control cable PVC insulated and PVC sheath Copper conductor (Solid or Stranded)

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D07P205UP	5 X 1	re	11.4	167	18.1	22.8	14	12.5	11
C07P205UP		rm	11.9	174	18.1	22.8			
D07P207UP	7 X 1	re	12.2	207	18.1	22.8	12	11	10
C07P207UP		rm	12.7	216	18.1	22.8			
D07P210UP	10 X 1	re	15	281	18.1	22.8	11	10	9
C07P210UP		rm	15.6	293	18.1	22.8			
D07P212UP	12 X 1	re	15.4	317	18.1	22.8	10.5	9	8
C07P212UP		rm	16	330	18.1	22.8			
D07P214UP	14 X 1	re	16.1	359	18.1	22.8	10	8	7
C07P214UP		rm	16.8	373	18.1	22.8			
D07P219UP	19 X 1	re	17.7	455	18.1	22.8	9	7.5	6.5
C07P219UP		rm	18.5	474	18.1	22.8			
D07P224UP	24 X 1	re	20.8	566	18.1	22.8	8	7	6
C07P224UP		rm	21.8	589	18.1	22.8			
D07P227UP	27 X 1	re	20.8	616	18.1	22.8	7	6.5	5.5
C07P227UP		rm	21.8	640	18.1	22.8			
D07P230UP	30 X 1	re	22.6	672	18.1	22.8	6	6	5
C07P230UP		rm	22.6	699	18.1	22.8			
D07P232UP	32 X 1	re	22.3	712	18.1	22.8	6.5	5.5	4.5
C07P232UP		rm	23.4	740	18.1	22.8			
D07P237UP	37 X 1	re	23.2	801	18.1	22.8	6	5	4
C07P237UP		rm	24.3	833	18.1	22.8			
D07P248UP	48 X 1	re	26.3	1010	18.1	22.8	5.5	4.5	3.5
C07P248UP		rm	24	1024	18.1	22.8			
D07P258UP	58 X 1	re	28.8	1207	18.1	22.8	5	4	3
C07P258UP		rm	29.5	1227	18.1	22.8			

re: round solid
rm: round stranded

0.6/1 kV

control cable PVC insulated and PVC sheath Copper conductor (Solid or Stranded)

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D08P205UP	5 X 1.5	re	12.2	202	12.1	14.6	18	15.5	13.5
C08P205UP		rm	12.6	209	12.1	14.6			
D08P207UP	7 X 1.5	re	13.1	254	12.1	14.6	16	14	12.5
C08P207UP		rm	13.5	262	12.1	14.6			
D08P210UP	10 X 1.5	re	16.1	347	12.1	14.6	14	13	12
C08P210UP		rm	16.7	359	12.1	14.6			
D08P212UP	12 X 1.5	re	16.5	395	12.1	14.6	13	12	11
C08P212UP		rm	17.2	408	12.1	14.6			
D08P214UP	14 X 1.5	re	17.3	449	12.1	14.6	12	11	10.5
C08P214UP		rm	18	463	12.1	14.6			
D08P219UP	19 X 1.5	re	19.1	575	12.1	14.6	11	10.5	10
C08P219UP		rm	19.9	594	12.1	14.6			
D08P224UP	24 X 1.5	re	22.5	717	12.1	14.6	10	9.5	9
C08P224UP		rm	23.5	740	12.1	14.6			
D08P227UP	27 X 1.5	re	22.5	784	12.1	14.6	9.5	9	8.5
C08P227UP		rm	23.5	809	12.1	14.6			
D08P230UP	30 X 1.5	re	23.3	857	12.1	14.6	9	8.5	8
C08P230UP		rm	24.3	884	12.1	14.6			
D07P232UP	32 X 1.5	re	24.2	909	12.1	14.6	8.5	8	7.5
C07P232UP		rm	25.2	938	12.1	14.6			
D08P237UP	37 X 1.5	re	25	1022	12.1	14.6	8	7	6.5
C08P237UP		rm	26.2	1060	12.1	14.6			
D08P248UP	48 X 1.5	re	28.6	1313	12.1	14.6	7.5	6.5	6
C08P248UP		rm	30	1360	12.1	14.6			
D08P258UP	58 X 1.5	re	31.4	1571	12.1	14.6	7	6	5.5
C08P258UP		rm	32.9	1627	12.1	14.6			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated and PVC sheath Copper conductor (Solid or Stranded)

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D09P205UP	5 X 2	re	12.7	234	9.15	10.9	22	18	15
C09P205UP		rm	13.2	242	9.15	10.9			
D09P207UP	7 X 2	re	13.7	297	9.15	10.9	19	16	14
C09P207UP		rm	14.3	307	9.15	10.9			
D09P210UP	10 X 2	re	16.9	408	9.15	10.9	18	14	13
C09P210UP		rm	17.7	422	9.15	10.9			
D09P212UP	12 X 2	re	17.3	467	9.15	10.9	16.5	13	12
C09P212UP		rm	18.2	483	9.15	10.9			
D09P214UP	14 X 2	re	18.2	530	9.15	10.9	15	12	11
C09P214UP		rm	19.1	548	9.15	10.9			
D09P219UP	19 X 2	re	20.1	684	9.15	10.9	14	11	10.5
C09P219UP		rm	21.1	707	9.15	10.9			
D09P224UP	24 X 2	re	23.7	854	9.15	10.9	13	10	9.5
C09P224UP		rm	25	883	9.15	10.9			
D09P227UP	27 X 2	re	23.7	936	9.15	10.9	12	9.5	9
C09P227UP		rm	25	967	9.15	10.9			
D09P230UP	30 X 2	re	24.6	1026	9.15	10.9	11	9	8.5
C09P230UP		rm	25.9	1060	9.15	10.9			
D09P232UP	32 X 2	re	52.5	1089	9.15	10.9	10.5	8.5	7.5
C09P232UP		rm	26.8	1125	9.15	10.9			
D09P237UP	37 X 2	re	26.4	1234	9.15	10.9	10	8	7
C09P237UP		rm	27.9	1274	9.15	10.9			
D09P248UP	48 X 2	re	30.4	1587	9.15	10.9	9.5	7.5	6.5
C09P248UP		rm	32.1	1647	9.15	10.9			
D09P258UP	58 X 2	re	33.3	1902	9.15	10.9	9	7	6
C09P258UP		rm	35.2	1973	9.15	10.9			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated and PVC sheath Copper conductor (Solid or Stranded)

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D10P205UP	5 X 2.5	re	13.2	265	7.41	8.89	24	20.5	18
C10P205UP		rm	13.8	274	7.41	8.89			
D10P207UP	7 X 2.5	re	14.3	340	7.41	8.89	22	18.5	16
C10P207UP		rm	14.9	351	7.41	8.89			
D10P210UP	10 X 2.5	re	17.7	469	7.41	8.89	20	16.5	14.5
C10P210UP		rm	18.5	484	7.41	8.89			
D10P212UP	12 X 2.5	re	18.2	538	7.41	8.89	18	15.5	13.5
C10P212UP		rm	19	556	7.41	8.89			
D10P214UP	14 X 2.5	re	19.1	613	7.41	8.89	16	14	12
C10P214UP		rm	20	632	7.41	8.89			
D10P219UP	19 X 2.5	re	21.1	795	7.41	8.89	15	13	11
C10P219UP		rm	22.1	819	7.41	8.89			
D10P224UP	24 X 2.5	re	25	994	7.41	8.89	14	12	10.5
C10P224UP		rm	26.3	1024	7.41	8.89			
D10P227UP	27 X 2.5	re	25	1092	7.41	8.89	13	11	9.5
C10P227UP		rm	26.3	1125	7.41	8.89			
D10P230UP	30 X 2.5	re	25.8	1196	7.41	8.89	12	10.5	9
C10P230UP		rm	27.3	1237	7.41	8.89			
D10P232UP	32 X 2.5	re	26.9	1274	7.41	8.89	11.5	10	8.5
C10P232UP		rm	28.4	1319	7.41	8.89			
D10P237UP	37 X 2.5	re	27.9	1452	7.41	8.89	11	9.5	8
C10P237UP		rm	29.5	1502	7.41	8.89			
D10P248UP	48 X 2.5	re	32.1	1869	7.41	8.89	10	9	7.5
C10P248UP		rm	34	1933	7.41	8.89			
D10P258UP	58 X 2.5	re	35.2	2242	7.41	8.89	9.5	8.5	7
C10P258UP		rm	37.2	2318	7.41	8.89			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated and PVC sheath Copper conductor (Solid or Stranded)

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D11P205UP	5 X 3	re	13.8	297	6.1	7.41	29	24	22
C11P205UP		rm	14.4	306	6.1	7.41			
D11P207UP	7 X 3	re	14.9	383	6.1	7.41	25.5	22	19
C11P207UP		rm	15.5	394	6.1	7.41			
D11P210UP	10 X 3	re	18.5	529	6.1	7.41	24	20	18.5
C11P210UP		rm	19.3	545	6.1	7.41			
D11P212UP	12 X 3	re	19	610	6.1	7.41	22	18	17
C11P212UP		rm	19.9	628	6.1	7.41			
D11P214UP	14 X 3	re	19.9	704	6.1	7.41	20	16	16
C11P214UP		rm	20.9	724	6.1	7.41			
D11P219UP	19 X 3	re	22.1	916	6.1	7.41	18	15	14.5
C11P219UP		rm	23.2	941	6.1	7.41			
D11P224UP	24 X 3	re	26.2	1147	6.1	7.41	17	14	13.5
C11P224UP		rm	27.5	1178	6.1	7.41			
D11P227UP	27 X 3	re	26.2	1263	6.1	7.41	16.5	13	12.5
C11P227UP		rm	27.6	1302	6.1	7.41			
D11P230UP	30 X 3	re	27.2	1390	6.1	7.41	16	12	12
C11P230UP		rm	28.7	1434	6.1	7.41			
D11P232UP	32 X 3	re	28.3	1482	6.1	7.41	14	11.5	11
C11P232UP		rm	29.9	1529	6.1	7.41			
D11P237UP	37 X 3	re	29.4	1690	6.1	7.41	13	11	10
C11P237UP		rm	31.1	1743	6.1	7.41			
D11P248UP	48 X 3	re	33.9	2178	6.1	7.41	12.5	10	9.5
C11P248UP		rm	35.8	2245	6.1	7.41			
D11P258UP	58 X 3	re	37.1	2614	6.1	7.41	11.5	9.5	9
C11P258UP		rm	39.3	2695	6.1	7.41			

re: round solid
rm: round stranded

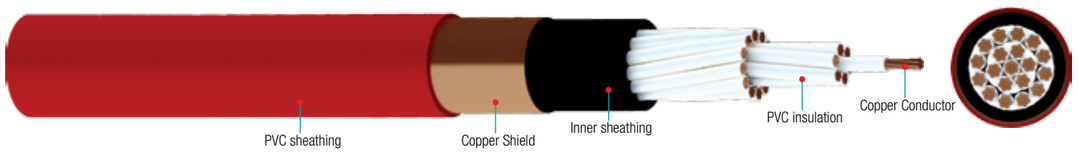
0.6/1 kV

Control cable PVC insulated and PVC sheath Copper conductor (Solid or Stranded)

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D12P205UP	5 X 4	re	15.5	382	4.61	5.51	31	25.5	24
C12P205UP		rm	16.3	396	4.61	5.51			
D12P207UP	7 X 4	re	21.1	536	4.61	5.51	28	23	21.5
C11P207UP		rm	17.7	515	4.61	5.51			
D12P210UP	10 X 4	re	21.1	692	4.61	5.51	25	21	19.5
C12P210UP		rm	22.3	716	4.61	5.51			
D12P212UP	12 X 4	re	21.7	801	4.61	5.51	23	19.5	18
C12P212UP		rm	22.9	829	4.61	5.51			
D12P214UP	14 X 4	re	22.8	927	4.61	5.51	20.5	17	16
C12P214UP		rm	24.1	958	4.61	5.51			
D12P219UP	19 X 4	re	25.2	1208	4.61	5.51	20	16.5	15.5
C12P219UP		rm	26.8	1255	4.61	5.51			
D12P224UP	24 X 4	re	30.4	1540	4.61	5.51	19	16	15
C12P224UP		rm	32.4	1601	4.61	5.51			
D12P227UP	27 X 4	re	30.4	1698	4.61	5.51	18	15	14
C12P227UP		rm	32.4	1763	4.61	5.51			
D12P230UP	30 X 4	re	31.6	2400	4.61	5.51	16	13	12.5
C12P230UP		rm	33.7	1944	4.61	5.51			
D12P232UP	32 X 4	re	32.9	2524	4.61	5.51	14.5	12	11
C12P232UP		rm	35.1	2073	4.61	5.51			
D12P237UP	37 X 4	re	34.4	2808	4.61	5.51	13.5	11.5	10.5
C12P237UP		rm	36.6	2366	4.61	5.51			
D12P248UP	48 X 4	re	39.5	2942	4.61	5.51	13	11	10
C12P248UP		rm	42.2	3053	4.61	5.51			
D12P258UP	58 X 4	re	43.4	3536	4.61	5.51	12	10.5	9.5
C12P258UP		rm	46.3	3668	4.61	5.51			

re: round solid
rm: round stranded

600/1000V Control Cables with Copper conductors, PVC insulation, Copper Tape shield and PVC sheath



Description

Circular multi core cables copper conductors, five up to fifty eight cores insulated and sheathed with PVC sheathed, acc. to VDE 0271, IEC 60 502.

Construction

1- Conductors	Soft annealed copper, stranded or solid conductors
2- Insulation	PVC rated 70°C or 85°C for continuous operation
3- Inner sheath	Extruded PVC as bedding.
4- Shield	copper tape applied helically over the bedding.
3- Sheath	PVC.

Identification

1- Colour for cores according to our standard colours or other colours are available on request.

2- White numbers on black PVC insulation or black numbers on white PVC insulation

Applications

Control cables are used as a traffic signals for indoor, in ducts and in the open. for also power stations, industrial plants and switching stations.

Control Cables

0.6/1 kV

Control cable PVC insulated with copper tape shield and PVC sheath copper conductor solid or stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D07P205MP	5 X 1	re	13.7	268.6	18.1	22.8	14	12.5	11
C07P205MP		rm	14.2	279.2	18.1	22.8			
D07P207MP	7 X 1	re	14.5	315.9	18.1	22.8	12	11	10
C07P207MP		rm	15	328.5	18.1	22.8			
D07P210MP	10 X 1	re	17.3	413.6	18.1	22.8	11	10	9
C07P210MP		rm	17.9	430.9	18.1	22.8			
D07P212MP	12 X 1	re	17.7	453.5	18.1	22.8	10.5	9	8
C07P212MP		rm	18.3	472.4	18.1	22.8			
D07P214MP	14 X 1	re	18.4	501.2	18.1	22.8	10	8	7
C07P214MP		rm	19.1	522.1	18.1	22.8			
D07P219MP	19 X 1	re	20	612.2	18.1	22.8	9	7.5	6.5
C07P219MP		rm	20.8	637.7	18.1	22.8			
D07P224MP	24 X 1	re	23.1	750.6	18.1	22.8	8	7	6
C07P224MP		rm	24.1	782.4	18.1	22.8			
D07P227MP	27 X 1	re	23.1	800	18.1	22.8	7	6.5	5.5
C07P227MP		rm	24.1	833.6	18.1	22.8			
D07P230MP	30 X 1	re	23.9	862.3	18.1	22.8	6	6	5
C07P230MP		rm	24.9	898.4	18.1	22.8			
D07P232MP	32 X 1	re	24.6	909.2	18.1	22.8	6.5	5.5	4.5
C07P232MP		rm	25.7	947.3	18.1	22.8			
D07P237MP	37 X 1	re	25.4	1002.1	18.1	22.8	6	5	4
C07P237MP		rm	26.6	1048.6	18.1	22.8			
D07P248MP	48 X 1	re	28.7	1253.6	18.1	22.8	5.5	4.5	3.5
C07P248MP		rm	30.1	1312.2	18.1	22.8			
D07P258MP	58 X 1	re	31.2	1472.6	18.1	22.8	5	4	3
C07P258MP		rm	32.8	1541.4	18.1	22.8			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with copper tape shield and PVC sheath copper conductor solid or stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D08P205MP	5 X 1.5	re	14.5	309.7	12.1	14.6	13	15.5	13.5
C08P205MP		rm	14.9	320.3	12.1	14.6			
D08P207MP	7 X 1.5	re	15.4	369.6	12.1	14.6	16	14	12.5
C08P207MP		rm	15.8	382.3	12.1	14.6			
D08P210MP	10 X 1.5	re	18.4	489	12.1	14.6	14	13	12
C08P210MP		rm	19	506.3	12.1	14.6			
D08P212MP	12 X 1.5	re	18.8	540.9	12.1	14.6	13	12	11
C08P212MP		rm	19.5	559.8	12.1	14.6			
D08P214MP	14 X 1.5	re	19.6	601.9	12.1	14.6	12	11	10.5
C08P214MP		rm	20.3	622.8	12.1	14.6			
D08P219MP	19 X 1.5	re	21.4	744	12.1	14.6	11	10.5	10
C08P219MP		rm	22.2	769.5	12.1	14.6			
D08P224MP	24 X 1.5	re	24.8	916.4	12.1	14.6	10	9.5	9
C08P224MP		rm	25.8	948.1	12.1	14.6			
D08P227MP	27 X 1.5	re	24.8	982.8	12.1	14.6	9.5	9	8.5
C08P227MP		rm	25.8	1016.3	12.1	14.6			
D08P230MP	30 X 1.5	re	25.6	1063.4	12.1	14.6	9	8.5	8
C08P230MP		rm	26.6	1099.4	12.1	14.6			
D08P232MP	32 X 1.5	re	26.5	1123	12.1	14.6	8.5	8	7.5
C08P232MP		rm	27.6	1165.9	12.1	14.6			
D08P237MP	37 X 1.5	re	27.4	1253.8	12.1	14.6	8	7	6.5
C08P237MP		rm	28.6	1301.1	12.1	14.6			
D08P248MP	48 X 1.5	re	31.1	1577.1	12.1	14.6	7.5	6.5	6
C08P248MP		rm	32.9	1674.4	12.1	14.6			
D08P258MP	58 X 1.5	re	34.3	1899.3	12.1	14.6	7	6	5.5
C08P258MP		rm	35.8	1971	12.1	14.6			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with copper tape shield and PVC sheath copper conductor solid or stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D09P205MP	5 X 2	re	15	346.1	9.15	10.9	22	18	15
C09P205MP		rm	15.5	359.4	9.15	10.9			
D09P207MP	7 X 2	re	16	417.9	9.15	10.9	19	16	14
C09P207MP		rm	16.6	433.7	9.15	10.9			
D09P210MP	10 X 2	re	19.2	556.9	9.15	10.9	18	14	13
C09P210MP		rm	20	578.5	9.15	10.9			
D09P212MP	12 X 2	re	19.6	620.1	9.15	10.9	16.5	13	12
C09P212MP		rm	20.5	643.7	9.15	10.9			
D09P214MP	14 X 2	re	20.5	690.9	9.15	10.9	15	12	11
C09P214MP		rm	21.4	717.1	9.15	10.9			
D09P219MP	19 X 2	re	22.4	861.3	9.15	10.9	14	11	10.5
C09P219MP		rm	23.4	893.2	9.15	10.9			
D09P224MP	24 X 2	re	26	1063.9	9.15	10.9	13	10	9.5
C09P224MP		rm	27.3	1103.6	9.15	10.9			
D09P227MP	27 X 2	re	26	1146.1	9.15	10.9	12	9.5	9
C09P227MP		rm	27.3	1191.6	9.15	10.9			
D09P230MP	30 X 2	re	26.9	1243.3	9.15	10.9	11	9	8.5
C09P230MP		rm	28.3	1296.3	9.15	10.9			
D09P232MP	32 X 2	re	27.9	1320.5	9.15	10.9	10.5	8.5	7.5
C09P232MP		rm	29.3	1374.8	9.15	10.9			
D09P237MP	37 X 2	re	28.9	1479.3	9.15	10.9	10	8	7
C09P237MP		rm	30.4	1539.2	9.15	10.9			
D09P248MP	48 X 2	re	33.3	1905.5	9.15	10.9	9.5	7.5	6.5
C09P248MP		rm	35	1982.9	9.15	10.9			
D09P258MP	58 X 2	re	36.2	2249.8	9.15	10.9	9	7	6
C09P258MP		rm	38.1	2340.7	9.15	10.9			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with copper tape shield and PVC sheath copper conductor solid or stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D10P205MP	5 X 2.5	re	15.5	382.6	7.41	8.89	24	20.5	18
C10P205MP		rm	16.1	396.6	7.41	8.89			
D10P207MP	7 X 2.5	re	16.6	466.1	7.41	8.89	22	18.5	16
C10P207MP		rm	17.2	482.7	7.41	8.89			
D10P210MP	10 X 2.5	re	20	624.8	7.41	8.89	20	16.5	14.5
C10P210MP		rm	20.8	647.5	7.41	8.89			
D10P212MP	12 X 2.5	re	20.5	699.2	7.41	8.89	18	15.5	13.5
C10P212MP		rm	21.3	724	7.41	8.89			
D10P21MP	14 X 2.5	re	21.4	781.8	7.41	8.89	16	14	12
C10P214MP		rm	22.3	809.3	7.41	8.89			
D10P219MP	19 X 2.5	re	23.4	981.1	7.41	8.89	15	13	11
C10P219MP		rm	24.4	1014.6	7.41	8.89			
D10P224MP	24 X 2.5	re	27.3	1214.7	7.41	8.89	14	12	10.5
C10P224MP		rm	28.7	1266.3	7.41	8.89			
D10P227MP	27 X 2.5	re	27.3	1316.6	7.41	8.89	13	11	9.5
C10P227MP		rm	28.7	1366.8	7.41	8.89			
D10P230MP	30 X 2.5	re	28.3	1435.1	7.41	8.89	12	10.5	9
C10P230MP		rm	29.7	1489.4	7.41	8.89			
D10P232MP	32 X 2.5	re	29.3	1522.9	7.41	8.89	11.5	10	8.5
C10P232MP		rm	30.8	1580.6	7.41	8.89			
D10P237MP	37 X 2.5	re	30.4	1710.4	7.41	8.89	11	9.5	8
C10P237MP		rm	32.4	1811.1	7.41	8.89			
D10P248MP	48 X 2.5	re	35	2205	7.41	8.89	10	9	7.5
C10P248MP		rm	36.9	2287.3	7.41	8.89			
D10P258MP	58 X 2.5	re	38.1	2609.1	7.41	8.89	9.5	8.5	7
C10P258MP		rm	40.1	2705.7	7.41	8.89			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with copper tape shield and PVC sheath copper conductor solid or stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D11P205MP	5 X 3	re	16.1	419	6.1	7.41	29	24	22
C11P205MP		rm	16.7	433.7	6.1	7.41			
D11P207MP	7 X 3	re	17.2	514.3	6.1	7.41	25.5	22	19
C11P207MP		rm	17.8	531.8	6.1	7.41			
D11P210MP	10 X 3	re	20.8	692.7	6.1	7.41	24	20	18.5
C11P210MP		rm	21.6	716.5	6.1	7.41			
D11P212MP	12 X 3	re	21.3	778.4	6.1	7.41	22	18	17
C11P212MP		rm	22.2	804.3	6.1	7.41			
D11P214MP	14 X 3	re	22.2	880.2	6.1	7.41	20	16	16
C11P214MP		rm	23.2	908.9	6.1	7.41			
D11P219MP	19 X 3	re	24.4	1111.1	6.1	7.41	18	15	14.5
C11P219MP		rm	25.4	1142	6.1	7.41			
D11P224MP	24 X 3	re	28.6	1387.9	6.1	7.41	17	14	13.5
C11P224MP		rm	30.1	1438.7	6.1	7.41			
D11P227MP	27 X 3	re	28.6	1503.8	6.1	7.41	16.5	13	12.5
C11P227MP		rm	30.1	1557.1	6.1	7.41			
D11P230MP	30 X 3	re	29.6	1641.7	6.1	7.41	16	12	12
C11P230MP		rm	31.2	1699.2	6.1	7.41			
D11P232MP	32 X 3	re	30.8	1743.1	6.1	7.41	14	11.5	11
C11P232MP		rm	32.8	1841.7	6.1	7.41			
D11P237MP	37 X 3	re	32.3	1999	6.1	7.41	13	11	10
C11P237MP		rm	34	2068.2	6.1	7.41			
D11P248MP	48 X 3	re	36.8	2531.1	6.1	7.41	12.5	10	9.5
C11P248MP		rm	38.7	2618.4	6.1	7.41			
D11P258MP	58 X 3	re	40	3000.5	6.1	7.41	11.5	9.5	9
C11P258MP		rm	42.2	3103	6.1	7.41			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with copper tape shield and PVC sheath copper conductor solid or stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D12P205MP	5 X 4	re	17.8	519.8	4.61	5.51	31	25.5	24
C12P205MP		rm	18.6	541.1	4.61	5.51			
D12P207MP	7 X 4	re	23.4	722.2	4.61	5.51	28	23	21.5
C11P207MP		rm	20	672	4.61	5.51			
D12P210MP	10 X 4	re	23.4	877.9	4.61	5.51	25	21	19.5
C12P210MP		rm	24.6	913.9	4.61	5.51			
D12P212MP	12 X 4	re	24	993.1	4.61	5.51	23	19.5	18
C12P212MP		rm	25.2	1031.8	4.61	5.51			
D12P214MP	14 X 4	re	25	1123.3	4.61	5.51	20.5	17	16
C12P214MP		rm	26.4	1171.8	4.61	5.51			
D12P219MP	19 X 4	re	27.7	1442.2	4.61	5.51	20	16.5	15.5
C12P219MP		rm	29.3	1502.9	4.61	5.51			
D12P224MP	24 X 4	re	33.3	1858.7	4.61	5.51	19	16	15
C12P224MP		rm	35.3	1939.5	4.61	5.51			
D12P227MP	27 X 4	re	33.3	2016.9	4.61	5.51	18	15	14
C12P227MP		rm	35.3	2101.9	4.61	5.51			
D12P230MP	30 X 4	re	34.5	2731.3	4.61	5.51	16	13	12.5
C12P230MP		rm	36.6	2295.9	4.61	5.51			
D12P232MP	32 X 4	re	35.8	2868.5	4.61	5.51	14.5	12	11
C12P232MP		rm	38	2438.9	4.61	5.51			
D12P237MP	37 X 4	re	37.2	3165.9	4.61	5.51	13.5	11.5	10.5
C12P237MP		rm	39.5	2746.7	4.61	5.51			
D12P248MP	48 X 4	re	42	3305	4.61	5.51	13	11	10
C12P248MP		rm	44.6	3439	4.61	5.51			
D12P258MP	58 X 4	re	45.9	3932.8	4.61	5.51	12	10.5	9.5
C12P258MP		rm	48.8	4091.1	4.61	5.51			

re: round solid
rm: round stranded

600/1000V Control Cables with Copper conductors, PVC insulation, Steel tape armor and PVC sheath

Description

Circular multi core cables copper conductors, five up to fifty eight cores insulated and sheathed with PVC sheathed, acc. to VDE 0271, IEC 60 502.

Construction

1- Conductors	Soft annealed copper, stranded or solid conductors
2- Insulation	PVC rated 70°C or 85°C for continuous operation
3- Inner sheath	Extruded PVC as bedding.
4- Armour	Double steel tapes applied helically over the bedding and also may be steel wires.
3- Sheath	PVC

Identification

1- Colour for cores according to our standard colours or other colours are available on request.
2- White numbers on black PVC insulation or black numbers on white PVC insulation

Applications

Control cables are used as a traffic signals for indoor, in ducts and in the open. for also power stations, industrial plants and switching stations.

0.6/1 kV

Control cable PVC insulated with steel tape armor and PVC sheath Copper conductor Solid or Stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D07P205IP	5 X 1	re	14.2	304.9	18.1	22.8	14	12.5	11
C07P205IP		rm	14.7	316.9	18.1	22.8			
D07P207IP	7 X 1	re	15	354.7	18.1	22.8	12	11	10
C07P207IP		rm	15.5	368.8	18.1	22.8			
D07P210IP	10 X 1	re	17.8	460.7	18.1	22.8	11	10	9
C07P210IP		rm	18.4	479.9	18.1	22.8			
D07P212IP	12 X 1	re	18.2	501.9	18.1	22.8	10.5	9	8
C07P212IP		rm	18.8	522.8	18.1	22.8			
D07P214IP	14 X 1	re	18.9	551.8	18.1	22.8	10	8	7
C07P214IP		rm	19.6	574.8	18.1	22.8			
D07P219IP	19 X 1	re	20.5	667.6	18.1	22.8	9	7.5	6.5
C07P219IP		rm	21.3	695.5	18.1	22.8			
D07P224IP	24 X 1	re	23.6	815.6	18.1	22.8	8	7	6
C07P224IP		rm	24.6	850.3	18.1	22.8			
D07P227IP	27 X 1	re	23.6	865	18.1	22.8	7	6.5	5.5
C07P227IP		rm	24.6	901.5	18.1	22.8			
D07P230IP	30 X 1	re	24.4	929.5	18.1	22.8	6	6	5
C07P230IP		rm	25.4	968.6	18.1	22.8			
D07P232IP	32 X 1	re	25.1	978.7	18.1	22.8	6.5	5.5	4.5
C07P232IP		rm	26.2	1020	18.1	22.8			
D07P237IP	37 X 1	re	26	1078.2	18.1	22.8	6	5	4
C07P237IP		rm	27.1	1123.5	18.1	22.8			
D07P248IP	48 X 1	re	29.1	1324.3	18.1	22.8	5.5	4.5	3.5
C07P248IP		rm	30.5	1386.4	18.1	22.8			
D07P258IP	58 X 1	re	31.6	1549.5	18.1	22.8	5	4	3
C07P258IP		rm	33.1	1622.2	18.1	22.8			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with steel tape armor and PVC sheath Copper conductor Solid or Stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D08P205IP	5 X 1.5	re	15	348.2	12.1	14.6	13	15.5	13.5
C08P205IP		rm	15.4	360.2	12.1	14.6			
D08P207IP	7 X 1.5	re	15.9	410.9	12.1	14.6	16	14	12.5
C08P207IP		rm	16.3	425	12.1	14.6			
D08P210IP	10 X 1.5	re	18.9	539.4	12.1	14.6	14	13	12
C08P210IP		rm	19.5	558.6	12.1	14.6			
D08P212IP	12 X 1.5	re	19.3	592.7	12.1	14.6	13	12	11
C08P212IP		rm	20	613.6	12.1	14.6			
D08P214IP	14 X 1.5	re	20.1	565	12.1	14.6	12	11	10.5
C08P214IP		rm	20.8	679.1	12.1	14.6			
D08P219IP	19 X 1.5	re	21.9	803.5	12.1	14.6	11	10.5	10
C08P219IP		rm	22.7	831.5	12.1	14.6			
D08P224IP	24 X 1.5	re	25.3	986.3	12.1	14.6	10	9.5	9
C08P224IP		rm	26.3	1021.1	12.1	14.6			
D08P227IP	27 X 1.5	re	25.3	1052.8	12.1	14.6	9.5	9	8.5
C08P227IP		rm	26.3	1089.3	12.1	14.6			
D08P230IP	30 X 1.5	re	26.1	1135.7	12.1	14.6	9	8.5	8
C08P230IP		rm	27.1	1174.9	12.1	14.6			
D08P237IP	32 X 1.5	re	27	1198	12.1	14.6	8.5	8	7.5
C08P237IP		rm	27.9	1233.6	12.1	14.6			
D08P237IP	37 X 1.5	re	27.8	1321	12.1	14.6	8	7	6.5
C08P237IP		rm	28.9	1371.4	12.1	14.6			
D08P248IP	48 X 1.5	re	31.4	1653.7	12.1	14.6	7.5	6.5	6
C08P248IP		rm	33.2	1753.4	12.1	14.6			
D08P258IP	58 X 1.5	re	34.6	1981.6	12.1	14.6	7	6	5.5
C08P258IP		rm	37.3	2388.7	12.1	14.6			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with steel tape armor and PVC sheath Copper conductor Solid or Stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D09P205IP	5 X 2	re	15.5	386.3	9.15	10.9	22	18	15
C09P205IP		rm	16	401.3	9.15	10.9			
D09P207IP	7 X 2	re	16.5	461	9.15	10.9	19	16	14
C09P207IP		rm	17.1	478.6	9.15	10.9			
D09P210IP	10 X 2	re	19.7	609.7	9.15	10.9	18	14	13
C09P210IP		rm	20.5	633.8	9.15	10.9			
D09P212IP	12 X 2	re	20.1	674.3	9.15	10.9	16.5	13	12
C09P212IP		rm	21	700.5	9.15	10.9			
D09P214IP	14 X 2	re	21	747.8	9.15	10.9	15	12	11
C09P214IP		rm	21.9	776.6	9.15	10.9			
D09P219IP	19 X 2	re	22.9	923.8	9.15	10.9	14	11	10.5
C09P219IP		rm	23.9	958.8	9.15	10.9			
D09P224IP	24 X 2	re	26.5	1137.6	9.15	10.9	13	10	9.5
C09P224IP		rm	27.8	1181.1	9.15	10.9			
D09P227IP	27 X 2	re	26.5	1219.8	9.15	10.9	12	9.5	9
C09P227IP		rm	27.8	1265.4	9.15	10.9			
D09P230IP	30 X 2	re	27.4	1319.5	9.15	10.9	11	9	8.5
C09P230IP		rm	28.7	1368.5	9.15	10.9			
D09P232IP	32 X 2	re	28.3	1393.4	9.15	10.9	10.5	8.5	7.5
C09P232IP		rm	29.7	1446.9	9.15	10.9			
D09P237IP	37 X 2	re	29.2	1550.3	9.15	10.9	10	8	7
C09P237IP		rm	30.7	1614	9.15	10.9			
D09P248IP	48 X 2	re	33.6	1985.3	9.15	10.9	9.5	7.5	6.5
C09P248IP		rm	36.5	2391.3	9.15	10.9			
D09P258IP	58 X 2	re	37.7	2672	9.15	10.9	9	7	6
C09P258IP		rm	39.6	2785.6	9.15	10.9			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with steel tape armor and PVC sheath Copper conductor Solid or Stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D10P205IP	5 X 2.5	re	16	424.4	7.41	8.89	24	20.5	18
C10P205IP		rm	16.6	440.1	7.41	8.89			
D10P207IP	7 X 2.5	re	17.1	511	7.41	8.89	22	18.5	16
C10P207IP		rm	17.7	529.6	7.41	8.89			
D10P210IP	10 X 2.5	re	20.5	680	7.41	8.89	20	16.5	14.5
C10P210IP		rm	21.3	705.3	7.41	8.89			
D10P212IP	12 X 2.5	re	21	756	7.41	8.89	18	15.5	13.5
C10P212IP		rm	21.8	783.4	7.41	8.89			
D10P214IP	14 X 2.5	re	21.9	841.4	7.41	8.89	16	14	12
C10P214IP		rm	22.8	871.6	7.41	8.89			
D10P219IP	19 X 2.5	re	23.9	1046.7	7.41	8.89	15	13	11
C10P219IP		rm	24.9	1083.4	7.41	8.89			
D10P224IP	24 X 2.5	re	27.8	1292.1	7.41	8.89	14	12	10.5
C10P224IP		rm	29.1	1337.8	7.41	8.89			
D10P227IP	27 X 2.5	re	27.8	1390.4	7.41	8.89	13	11	9.5
C10P227IP		rm	29.1	1438.3	7.41	8.89			
D10P230IP	30 X 2.5	re	28.7	1507.4	7.41	8.89	12	10.5	9
C10P230IP		rm	30.1	1562.5	7.41	8.89			
D10P232IP	32 X 2.5	re	29.7	1595	7.41	8.89	11.5	10	8.5
C10P232IP		rm	31.2	1656.5	7.41	8.89			
D10P237IP	37 X 2.5	re	30.7	1785.2	7.41	8.89	11	9.5	8
C10P237IP		rm	32.7	1888.8	7.41	8.89			
D10P248IP	48 X 2.5	re	36.5	2613.5	7.41	8.89	10	9	7.5
C10P248IP		rm	38.4	2717.4	7.41	8.89			
D10P258IP	58 X 2.5	re	39.6	3054	7.41	8.89	9.5	8.5	7
C10P258IP		rm	41.6	3174.6	7.41	8.89			

re: round solid
rm: round stranded

0.6/1 kV

Control cable PVC insulated with steel tape armor and PVC sheath Copper conductor Solid or Stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D11P205IP	5 X 3	re	16.6	462.5	6.1	7.41	29	24	22
C11P205IP		rm	17.2	478.9	6.1	7.41			
D11P207IP	7 X 3	re	17.7	561.1	6.1	7.41	25.5	22	19
C11P207IP		rm	18.3	580.5	6.1	7.41			
D11P210IP	10 X 3	re	21.3	750.4	6.1	7.41	24	20	18.5
C11P210IP		rm	2.1	776.8	6.1	7.41			
D11P212IP	12 X 3	re	21.8	837.7	6.1	7.41	22	18	17
C11P212IP		rm	2.7	866.4	6.1	7.41			
D11P214IP	14 X 3	re	22.7	942.4	6.1	7.41	20	16	16
C11P214IP		rm	23.7	974.1	6.1	7.41			
D11P219IP	19 X 3	re	24.9	1179.7	6.1	7.41	18	15	14.5
C11P219IP		rm	26	1218.2	6.1	7.41			
D11P224IP	24 X 3	re	29	1459.5	6.1	7.41	17	14	13.5
C11P224IP		rm	30.3	1507.3	6.1	7.41			
D11P227IP	27 X 3	re	29	1574.1	6.1	7.41	16.5	13	12.5
C11P227IP		rm	30.4	1631.1	6.1	7.41			
D11P230IP	30 X 3	re	30	1714.6	6.1	7.41	16	12	12
C11P230IP		rm	31.5	1775.9	6.1	7.41			
D11P232IP	32 X 3	re	31.1	1818.8	6.1	7.41	14	11.5	11
C11P232IP		rm	33.1	1920.3	6.1	7.41			
D11P237IP	37 X 3	re	32.6	2076.5	6.1	7.41	13	11	10
C11P237IP		rm	34.3	2149.8	6.1	7.41			
D11P248IP	48 X 3	re	38.3	2960.2	6.1	7.41	12.5	10	9.5
C11P248IP		rm	40.2	3070	6.1	7.41			
D11P258IP	58 X 3	re	41.5	3468.2	6.1	7.41	11.5	9.5	9
C11P258IP		rm	43.7	3595.7	6.1	7.41			

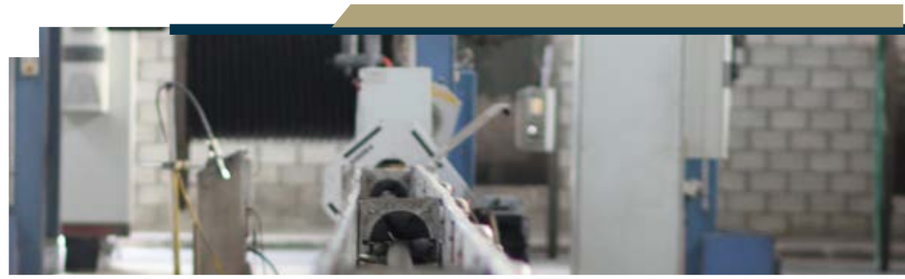
re: round solid
rm: round stranded

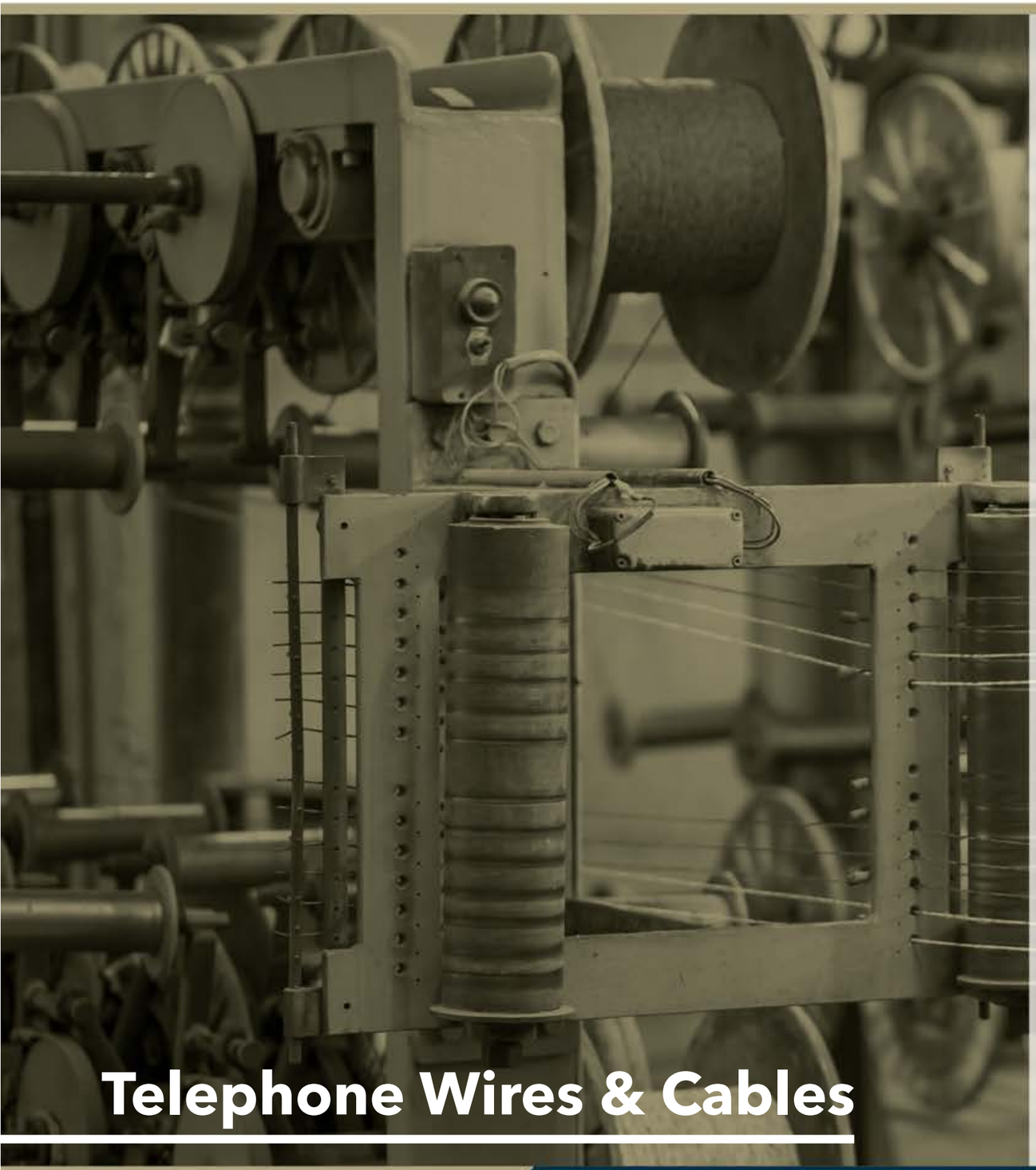
0.6/1 kV

Control cable PVC insulated with steel tape armor and PVC sheath Copper conductor Solid or Stranded

Product-Code	Cross Section Area of Conductor	shape of conductor	Overall diameter	Net Weight	Max. resistance		Current carrying capacity		
					d.c AT 20 °C	A.c AT 70 °C	Laid direct in ground At 35 °C	Laid in Duct	Laid in Air At 40 35 °C
	No. x mm²		Approx mm	Approx. kg/mm	ohm/km	ohm/km	Amp	Amp	Amp
D12P205IP	5 X 4	re	18.3	568.5	4.61	5.51	31	25.5	24
C12P205IP		rm	19.1	592.3	4.61	5.51			
D12P207IP	7 X 4	re	23.9	787.8	4.61	5.51	28	23	21.5
C11P207IP		rm	20.5	727.4	4.61	5.51			
D12P210IP	10 X 4	re	23.9	943.5	4.61	5.51	25	21	19.5
C12P210IP		rm	25.1	982.3	4.61	5.51			
D12P212IP	12 X 4	re	24.5	1060.5	4.61	5.51	23	19.5	18
C12P212IP		rm	25.7	1103	4.61	5.51			
D12P214IP	14 X 4	re	25.6	1199.7	4.61	5.51	20.5	17	16
C12P214IP		rm	26.9	1246.8	4.61	5.51			
D12P219IP	19 X 4	re	28	1510.1	4.61	5.51	20	16.5	15.5
C12P219IP		rm	29.6	1574.8	4.61	5.51			
D12P224IP	24 X 4	re	33.6	1938.7	4.61	5.51	19	16	15
C12P224IP		rm	36.8	2351.4	4.61	5.51			
D12P227IP	27 X 4	re	33.6	2096.9	4.61	5.51	18	15	14
C12P227IP		rm	36.8	2513.8	4.61	5.51			
D12P230IP	30 X 4	re	36	3134	4.61	5.51	16	13	12.5
C12P230IP		rm	38.1	2722.9	4.61	5.51			
D12P232IP	32 X 4	re	37.3	3286.6	4.61	5.51	14.5	12	11
C12P232IP		rm	39.5	2882.4	4.61	5.51			
D12P237IP	37 X 4	re	38.7	3600.1	4.61	5.51	13.5	11.5	10.5
C12P237IP		rm	41	3207.4	4.61	5.51			
D12P248IP	48 X 4	re	43.5	3798.8	4.61	5.51	13	11	10
C12P248IP		rm	16.2	3963.8	4.61	5.51			
D12P258IP	58 X 4	re	47.4	4472.5	4.61	5.51	12	10.5	9.5
C12P258IP		rm	50.3	4665.1	4.61	5.51			

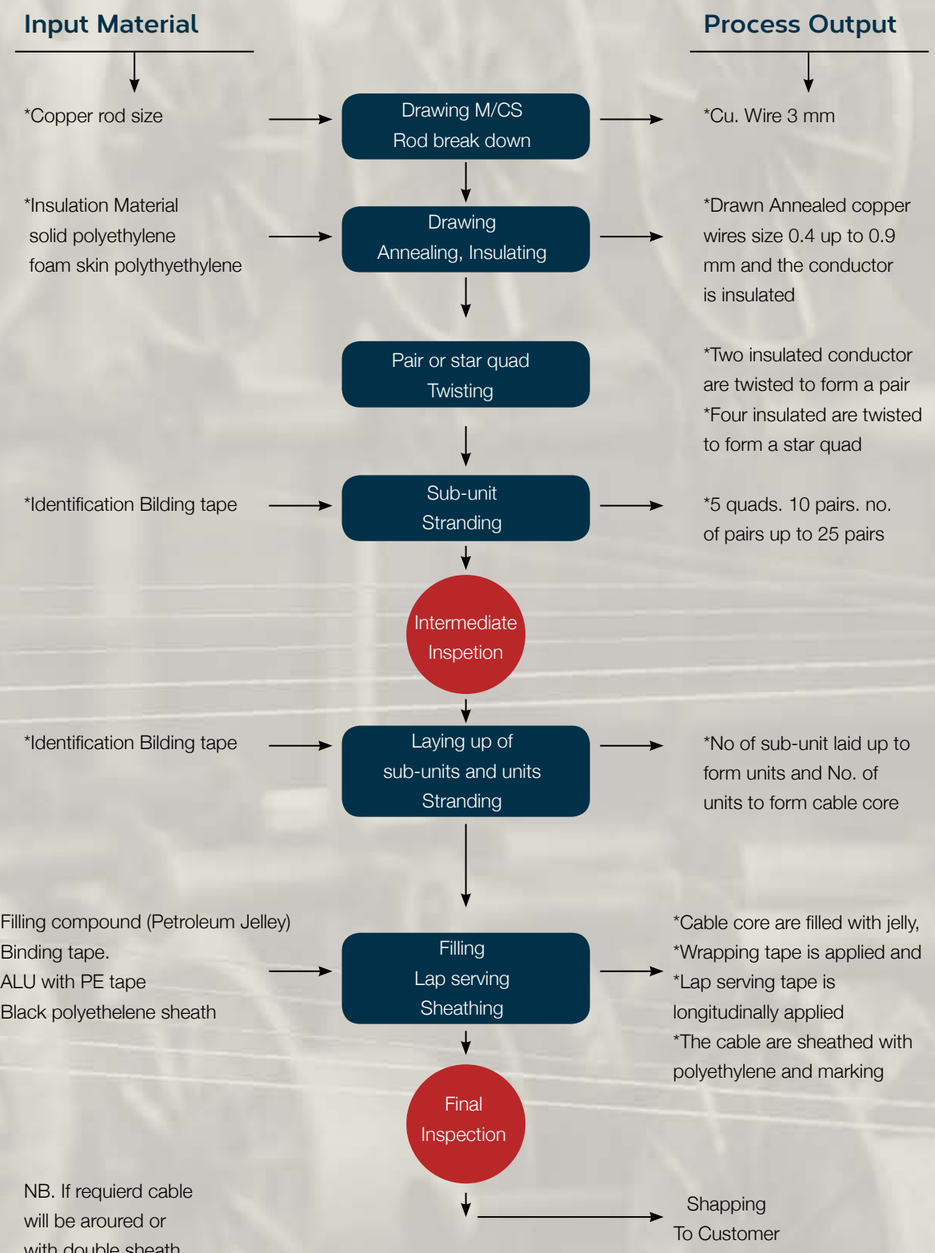
re: round solid
rm: round stranded





Telephone Wires & Cables

Manufacturing Flow Chart



Designation Code for Telephone Cables
You can order our product by giving the following informations

1- cable codes as per the catalogue
2- if your requirements is out of our catalogue product range, you can use the following map to identify the code

0 | 00 | 0 | 0000 | 0 | 0

Conductor Material

D Solid Soft Copper

wire Diam. (mm)

02 0.4
03 0.5
04 0.6
06 0.9

Insulation Type

E Polyethylene
P PVC

No. of Paires

0001 1 Pair
0005 5 Pairs
0010 10 Pairs
1200 up to 1200 Pairs

Armoring

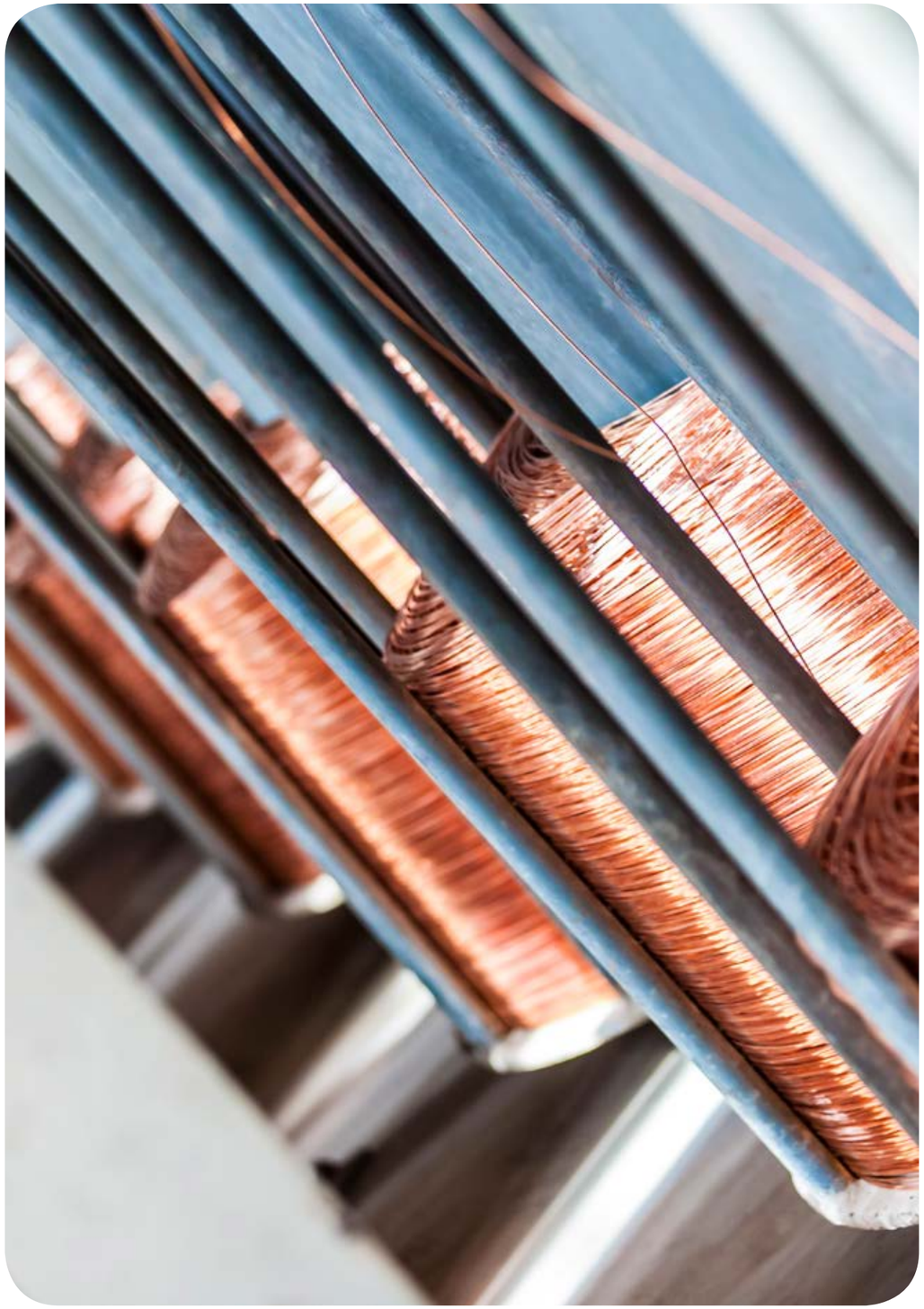
U Unarmored
A Armored

Outer Sheathing Type

P PVC
F PVC / FR
H Polyethylene

Egyptian Standard

01 TC 113
02 TC 135
03 TC 154
04 TC 450
05 TC 113 JUMBER



Jelly Filled Telephone Cable
Primary and Secondary

Description:

Plain solid annealed copper conductor, polyethylene (solid or foam) insulated, twisted pairs or twisted quads, Jelly filled, screened with ALU laminated PE, CU wire acc. to Egyptian standard spec. TC 154 & TC 450 Also the cable can be manufacturing according to customer spec.

Construction:

1- Solid annealed copper conductor.
2- Polyethylene (solid or foam) insulation.
3- Filling compound petroleum Jelly.
4- Core wrapping tape.
5- Aluminium moisture barrier (screen).
6- Extruded black Polyethylene sheath.
7- Sheath marking by ink Jet.

Application:

Jelly filled cable are used for primary and secondary underground distribution networks and for long distance communications.

Telephone Wires and Cables

Jelly Filled telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D02E0006UH03	6 x 2 x 0.4	8	58	1000	600
D02E0010UH03	10 x 2 x 0.4	9	79	1000	700
D02E0016UH03	16 x 2 x 0.4	10	109	1000	700
D02E0020UH03	20 x 2 x 0.4	11	128	1000	800
D02E0030UH03	30 x 2 x 0.4	12	173	1000	800
D02E0050UH03	50 x 2 x 0.4	15	275	1000	900
D02E0100UH03	100 x 2 x 0.4	19	478	1000	1200
D02E0150UH03	150 x 2 x 0.4	22.5	700	1000	1200
D02E0200UH03	200 x 2 x 0.4	26	928	1000	1400
D02E0250UH03	250 x 2 x 0.4	28.5	1133	1000	1400
D02E0300UH03	300 x 2 x 0.4	30.5	1335	1000	1600
D02E0400UH03	400 x 2 x 0.4	35	1786	1000	1800
D02E0500UH03	500 x 2 x 0.4	38.5	2150	1000	2000
D02E0600UH03	600 x 2 x 0.4	41.5	2542	500	1600
D02E0800UH03	800 x 2 x 0.4	47.5	3348	500	1800
D02E1000UH03	1000 x 2 x 0.4	52	4122	500	2000
D02E1200UH03	1200 x 2 x 0.4	57	4926	500	2000

N.B.: Intermediate and other sizes are produced upon request

Jelly Filled telephone cable
Dimensions and standard packing

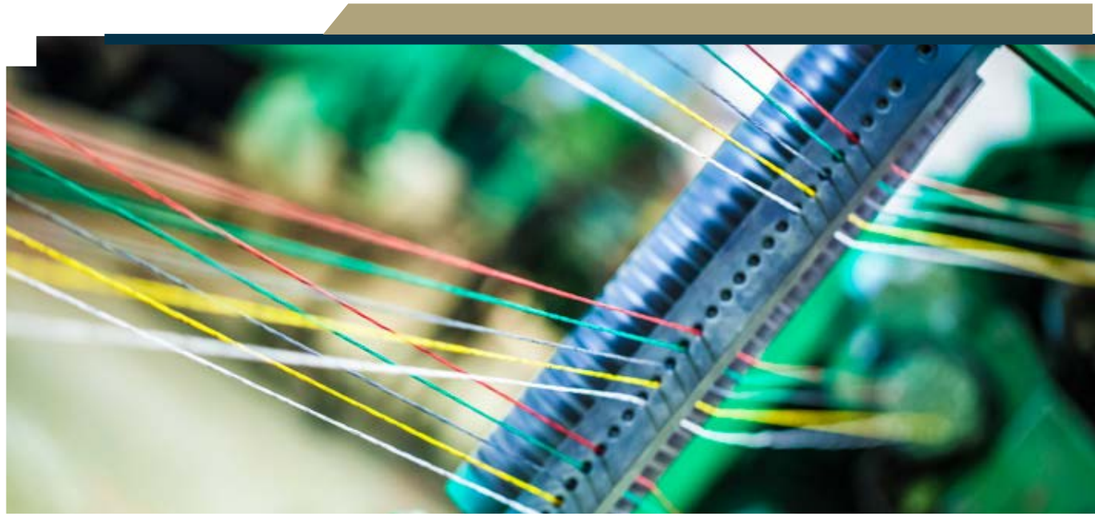
Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D03E0006UH03	6 x 2 x 0.5	8.5	69	1000	600
D03E0010UH03	10 x 2 x 0.5	10	96	1000	700
D03E0016UH03	16 x 2 x 0.5	11	134	1000	800
D03E0020UH03	20 x 2 x 0.5	12	158	1000	800
D03E0030UH03	30 x 2 x 0.5	14	216	1000	900
D03E0050UH03	50 x 2 x 0.5	17	347	1000	1000
D03E0100UH03	100 x 2 x 0.5	22	612	1000	1200
D03E0150UH03	150 x 2 x 0.5	27	927	1000	1600
D03E0200UH03	200 x 2 x 0.5	30	1198	1000	1600
D03E0250UH03	250 x 2 x 0.5	33.5	1492	1000	1800
D03E0300UH03	300 x 2 x 0.5	36.5	1782	1000	1800
D03E0400UH03	400 x 2 x 0.5	41	2315	1000	2000
D03E0500UH03	500 x 2 x 0.5	45	2792	500	1800
D03E0600UH03	600 x 2 x 0.5	49	3336	500	2000
D03E0800UH03	800 x 2 x 0.5	60	4361	500	2000
D03E1000UH03	1000 x 2 x 0.5	62	5415	500	2200
D03E1200UH03	1200 x 2 x 0.5	68	6510	500	2200

N.B.: Intermediate and other sizes are produced upon request

Jelly Filled telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D04E0006UH03	6 x 2 x 0.6	9	91	1000	700
D04E0010UH03	10 x 2 x 0.6	10.5	131	1000	700
D04E0016UH03	16 x 2 x 0.6	12	187	1000	800
D04E0020UH03	20 x 2 x 0.6	13	224	1000	900
D04E0030UH03	30 x 2 x 0.6	16	322	1000	1000
D04E0050UH03	50 x 2 x 0.6	19	511	1000	1400
D04E0100UH03	100 x 2 x 0.6	26	949	1000	1600
D04E0150UH03	150 x 2 x 0.6	30.5	1412	1000	1800
D04E0200UH03	200 x 2 x 0.6	35	1868	1000	2000
D04E0250UH03	250 x 2 x 0.6	38.5	2318	1000	2200
D04E0300UH03	300 x 2 x 0.6	42	2744	1000	2400
D04E0400UH03	400 x 2 x 0.6	47.5	3618	500	1800
D04E0500UH03	500 x 2 x 0.6	52	4379	500	2000
D04E0600UH03	600 x 2 x 0.6	57	5235	500	2000
D04E0800UH03	800 x 2 x 0.6	64.5	6874	500	2200
D04E1000UH03	1000 x 2 x 0.6	72	8589	500	2400
D04E1200UH03	1200 x 2 x 0.6	79.5	10362	500	2200

N.B.: Intermediate and other sizes are produced upon request



Jelly Filled telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D06E0006UH03	6 x 2 x 0.9	12.5	175	1000	900
D06E0010UH03	10 x 2 x 0.9	15	273	1000	900
D06E0016UH03	16 x 2 x 0.9	18	402	1000	1200
D06E0020UH03	20 x 2 x 0.9	19.5	487	1000	1200
D06E0030UH03	30 x 2 x 0.9	23	693	1000	1400
D06E0050UH03	50 x 2 x 0.9	30	1185	1000	1600
D06E0100UH03	100 x 2 x 0.9	40	2205	1000	2000
D06E0150UH03	150 x 2 x 0.9	48	3341	500	1800
D06E0200UH03	200 x 2 x 0.9	55	4371	500	2000
D06E0250UH03	250 x 2 x 0.9	61	5430	500	2200
D06E0300UH03	300 x 2 x 0.9	66	6450	300	2000
D06E0400UH03	400 x 2 x 0.9	76	8568	300	2200

N.B.: Intermediate and other sizes are produced upon request

Electrical and transmission characteristics

1- Conductor resistance at 20° C

Copper conductor diameter			Resistance ohm/Km
Nominal mm	Minimum mm	Max. mm	
0.4	0.385	0.425	149
0.5	0.485	0.525	93
0.6	0.585	0.625	64.5
0.9	0.885	0.925	28

2- Resistance unbalance

Resistance unbalance shall be calculated with the following formula

$$R\ (\%) = \frac{Rmax - Rmin}{Rmax + Rmin} \times 100$$

Conductor dia mm	Resistance unbalance %	
	Minimum mm	Max. mm
0.4	2	5
0.5	1.5	5
0.6	1.5	4
0.9	1.2	4

3- The tensile strength of conductor is max 26 Kg/mm² and min 20 Kg/mm²

3- Insulation Resistance

The Insulation Resistance at 20 °C is the following

Min. 10000 Mega ohm km for foam skin insulation

Min. 5000 Mega ohm km for solid insulation

4- Mutual Capacitance at 800 HZ

Max average 45 ± 5 nf/km

Max average 50 nf/km

5- Capacitance unbalance

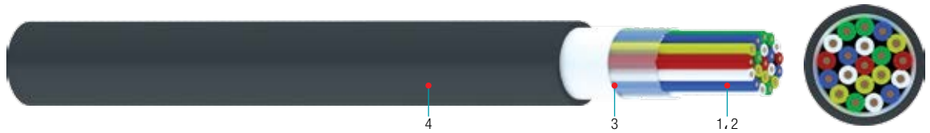
For 160 meter at 800 HZ

Max avarage 500 PF/km] Pair

Max individual 2500 PF/km] to earth

Kind of Reading	Max capacitance unbalance	
	Avarage	Individual
Side to side (within star quad)	70	300
Side to earth	200	450
Side to side adjacent pairs	-	150

Indoor Telephone Cable



Description:

Plain solid annealed copper conductor, PVC insulated, twisted pairs or twisted quads, and PVC sheathed also flame retardant PVC sheathed can be applied acc. to Egyptian standard spec. TC 113 also the cable can be manufacturing according to customer specification.

Construction:

1- Solid annealed copper conductor. 2-PVC insulation
3- Polyethylene or polyster tape (core wrapping tape)..
4- Gray or black PVC Sheath.
5- Sheath marhing by ink jet.

Application:

Indoor cables are used for indoor installation in telephone communications networks. (frame and switch board cables).

Telephone Wires and Cables

Indoor telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D03P0003UP01	3 x 2 x 0.5	5.5	35	1000	500
D03P0004UP01	4 x 2 x 0.5	6	43	1000	500
D03P0005UP01	5 x 2 x 0.5	6.5	54	1000	500
D03P0006UP01	6 x 2 x 0.5	7	62	1000	700
D03P0010UP01	10 x 2 x 0.5	9	99	1000	700
D03P0016UP01	16 x 2 x 0.5	10.5	142	1000	800
D03P0020UP01	20 x 2 x 0.5	12	181	1000	800
D03P0030UP01	30 x 2 x 0.5	14	251	1000	900
D03P0050UP01	50 x 2 x 0.5	17.5	400	1000	1000
D03P0100UP01	100 x 2 x 0.5	24	747	1000	1400
D03P0150UP01	150 x 2 x 0.5	29.5	1138	1000	1600
D03P0200UP01	200 x 2 x 0.5	33.5	1507	1000	1800
D03P0250UP01	250 x 2 x 0.5	37	1846	1000	2000
D03P0300UP01	300 x 2 x 0.5	41	2254	1000	2000
D03P0400UP01	400 x 2 x 0.5	47	2971	1000	2400
D03P0500UP01	500 x 2 x 0.5	52.5	3690	1000	2400

N.B.: Intermediate and other sizes are produced upon request

Indoor telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D04P0003UP01	3 x 2 x 0.6	6.5	44	1000	500
D04P0004UP01	4 x 2 x 0.6	7	55	1000	600
D04P0005UP01	5 x 2 x 0.6	7.5	70	1000	600
D04P0006UP01	6 x 2 x 0.6	8	80	1000	600
D04P0010UP01	10 x 2 x 0.6	10	129	1000	700
D04P0016UP01	16 x 2 x 0.6	12	189	1000	800
D04P0020UP01	20 x 2 x 0.6	13.5	239	1000	900
D04P0030UP01	30 x 2 x 0.6	16	336	1000	1000
D04P0050UP01	50 x 2 x 0.6	20.5	543	1000	1200
D04P0100UP01	100 x 2 x 0.6	28	1022	1000	1600
D04P0150UP01	150 x 2 x 0.6	34	1562	1000	1800
D04P0200UP01	200 x 2 x 0.6	39	2071	1000	2000
D04P0250UP01	250 x 2 x 0.6	43.5	2545	1000	2200
D04P0300UP01	300 x 2 x 0.6	47.5	3099	1000	2400
D04P0400UP01	400 x 2 x 0.6	55	4092	1000	2400
D04P0500UP01	500 x 2 x 0.6	61	5088	1000	2600

N.B.: Intermediate and other sizes are produced upon request

Indoor telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D06P0003UP01	3 x 2 x 0.9	9	92	1000	700
D06P0004UP01	4 x 2 x 0.9	10.5	117	1000	800
D06P0005UP01	5 x 2 x 0.9	11.5	148	1000	800
D06P0006UP01	6 x 2 x 0.9	12	173	1000	800
D06P0010UP01	10 x 2 x 0.9	15.5	282	1000	900
D06P0016UP01	16 x 2 x 0.9	19	425	1000	1200
D06P0020UP01	20 x 2 x 0.9	21.5	537	1000	1400
D06P0030UP01	30 x 2 x 0.9	25.5	771	1000	1400
D06P0050UP01	50 x 2 x 0.9	32.5	1274	1000	1600
D06P0100UP01	100 x 2 x 0.9	45	2432	1000	2200
D06P0150UP01	150 x 2 x 0.9	55	3743	1000	2400
D06P0200UP01	200 x 2 x 0.9	63.5	4971	1000	2600
D06P0250UP01	250 x 2 x 0.9	70.5	6143	500	2400
D06P0300UP01	300 x 2 x 0.9	77.5	7444	500	2400

N.B.: Intermediate and other sizes are produced upon request

Outdoor Armoured Telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D03P0010AP01	10x2x0.5	12	234	1000	800
D03P0016AP01	16x2x0.5	13.5	298	1000	900
D03P0020AP01	20x2x0.5	15	351	1000	900
D03P0030AP01	30x2x0.5	17	445	1000	1000
D03P0050AP01	50x2x0.5	20.5	636	1000	1200
D03P0100AP01	100x2x0.5	27	1056	1000	1600
D03P0150AP01	150x2x0.5	34	1881	1000	1800
D03P0200AP01	200x2x0.5	38	2345	1000	2000
D03P0250AP01	250x2x0.5	41.5	2763	1000	2000
D03P0300AP01	300x2x0.5	45.5	3255	1000	2200
D03P0400AP01	400x2x0.5	51.5	4107	1000	2400
D03P0500AP01	500x2x0.5	57	4947	1000	2600

N.B.: Intermediate and other sizes are produced upon request

Outdoor Armoured Telephone cable
Dimensions and standard packing

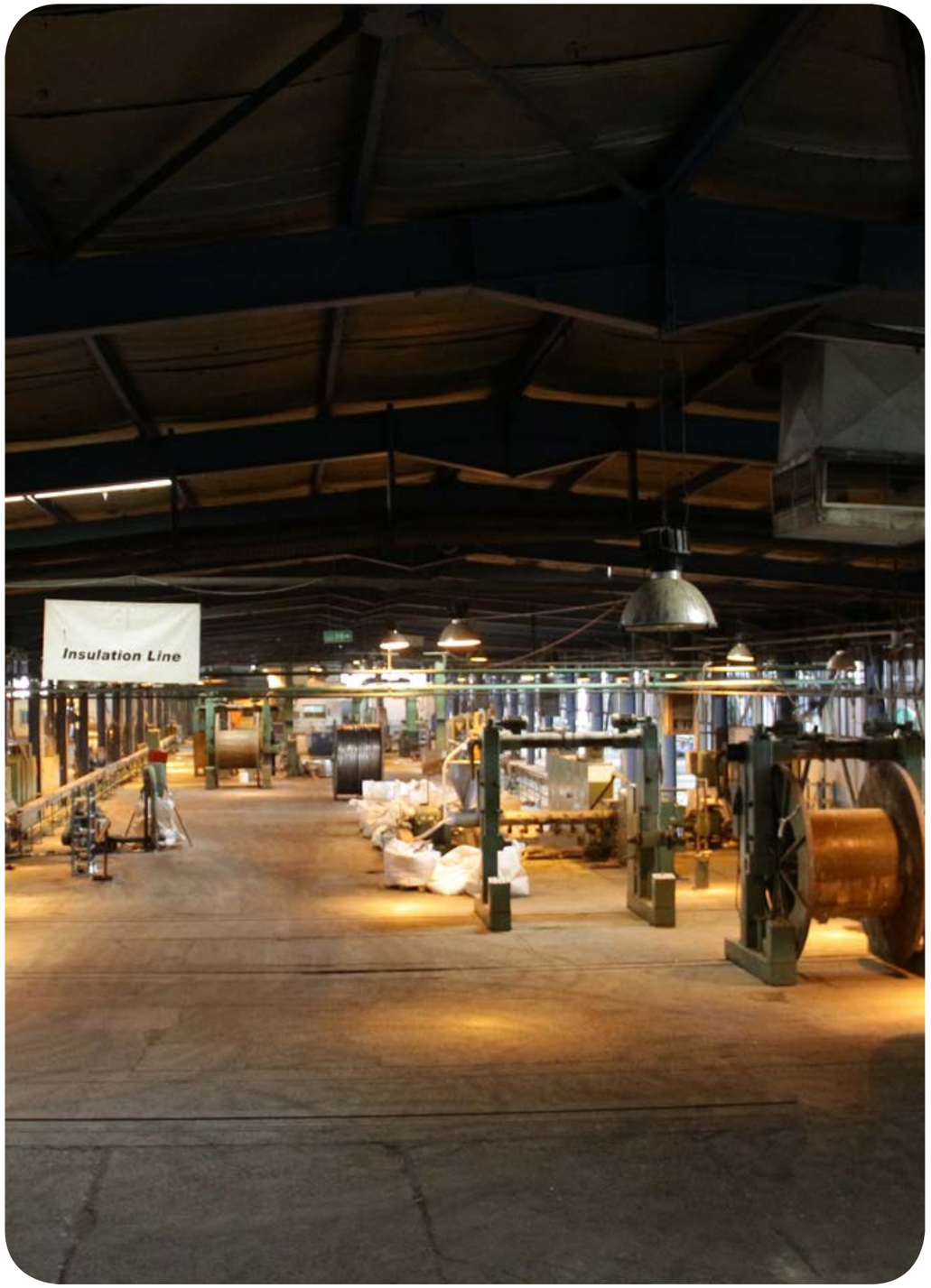
Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D04P0010AP01	10 x 2 x 0.6	13	278	1000	900
D04P0016AP01	16 x 2 x 0.6	15	361	1000	900
D04P0020AP01	20 x 2 x 0.6	16.5	429	1000	1000
D04P0030AP01	30 x 2 x 0.6	19	554	1000	1200
D04P0050AP01	50 x 2 x 0.6	23	810	1000	1400
D04P0100AP01	100 x 2 x 0.6	30.5	1375	1000	1600
D04P0150AP01	150 x 2 x 0.6	38.5	2410	1000	2000
D04P0200AP01	200 x 2 x 0.6	43.5	3031	1000	2200
D04P0250AP01	250 x 2 x 0.6	48	3598	1000	2400
D04P0300AP01	300 x 2 x 0.6	52	4250	1000	2400
D04P0400AP01	400 x 2 x 0.6	59.5	5402	1000	2600
D04P0500AP01	500 x 2 x 0.6	65.5	6539	1000	2200

N.B.: Intermediate and other sizes are produced upon request

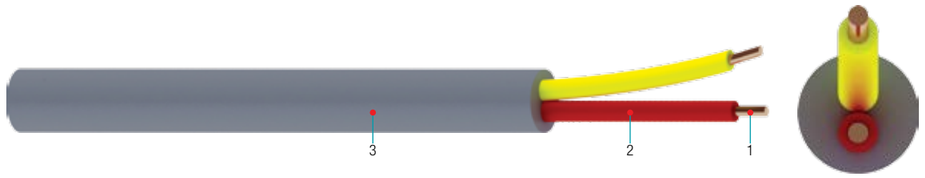
Outdoor Armoured Telephone cable
Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg/km	Shipping lengh ± 5 % Meter	Drum Size flange diameter mm
D06P0010AP01	10x2x0.9	18.5	510	1000	1200
D06P0016AP01	16x2x0.9	22	696	1000	1400
D06P0020AP01	20x2x0.9	24	814	1000	1400
D06P0030AP01	30x2x0.9	29	1158	1000	1600
D06P0050AP01	50x2x0.9	36	1758	1000	1800
D06P0100AP01	100x2x0.9	48	3037	1000	2200
D06P0150AP01	150x2x0.9	60	5136	1000	2600
D06P0200AP01	200x2x0.9	68	6559	1000	2200
D06P0250AP01	250x2x0.9	75.5	7966	1000	2400
D06P0300AP01	300x2x0.9	82.5	9364	1000	2600

N.B.: Intermediate and other sizes are produced upon request



Indoor Wires



Description:

Plain solid annealed copper conductor, PVC insulated, one pair or one quad, and PVC sheathed. According to Egyptian local standard spec, TC 113 also can be manufacturing according to customer specification.

Construction:

1- copper conductor. 2-PVC insulation
3- PVC sheathed (lightgray).
4- Drain wire (as polyproplene) for easily strippable sheathed.

Application:

The indoor wires are used for installations between internal distribution points on subscribers terminationblocks to wall the telephone sockets.

Telephone Wires and Cables

Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg	Shipping lengh Meter	Packing
D03P0001UP01	1 x 2 x 0.5	4	1.8	100	Coil
D03P0002UP01	1 x 4 x 0.5	5	2.6	100	Coil
D04P0001UP01	1 x 2 x 0.6	4.5	2.1	100	Coil
D04P0002UP01	1 x 4 x 0.6	5.5	3.2	100	Coil

Electrical and transmission characteristics

1- Loop resistance at 20°C.

Max. 192 ohm / Km for 0.5 mm

Max. 131 ohm / Km for 0.6 mm

1.1 Resistance unbalance

Max. average	1.5	for both sizes
Max. individual	5	for size 0.5 mm
Max. individual	4	for size 0.6 mm

2- Insulation Resistance

The insulation resistance at 20°C shall not less than 500 mega ohm Km.

3- The tensile strength of conductor is max. 26 kg/mm2 and min. 20 kg/mm2.

4- Mutual capacitance at 800 Hz Max. 100 nf/km.

Jumper Wires

Description:

Plain solid annealed copper conductor, solid PE or PVC insulated, tow insulated conductors are twisted together with short lay to from a pair according to Egyptian local standard spec. TC 113 also can be manufacturing according to customer specification.

Construction:

copper conductor.
PVC or PE insulation.

Application:

The jumber wires are used generally in outdoor cabinets forcross connections between primary and secondary terminal block also in main distribution frame in exchange buildings.

Dimensions and standard packing

Product-Code	Cable Size Pair Count No. x mm	Approx. outer diameter mm	Approx. Weight kg	Shipping lengh Meter	Packing
D03P000105	2 x 0.5	2.1	0.6	100	Coil
D04P000105	2 x 0.6	2.4	0.8	100	Coil

Electrical and transmission characteristics

1- Loop resistance at 20°C.

Max. 192 ohm / Km for 0.5 mm

Max. 131 ohm / Km for 0.6 mm

1.1 Resistance unbalance

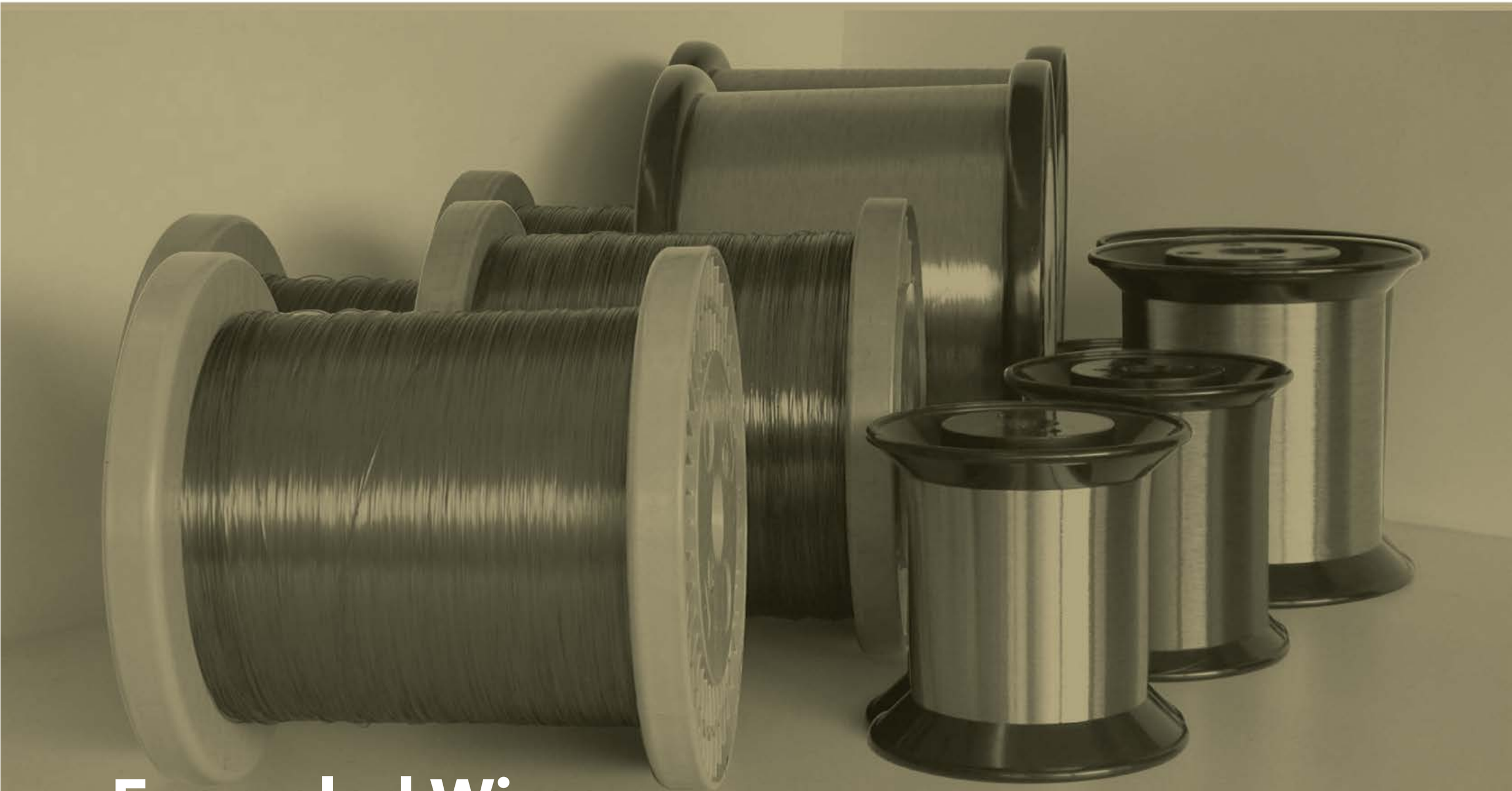
Max. average 1%

Max. individual 2%

2- Insulation Resistance

The insulation resistance at 20°C shall not less than 5000 mega ohm Km.

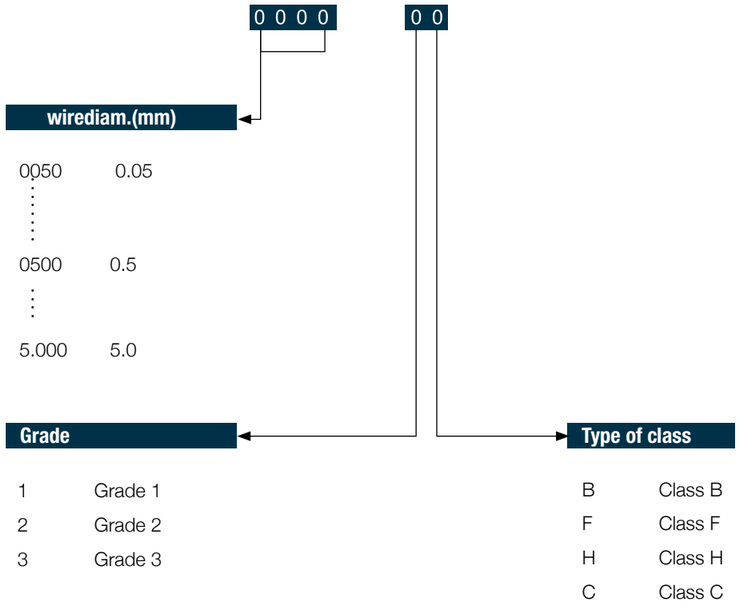
3- The tensile strength of conductor is max. 26 kg/mm2 and min. 20 kg/mm2.



Enameled Wires

System for Conductor Designation for Enameled Wires

Wires code as per the catalouge



Enameled copper wires coated With polyvinyl acetal

Description:

Soft annealed copper wires insulated with a composed of a polyvinyl acetal layer.
Different colour upon request.
Thermal class up to 130oC.
resistant to oil transformer.

Construction:

1- Conductor: Soft annealed circular copper wires according to IEC Specification.
2- Insulation: The insulation is composed of layers.
Type: a polyvinyl acetal Insulation thickness may be single grade 1 or double grade 2 and acc to IEC 317-12.

Testing:

Acc to IEC 317-0-1, IEC 317-12 and methods of test IEC 851.

Application:

For winding all rotors and coils, which are, used in general purposes and oil transformers.

Enameled copper wires coated With polyvinyl acetal

Single Layer (Grade 1):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
05001F	0.500	0.005	0.515	0.544	1.809
05301F	0.530	0.006	0.545	0.576	2.031
05601F	0.560	0.006	0.575	0.606	2.263
06001F	0.600	0.006	0.616	0.649	2.598
06301F	0.630	0.006	0.646	0.679	2.860
06701F	0.670	0.007	0.687	0.722	3.234
07101F	0.710	0.007	0.727	0.762	3.625
07501F	0.750	0.008	0.767	0.805	4.045
08001F	0.800	0.008	0.817	0.855	4.594
08501F	0.850	0.009	0.868	0.909	5.188
09001F	0.900	0.009	0.918	0.959	5.807
09501F	0.950	0.010	0.968	1.012	6.470
10001F	1.000	0.010	1.018	1.062	7.159
10601F	1.060	0.011	1.079	1.124	8.039
11201F	1.120	0.011	1.139	1.184	8.963
11801F	1.180	0.012	1.199	1.246	9.944
12501F	1.250	0.013	1.268	1.316	11.145
13201F	1.320	0.013	1.339	1.388	12.422
14001F	1.400	0.014	1.418	1.468	13.957
15001F	1.500	0.015	1.517	1.570	16.010
16001F	1.600	0.016	1.616	1.670	18.194
17001F	1.700	0.017	1.716	1.772	20.528
18001F	1.800	0.018	1.815	1.872	22.993
19001F	1.900	0.019	1.915	1.974	25.608
20001F	2.000	0.020	2.014	2.074	28.353
21201F	2.120	0.021	2.134	2.196	31.843
22401F	2.240	0.022	2.253	2.316	35.523
23601F	2.360	0.024	2.372	2.438	39.417
25001F	2.500	0.025	2.511	2.578	44.200
26501F	2.650	0.027	2.660	2.730	49.644
28001F	2.800	0.028	2.809	2.880	55.388
30001F	3.000	0.030	3.008	3.083	63.560
31501F	3.150	0.032	3.156	3.233	70.039
33501F	3.350	0.034	3.355	3.435	79.185
35501F	3..550	0.036	3.553	3.635	88.872
37501F	3.750	0.038	3.753	3.838	99.149
40001F	4.000	0.040	4.001	4.088	112.745
42501F	4.250	0.043	4.249	4.341	127.249
45001F	4.500	0.045	4.497	4.591	142.593
47501F	4.750	0.048	4.745	4.843	158.837
50001F	5.000	0.050	4.993	5.093	175.930

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated With polyvinyl acetal

Double Layer (Grade 2):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
05002F	0.500	0.005	0.516	0.566	1.842
05302F	0.530	0.006	0.547	0.600	2.069
05602F	0.560	0.006	0.577	0.630	2.303
06002F	0.600	0.006	0.618	0.674	2.642
06302F	0.630	0.006	0.648	0.704	2.906
06702F	0.670	0.007	0.689	0.749	3.288
07102F	0.710	0.007	0.729	0.789	3.682
07502F	0.750	0.008	0.770	0.834	4.110
08002F	0.800	0.008	0.820	0.884	4.662
08502F	0.850	0.009	0.870	0.939	5.263
09002F	0.900	0.009	0.920	0.989	5.886
09502F	0.950	0.010	0.971	1.044	6.558
10002F	1.000	0.010	1.021	1.094	7.252
10602F	1.060	0.011	1.081	1.157	8.140
11202F	1.120	0.011	1.141	1.217	9.070
11802F	1.180	0.012	1.200	1.279	10.057
12502F	1.250	0.013	1.269	1.349	11.264
13202F	1.320	0.013	1.340	1.422	12.551
14002F	1.400	0.014	1.419	1.502	14.093
15002F	1.500	0.015	1.520	1.606	16.164
16002F	1.600	0.016	1.619	1.706	18.359
17002F	1.700	0.017	1.719	1.809	20.707
18002F	1.800	0.018	1.818	1.909	23.182
19002F	1.900	0.019	1.918	2.012	25.813
20002F	2.000	0.020	2.017	2.112	28.568
21202F	2.120	0.021	2.139	2.235	32.076
22402F	2.240	0.022	2.256	2.355	35.769
23602F	2.360	0.024	2.375	2.478	39.683
25002F	2.500	0.025	2.514	2.618	44.481
26502F	2.650	0.027	2.664	2.772	49.956
28002F	2.800	0.028	2.813	2.922	55.717
30002F	3.000	0.030	3.012	3.126	63.921
31502F	3.150	0.032	3.160	3.276	70.417
33502F	3.350	0.034	3.359	3.479	79.595
35502F	3..550	0.036	3.557	3.679	89.306
37502F	3.750	0.038	3.756	3.883	99.618
40002F	4.000	0.040	4.004	4.133	113.244
42502F	4.250	0.043	4.252	4.387	127.791
45002F	4.500	0.045	4.500	4.637	143.167
47502F	4.750	0.048	4.749	4.891	159.468
50002F	5.000	0.050	4.997	5.141	176.593

N.B.: Intermediate Sizes Are Produced Upon Request

Enamelled copper wires coated With polyurethane

Description:

Soft annealed copper wires insulated with a composed of a polyurethane layer.
Different colour upon request.
Thermal class up to 155oC.
Self welding (self flux).

Construction:

1- Conductor: Soft annealed circular copper wires according to IEC Specification.
2- Insulation: The insulation is composed of layers.

Type: a polyurethane Insulation thickness may be single grade 1 or double grade 2 and acc to IEC 317-20.

Testing:

Acc to IEC 317-0-1, IEC 317-20 and methods of test IEC 851.

Application:

For winding all rotors and small coils, which are used in electronic circuits for general purposes.

Enameled Wires

Enameled copper wires coated With polyurethane

Single Layer (Grade 1):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
00501F	0.050		0.060	0.060	0.019
00561F	0.056		0.067	0.067	0.024
00631F	0.063		0.076	0.076	0.030
00711F	0.071	0.003	0.074	0.084	0.038
00751F	0.075	0.003	0.079	0.089	0.042
00801F	0.080	0.003	0.084	0.094	0.048
00851F	0.085	0.003	0.089	0.100	0.054
00901F	0.090	0.003	0.094	0.105	0.061
00951F	0.095	0.003	0.100	0.111	0.068
01001F	0.100	0.003	0.106	0.117	0.075
01061F	0.106	0.003	0.111	0.123	0.084
01121F	0.112	0.003	0.118	0.130	0.094
01181F	0.118	0.003	0.123	0.136	0.103
01251F	0.125	0.003	0.131	0.144	0.116
01321F	0.132	0.003	0.138	0.152	0.129
01401F	0.140	0.003	0.146	0.160	0.145
01501F	0.150	0.003	0.156	0.171	0.166
01601F	0.160	0.003	0.167	0.182	0.189
01701F	0.170	0.003	0.178	0.194	0.214
01801F	0.180	0.003	0.188	0.204	0.239
01901F	0.190	0.003	0.199	0.216	0.266
02001F	0.200	0.003	0.209	0.226	0.294
02121F	0.212	0.003	0.222	0.240	0.331
02241F	0.224	0.003	0.234	0.252	0.369
02361F	0.236	0.004	0.246	0.267	0.410
02501F	0.250	0.004	0.260	0.281	0.459
02651F	0.265	0.004	0.275	0.297	0.515
02801F	0.280	0.004	0.290	0.312	0.573
03001F	0.300	0.004	0.311	0.334	0.658
03151F	0.315	0.004	0.326	0.349	0.724
03351F	0.335	0.004	0.348	0.372	0.819
03551F	0.355	0.004	0.368	0.392	0.918
03751F	0.375	0.005	0.388	0.414	1.024
04001F	0.400	0.005	0.413	0.439	1.162

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated With polyurethane

Single Layer (Grade 1):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
04251F	0.425	0.005	0.439	0.466	1.311
04501F	0.450	0.005	0.464	0.491	1.467
04751F	0.475	0.005	0.490	0.519	1.635
05001F	0.500	0.005	0.515	0.544	1.809
05301F	0.530	0.006	0.545	0.576	2.031
05601F	0.560	0.006	0.575	0.606	2.263
06001F	0.600	0.006	0.616	0.649	2.598
06301F	0.630	0.006	0.646	0.679	2.860
06701F	0.670	0.007	0.687	0.722	3.234
07101F	0.710	0.007	0.727	0.762	3.625
07501F	0.750	0.008	0.767	0.805	4.045
08001F	0.800	0.008	0.817	0855	4.594
08501F	0.850	0.009	0.868	0.909	5.188
09001F	0.900	0.009	0.918	0.959	5.807
09501F	0.950	0.010	0.968	1.012	6.470
10001F	1.000	0.010	1.018	1.062	7.159
10601F	1.060	0.011	1.079	1.124	8.039
11201F	1.120	0.011	1.139	1.184	8.963
11801F	1.180	0.012	1.199	1.246	9.944
12501F	1.250	0.013	1.268	1.316	11.145
13201F	1.320	0.013	1.339	1.388	12.422
14001F	1.400	0.014	1.418	1.468	13.957
15001F	1.500	0.015	1.517	1.570	16.010
16001F	1.600	0.016	1.616	1.670	18.194
17001F	1.700	0.017	1.716	1.772	20.528
18001F	1.800	0.018	1.815	1.872	22.993
19001F	1.900	0.019	1.915	1.974	25.608
20001F	2.000	0.020	2.014	2.074	28.353
21201F	2.120	0.021	2.134	2.196	31.843
22401F	2.240	0.022	2.253	2.316	35.523
23601F	2.360	0.024	2.372	2.438	39.417
25001F	2.500	0.025	2.511	2.578	44.200

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated With polyurethane

Double Layer (Grade 2):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
00502F	0.050		0.066	0.066	0.020
00562F	0.056		0.074	0.074	0.025
00632F	0.063		0.083	0.083	0.032
00712F	0.071	0.003	0.076	0.091	0.040
00752F	0.075	0.003	0.078	0.095	0.044
00802F	0.080	0.003	0.084	0.101	0.050
00852F	0.085	0.003	0.089	0.107	0.056
00902F	0.090	0.003	0.095	0.113	0.063
00952F	0.095	0.003	0.100	0.119	0.070
01002F	0.100	0.003	0.106	0.125	0.077
01062F	0.106	0.003	0.112	0.132	0.087
01122F	0.112	0.003	0.119	0.139	0.097
01182F	0.118	0.003	0.123	0.145	0.107
01252F	0.125	0.003	0.132	0.154	0.120
01322F	0.132	0.003	0.138	0.162	0.134
01402F	0.140	0.003	0.147	0.171	0.150
01502F	0.150	0.003	0.156	0.182	0.172
01602F	0.160	0.003	0.168	0.194	0.195
01702F	0.170	0.003	0.177	0.205	0.220
01802F	0.180	0.003	0.189	0.217	0.246
01902F	0.190	0.003	0.198	0.228	0.274
02002F	0.200	0.003	0.209	0.239	0.303
02122F	0.212	0.003	0.222	0.254	0.340
02242F	0.224	0.003	0.234	0.266	0.378
02362F	0.236	0.004	0.247	0.283	0.422
02502F	0.250	0.004	0.261	0.297	0.471
02652F	0.265	0.004	0.277	0.314	0.529
02802F	0.280	0.004	0.292	0.329	0.588
03002F	0.300	0.004	0.313	0.352	0.675
03152F	0.315	0.004	0.328	0.367	0.741
03352F	0.335	0.004	0.349	0.391	0.839
03552F	0.355	0.004	0.369	0.411	0.938
03752F	0.375	0.005	0.389	0.434	1.047
04002F	0.400	0.005	0.414	0.459	1.186

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled Wires - Polyurethane

Enameled copper wires coated With polyurethane

Double Layer (Grade 2):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
04252F	0.425	0.005	0.441	0.488	1.340
04502F	0.450	0.005	0.466	0.513	1.497
04752F	0.475	0.005	0.491	0.541	1.667
05002F	0.500	0.005	0.516	0.566	1.842
05302F	0.530	0.006	0.547	0.600	2.069
05602F	0.560	0.006	0.577	0.630	2.303
06002F	0.600	0.006	0.618	0.674	2.642
06302F	0.630	0.006	0.648	0.704	2.906
06702F	0.670	0.007	0.689	0.749	3.288
07102F	0.710	0.007	0.729	0.789	3.682
07502F	0.750	0.008	0.770	0.834	4.110
08002F	0.800	0.008	0.820	0.884	4.662
08502F	0.850	0.009	0.870	0.939	5.263
09002F	0.900	0.009	0.920	0.989	5.886
09502F	0.950	0.010	0.971	1.044	6.558
10002F	1.000	0.010	1.021	1.094	7.252
10602F	1.060	0.011	1.081	1.157	8.140
11202F	1.120	0.011	1.141	1.217	9.070
11802F	1.180	0.012	1.200	1.279	10.057
12502F	1.250	0.013	1.269	1.349	11.264
13202F	1.320	0.013	1.340	1.422	12.551
14002F	1.400	0.014	1.419	1.502	14.093
15002F	1.500	0.015	1.520	1.606	16.164
16002F	1.600	0.016	1.619	1.706	18.359
17002F	1.700	0.017	1.719	1.809	20.707
18002F	1.800	0.018	1.818	1.909	23.182
19002F	1.900	0.019	1.918	2.012	25.813
20002F	2.000	0.020	2.017	2.112	28.568
21202F	2.120	0.021	2.139	2.235	30.076
22402F	2.240	0.022	2.256	2.355	32.769
23602F	2.360	0.024	2.375	2.478	39.683
25002F	2.500	0.025	2.514	2.618	44.481

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated With polyester imide

Description:

Soft annealed copper wires insulated with a composed of a polyester - imide layer. Different colour request. Thermal class up to 220oC.

Construction:

1- Conductor: Soft annealed circular and rectangular copper wires according to IEC Specification

2- Insulation: The insulation is composed of layers.

Type: a polyester - imide Insulation thickness may be single grade 1 or double grade 2 and acc to IEC 317-7, 317-8, 317-0-2 and 317-30.

Testing:

Acc to IEC 317-0-1, and methods of test IEC 851.

Application:

For winding all rotors and coils, which are, used in motors for general purposes such as fans, washing, M/CS, fridge….Etc.

Enameled copper wires coated With polyester imide

Single Layer (Grade 1):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
00501H	0.050		0.060	0.060	0.019
00561H	0.056		0.067	0.067	0.024
00631H	0.063		0.076	0.076	0.030
00711H	0.071	0.003	0.074	0.084	0.038
00751H	0.075	0.003	0.079	0.089	0.042
00801H	0.080	0.003	0.084	0.094	0.048
00851H	0.085	0.003	0.089	0.100	0.054
00901H	0.090	0.003	0.094	0.105	0.061
00951H	0.095	0.003	0.100	0.111	0.068
01001H	0.100	0.003	0.106	0.117	0.075
01061H	0.106	0.003	0.111	0.123	0.084
01121H	0.112	0.003	0.118	0.130	0.094
01181H	0.118	0.003	0.123	0.136	0.103
01251H	0.125	0.003	0.131	0.144	0.116
01321H	0.132	0.003	0.138	0.152	0.129
01401H	0.140	0.003	0.146	0.160	0.145
01501H	0.150	0.003	0.156	0.171	0.166
01601H	0.160	0.003	0.167	0.182	0.189
01701H	0.170	0.003	0.178	0.194	0.214
01801H	0.180	0.003	0.188	0.204	0.239
01901H	0.190	0.003	0.199	0.216	0.266
02001H	0.200	0.003	0.209	0.226	0.294
02121H	0.212	0.003	0.222	0.240	0.331
02241H	0.224	0.003	0.234	0.252	0.369
02361H	0.236	0.004	0.246	0.267	0.410
02501H	0.250	0.004	0.260	0.281	0.459
02651H	0.265	0.004	0.275	0.297	0.515
02801H	0.280	0.004	0.290	0.312	0.573
03001H	0.300	0.004	0.311	0.334	0.658
03151H	0.315	0.004	0.326	0.349	0.724
03351H	0.335	0.004	0.348	0.372	0.819
03551H	0.355	0.004	0.368	0.392	0.918
03751H	0.375	0.005	0.388	0.414	1.024
04001H	0.400	0.005	0.413	0.439	1.162
04251H	0.425	0.005	0.439	0.466	1.311
04501H	0.450	0.005	0.464	0.491	1.467
04751H	0.475	0.005	0.490	0.519	1.635
05001H	0.500	0.005	0.515	0.544	1.809
05301H	0.530	0.006	0.545	0.576	2.031

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated With polyester imide

Single Layer (Grade 1):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
05601H	0.560	0.006	0.575	0.606	2.263
06001H	0.600	0.006	0.616	0.649	2.598
06301H	0.630	0.006	0.646	0.679	2.860
06701H	0.670	0.007	0.687	0.722	3.234
07101H	0.710	0.007	0.727	0.762	3.625
07501H	0.750	0.008	0.767	0.805	4.045
08001H	0.800	0.008	0.817	0855	4.594
08501H	0.850	0.009	0.868	0.909	5.188
09001H	0.900	0.009	0.918	0,959	5.807
09501H	0.950	0.010	0.968	1.012	6.470
10001H	1.000	0.010	1.018	1.062	7.159
10601H	1.060	0.011	1.079	1.124	8.039
11201H	1.120	0.011	1.139	1.184	8.963
11801H	1.180	0.012	1.199	1.246	9.944
12501H	1.250	0.013	1.268	1.316	11.145
13201H	1.320	0.013	1.339	1.388	12.422
14001H	1.400	0.014	1.418	1.468	13.957
15001H	1.500	0.015	1.517	1.570	16.010
16001H	1.600	0.016	1.616	1.670	18.194
17001H	1.700	0.017	1.716	1.772	20.528
18001H	1.800	0.018	1.815	1.872	22.993
19001H	1.900	0.019	1.915	1.974	25.608
20001H	2.000	0.020	2.014	2.074	28.353
21201H	2.120	0.021	2.134	2.196	31.843
22401H	2.240	0.022	2.253	2.316	35.523
23601H	2.360	0.024	2.372	2.438	39.417
25001H	2.500	0.025	2.511	2.578	44.200
26501H	2.650	0.027	2.660	2,730	49.644
28001H	2.800	0.028	2.809	2,880	55.388
30001H	3.000	0.030	3.008	3,083	63.560
31501H	3.150	0.032	3.156	3,233	70.039
33501H	3.350	0.034	3.355	3,435	79.185
35501H	3.550	0.036	3.553	3,635	88.872
37501H	3.750	0.038	3.753	3,838	99.149
40001H	4.000	0.040	4.001	4,088	112.745
42501H	4.250	0.043	4.249	4,341	127.249
45001H	4.750	0.048	4.745	4,843	158.837
47501H	5.000	0.050	4.993	5,093	175,930

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated With polyester imide

Double Layer (Grade 2):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
00502H	0.050		0.066	0.066	0.020
00562H	0.056		0.074	0.074	0.025
00632H	0.063		0.083	0.083	0.032
00712H	0.071	0.003	0.076	0.091	0.040
00752H	0.075	0.003	0.078	0.095	0.044
00802H	0.080	0.003	0.084	0.101	0.050
00852H	0.085	0.003	0.089	0.107	0.056
00902H	0.090	0.003	0.095	0.113	0.063
00952H	0.095	0.003	0.100	0.119	0.070
01002H	0.100	0.003	0.106	0.125	0.077
01062H	0.106	0.003	0.112	0.132	0.087
01122H	0.112	0.003	0.119	0.139	0.097
01182H	0.118	0.003	0.123	0.145	0.107
01252H	0.125	0.003	0.132	0.154	0.120
01322H	0.132	0.003	0.138	0.162	0.134
01402H	0.140	0.003	0.147	0.171	0.150
01502H	0.150	0.003	0.156	0.182	0.172
01602H	0.160	0.003	0.168	0.194	0.195
01702H	0.170	0.003	0.177	0.205	0.220
01802H	0.180	0.003	0.189	0.217	0.246
01902H	0.190	0.003	0.198	0.228	0.274
02002H	0.200	0.003	0.209	0.239	0.303
02122H	0.212	0.003	0.222	0.254	0.340
02242H	0.224	0.004	0.234	0.266	0.378
02362H	0.236	0.004	0.247	0.283	0.422
02502H	0.250	0.004	0.261	0.297	0.471
02652H	0.265	0.004	0.277	0.314	0.529
02802H	0.280	0.004	0.292	0.329	0.588
03002H	0.300	0.004	0.313	0.352	0.675
03152H	0.315	0.004	0.328	0.367	0.741
03352H	0.335	0.004	0.349	0.391	0.839
03552H	0.355	0.004	0.369	0.411	0.938
03752H	0.375	0.005	0.389	0.434	1.047
04002H	0.400	0.005	0.414	0.459	1.186
04252H	0.425	0.005	0.441	0.488	1.340
04502H	0.450	0.005	0.466	0.513	1.497
04752H	0.475	0.005	0.491	0.541	1.667
05002H	0.500	0.005	0.516	0.566	1.842
05302H	0.530	0.006	0.547	0.600	2.069

N.B.: Intermediate Sizes Are Produced Upon Request

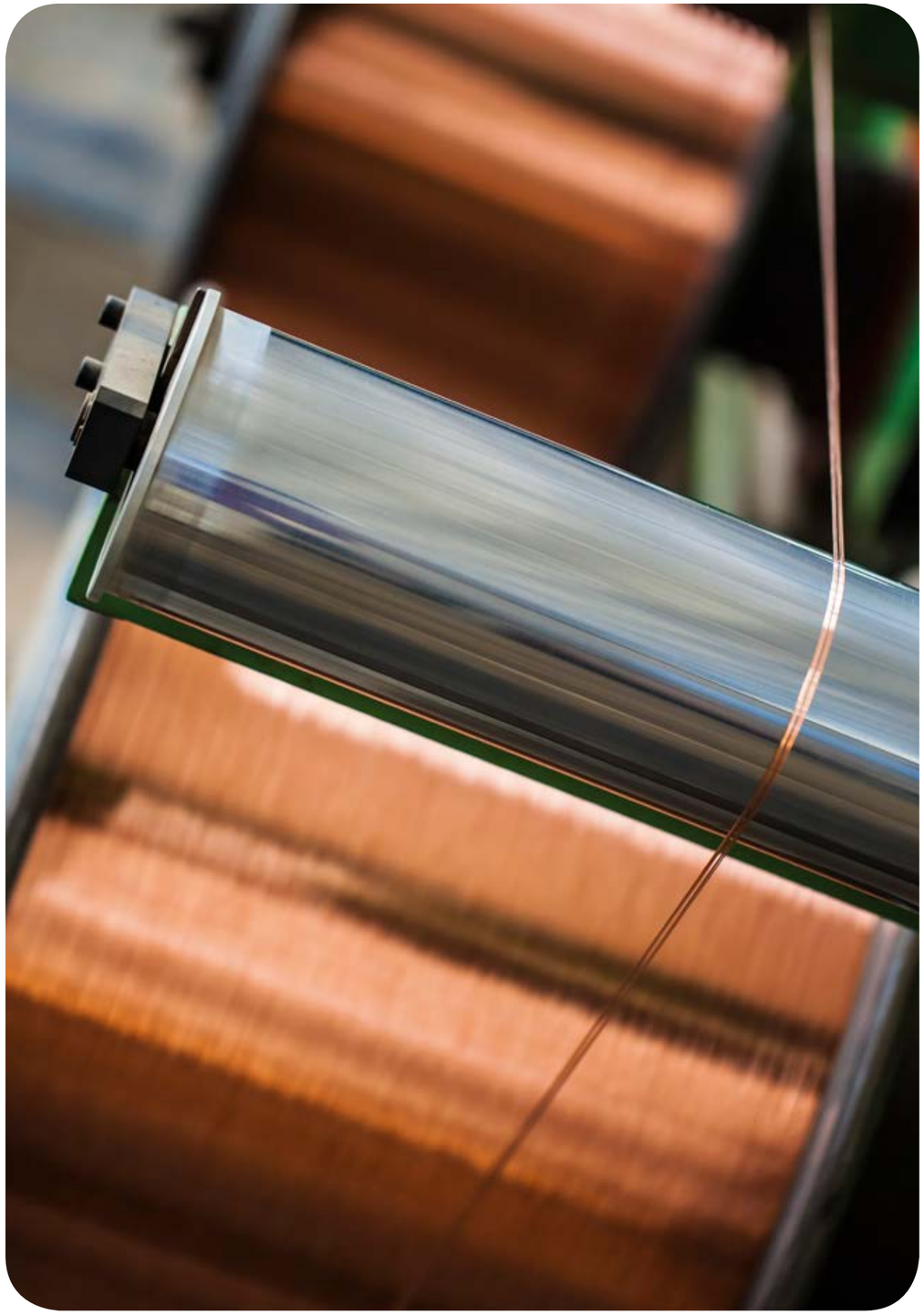
Enameled Wires - polyester imide

Enameled copper wires coated With polyester imide

Double Layer (Grade 2):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
05602H	0.560	0.006	0.577	0.630	2.303
06002H	0.600	0.006	0.618	0.674	2.642
06302H	0.630	0.006	0.648	0.704	2.906
06702H	0.670	0.007	0.689	0.749	3.288
07102H	0.710	0.007	0.729	0.789	3.682
07502H	0.750	0.008	0.770	0.834	4.110
08002H	0.800	0.008	0.820	0.884	4.662
08502H	0.850	0.009	0.870	0.939	5.263
09002H	0.900	0.009	0.920	0.989	5.886
09502H	0.950	0.010	0.971	1.044	6.558
10002H	1.000	0.010	1.021	1.094	7.252
10602H	1.060	0.011	1.081	1.157	8.140
11202H	1.120	0.011	1.141	1.217	9.070
11802H	1.180	0.012	1.200	1.279	10.057
12502H	1.250	0.013	1.269	1.349	11.264
13202H	1.320	0.013	1.340	1.422	12.551
14002H	1.400	0.014	1.419	1.502	14.093
15002H	1.500	0.015	1.520	1.606	16.164
16002H	1.600	0.016	1.619	1.706	18.359
17002H	1.700	0.017	1.719	1.809	20.707
18002H	1.800	0.018	1.818	1.909	23.182
19002H	1.900	0.019	1.918	2.012	25.813
20002H	2.000	0.020	2.017	2.112	28.568
21202H	2.120	0.021	2.139	2.235	30.076
22402H	2.240	0.022	2.256	2.355	32.769
23602H	2.360	0.024	2.375	2.478	39.683
25002H	2.500	0.025	2.514	2.618	44.481
26502H	2.650	0.027	2.664	2.772	49.956
28002H	2.800	0.028	2.813	2.922	55.717
30002H	3.000	0.030	3.012	3.126	63.921
31502H	3.150	0.032	3.160	3.276	70.417
35502H	3.550	0.036	3.557	3.679	89.306
37502H	3.750	0.038	3.756	3.883	99.618
40002H	4.000	0.040	4.004	4.133	113.244
42502H	4.250	0.043	4.252	4.387	127.791
45002H	4.500	0.045	4.500	4.637	143.137
47502H	4.750	0.048	4.749	4.871	159.468
50002H	5.000	0.050	4.997	5.141	176.593

N.B.: Intermediate Sizes Are Produced Upon Request



Enameled copper wires coated
With base and over coat

Description:

Soft annealed copper wires insulated with a composed of a polyester imide layer as a base and a poly amide - imide layer as an over coat.
Different colour request.
Thermal class up to 220oC.
Resistant to gas Freon
Self bonding.

Construction:

1- Conductor: Soft annealed circular and flat copper wires according to IEC Specification.
2- Insulation: (with over coat): The insulation is composed of layers.

Type: base polyester - imide overcoat polyamide - imide.
Insulation thickness may be double grade 2 or triple grade 3 and acc to IEC 317-13.

Testing:

Acc to IEC 317-0-1, IEC 317-13 and methods of test IEC 851.

Application:

For winding all rotors and coils, which are, used in motors for general purposes such as fans, washing, M/CS, fridge….Etc.

Enameled copper wires coated
With base and over coat

Double Layer (Grade 2):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
02002C	0.200	0.003	0.209	0.239	0.303
02122C	0.212	0.003	0.222	0.254	0.340
02242C	0.224	0.003	0.234	0.266	0.378
02362C	0.236	0.004	0.247	0.283	0.422
02502C	0.250	0.004	0.261	0.297	0.471
02652C	0.265	0.004	0.277	0.314	0.529
02802C	0.280	0.004	0.292	0.329	0.588
03002C	0.300	0.004	0.313	0.352	0.675
03152C	0.315	0.004	0.328	0.367	0.741
03352C	0.335	0.004	0.349	0.391	0.839
03552C	0.355	0.004	0.369	0.411	0.938
03752C	0.375	0.005	0.389	0.434	1.047
04002C	0.400	0.005	0.414	0.459	1.186
04252C	0.425	0.005	0.441	0.488	1.340
04502C	0.450	0.005	0.466	0.513	1.497
04752C	0.475	0.005	0.491	0.541	1.667
05002C	0.500	0.005	0.516	0.566	1.842
05302C	0.530	0.006	0.547	0.600	2.069
05602C	0.560	0.006	0.577	0.630	2.303
06002C	0.600	0.006	0.618	0.674	2.642
06302C	0.630	0.006	0.648	0.704	2.906
06702C	0.670	0.007	0.689	0.749	3.288
07102C	0.710	0.007	0.729	0.789	3.682
07502C	0.750	0.008	0.770	0.834	4.110
08002C	0.800	0.008	0.820	0.884	4.662
08502C	0.850	0.009	0.870	0.939	5.263
09002C	0.900	0.009	0.920	0.989	5.886
09502C	0.950	0.009	0.971	1.044	6.558

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated
With base and over coat

Double Layer (Grade 2):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
10002C	1.000	0.010	1.021	1.094	7.252
10602C	1.060	0.011	1.081	1.157	8.140
11202C	1.120	0.011	1.141	1.217	9.070
11802C	1.180	0.012	1.200	1.279	10.057
12502C	1.250	0.013	1.269	1.349	11.264
13202C	1.320	0.013	1.340	1.422	12.551
14002C	1.400	0.014	1.419	1.502	14.093
15002C	1.500	0.015	1.520	1.606	16.164
16002C	1.600	0.016	1.619	1.706	18.359
17002C	1.700	0.017	1.719	1.809	20.707
18002C	1.800	0.018	1.818	1.909	23.182
19002C	1.900	0.019	1.918	2.012	25.813
20002C	2.000	0.020	2.017	2.112	28.568
21202C	2.120	0.021	2.139	2.235	32.076
22402C	2.240	0.022	2.256	2.355	35.769
23602C	2.360	0.024	2.375	2.478	39.683
25002C	2.500	0.025	2.514	2.618	44.481
26502C	2.650	0.027	2.664	2.772	49.956
28002C	2.800	0.028	2.813	2.922	55.717
30002C	3.000	0.030	3.012	3.126	63.921
31502C	3.150	0.032	3.160	3.276	70.417
33502C	3.350	0.034	3.359	3.479	79.595
35502C	3.550	0.036	3.557	3.679	89.306
37502C	3.750	0.038	3.756	3.883	99.618
40002C	4.000	0.040	4.004	4.133	113.244
42502C	4.250	0.043	4.252	4.387	127.791
45002C	4.500	0.045	4.500	4.637	143.167
47502C	4.750	0.048	4.749	4.891	159.468
50002C	5.000	0.050	4.997	5.141	176.593

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled copper wires coated
With base and over coat

Triple Layer (Grade 3):

Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
02003C	0.200	0.003	0.210	0.252	2.622
02123C	0.212	0.003	0.222	0.268	2.673
02243C	0.224	0.003	0.234	0.280	2.738
02363C	0.236	0.004	0.246	0.298	2.780
02503C	0.250	0.004	0.260	0.312	2.854
02653C	0.265	0.004	0.276	0.330	2.920
02803C	0.280	0.004	0.291	0.345	2.998
03003C	0.300	0.004	0.312	0.369	3.084
03153C	0.315	0.004	0.327	0.384	3.160
03353C	0.335	0.004	0.347	0.408	3.246
03553C	0.355	0.004	0.367	0.428	3.347
03753C	0.375	0.005	0.388	0.453	3.427
04003C	0.400	0.005	0.413	0.478	3.554
04253C	0.425	0.005	0.439	0.508	3.663
04503C	0.450	0.005	0.464	0.533	3.793
04753C	0.475	0.005	0.490	0.562	3.910
05003C	0.500	0.005	0.515	0.587	4.046
05303C	0.530	0.006	0.546	0.623	4.192
05603C	0.560	0.006	0.576	0.653	4.367
06003C	0.600	0.006	0.617	0.698	4.593
06303C	0.630	0.006	0.647	0.728	4.787
06703C	0.670	0.007	0.687	0.774	5.039
07103C	0.710	0.007	0.727	0.814	5.330
07503C	0.750	0.008	0.768	0.861	5.620
08003C	0.800	0.008	0.818	0.911	6.038
08503C	0.850	0.009	0.869	0.968	6.474
09003C	0.900	0.009	0.919	1.018	6.966
09503C	0.950	0.009	0.969	1.074	7.484

N.B.: Intermediate Sizes Are Produced Upon Request

Enameled Wires - Base & Over Coat

Enameled copper wires coated With base and over coat

Triple Layer (Grade 3):

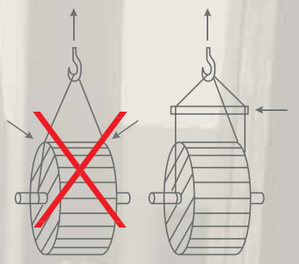
Product-Code	Nominal conductor diameter mm	Conductor tolerance ± mm	Overall diameter mm		Total Weight approx kg/km
			min	max	
10003C	1.000	0.010	1.019	1.124	8.055
10603C	1.060	0.011	1.079	1.188	8.787
11203C	1.120	0.011	1.139	1.248	9.586
11803C	1.180	0.012	1.199	1.311	10.441
12503C	1.250	0.013	1.268	1.381	11.519
13203C	1.320	0.013	1.339	1.455	12.675
14003C	1.400	0.014	1.418	1.535	14.100
15003C	1.500	0.015	1.518	1.640	16.026
16003C	1.600	0.016	1.617	1.740	18.115
17003C	1.700	0.017	1.717	1.844	20.360
18003C	1.800	0.018	1.816	1.944	22.760
19003C	1.900	0.019	1.916	2.048	25.310
20003C	2.000	0.020	2.015	2.148	28.009
21203C	2.120	0.021	2.135	2.272	31.442
22403C	2.240	0.022	2.254	2.392	35.083
23603C	2.360	0.024	2.373	2.516	38.929
25003C	2.500	0.025	2.512	2.656	43.676
26503C	2.650	0.027	2.661	2.811	49.068
28003C	2.800	0.028	2.810	2.961	54.777
30003C	3.000	0.030	3.009	3.166	62.880
31503C	3.150	0.032	3.157	3.316	69.324
33503C	3.350	0.034	3.357	3.521	78.406
35503C	3.550	0.036	3.555	3.721	88.047
37503C	3.750	0.038	3.754	3.926	98.248
40003C	4.000	0.040	4.002	4.176	111.784
42503C	4.250	0.043	4.250	4.431	126.194
45003C	4.500	0.045	4.498	4.681	141.477
47503C	4.750	0.048	4.746	4.936	157.633
50003C	5.000	0.050	4.994	5.186	174.663

N.B.: Intermediate Sizes Are Produced Upon Request

Handling & Laying Instructions

Handling & Laying Instructions

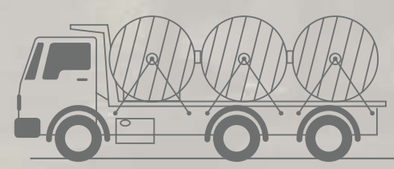
Cables should be installed and stored according to International regulation by trained persons with good engineering practice. Cables are supplied on heavy wooden/steel drum and handling these drums can constitute real hazardous. indicated some of the common mistakes can he committed do during the handling care should be taken during loading and unloading.



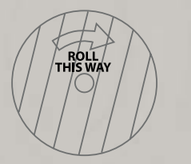
Lifting cable drums using crane.

Do not lay drums flat on their sides, use proper stops to prevent drums roling.

Lift drums on fork trucks correctly.



Secure drums adequately before transportation.



Roll in the direction shown by the arrow.

Laying of Power Cables

Applied Laying Depth

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

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

Laying Methods

1- Paying out from a trailer

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

2- Laying by Hand

(Equipment needed)
- (a) Cable Rollers [placed at distances 3 meters]
- (b) Corner Rollers [placed at bends]
- (c) Rollers for drawing cables in pipes
- (d) Cable stocking (Grip)]
- (e) Brakes at the drum

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

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

3- Laying by motor-driven Rollers

The cable is pulled off the jacked-up drum by motor driven rollers set up the trench 20 to 3Dm apart. Normal rollers are distributed 3m apart between motor-driven rollers at sharp bends, it may be necessary to set up one motor driven rollers before and one after the bend. All rollers are connected to the main switch box and switched on & off jointly. With motor driven rollers the pull is evenly distributed over the whole length of the cable.

4- Pulling by Winch

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

(a) Dynamometer for continuous check of pulling force.

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

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

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

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

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

Maximum Tensile Forces During Laying

- Maximum tensile force when pulling by cable stocking — F = A x 10 ..... 15 N
(cables with aluminium conductor) — F = A x 10 ..... 20 N
(cables with copper conductor)
But the maximum value should be revised with us before laying of cables.
- Maximum tensile force when pulling by eye attached to the conductors — F = A x 30 N
(cables with aluminium conductor) — F = A x 50 N
(cables with copper conductor)
But the maximum value should be revised with us before laying of cables.

Where

A is Cable Cross Section mm2

Earthing of Single Core H.V. and E.H.V. Cables

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

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

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

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

Specially Bonded Cable Systems

Single End Bonding System

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

Mid-point Bonding System

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

Cross-bonding System

In long routes, the route is split up into “major” sections, each comprised of three lengths and special joints are fitted. At each third joint position the sheaths are connected together and at all other positions they are connected so that all sheaths occupying the same position in the cable trench are connected in series .The sheaths at the intermediate positions are also connected to SVLS. The three sheaths connected in series are associated with conductors of different phases and when the cables are installed in trefoil formation their currents, and hence the sheath voltages, have equal magnitude but phase displacements of 2O~. The overall effect if that the resultant voltage and current in the three sheaths are zero. When cables are laid in flat formation the voltages induced in the sheaths of the outer cable are greater than induced on the sheath of the middle cable and the phasor sum is not zero. The cables are therefore transposed at every joint position and the cross-connections are made with a phase rotation opposite to that of transposition so that the sheaths are effectively straight connected.

PRODUCT CERTIFICATE

DAS CERTIFICATION

DAS CERTIFICATION

Quality Management System

Certificate of Approval

This is to certify that the QMS of

Giza Power Industries Co.

Abo Rawash Giza, Kilo 28 Alexandria Desert Road,
690 Industrial Area - Giza-Egypt.

Has been assessed and found to meet the requirements of

ISO 9001:2008

This certificate is valid for the following scope of operations:

Manufacturing of High, Medium and Low Voltage Power Cable
till 220 Kv with all Aluminium and Copper Cross-Section
from 10 mm² to 2000 mm²

Authorised by: Stan Wright
Chief Executive

Date of Certificate Issue: 07 January, 2017
Certificate Valid Until: 15 September 2018

Recertification audit before 15 September 2018. Certified since 07 January 2017.
This certificate is the property of DAS Certification and remains valid
subject to satisfactory annual Surveillance audits

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Company number: 07659067

Certificate Number: DAS 61047496/32/Q

ISO9001:2008 — Member of SN Registrars (Holdings) Ltd — UKAS MANAGEMENT SYSTEMS 8327

DAS CERTIFICATION

Occupational Health & Safety Management System

Certificate of Approval

This is to certify that the OHSMS of

Giza Power Industries Co.

Abo Rawash Giza, Kilo 28 Alexandria Desert Road,
690 Industrial Area - Giza-Egypt.

Has been assessed and found to meet the requirements of

BS OHSAS 18001:2007

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Certificate Valid Until: 06 January 2020

Recertification audit before 15 September 2018. Certified since 07 January 2017.
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BS OHSAS 18001:2007 — Member of SN Registrars (Holdings) Ltd — UKAS MANAGEMENT SYSTEMS 8327

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