



www.alahramgroupworld.com

مجموعة مصانع وشركات الأهرام جروب الدولية
Al Ahram Group International Factories & Companies

EGY. +201272496660

UAE. +971507456568

LON. +447926201960



email: info@alahramgroup-eg.net





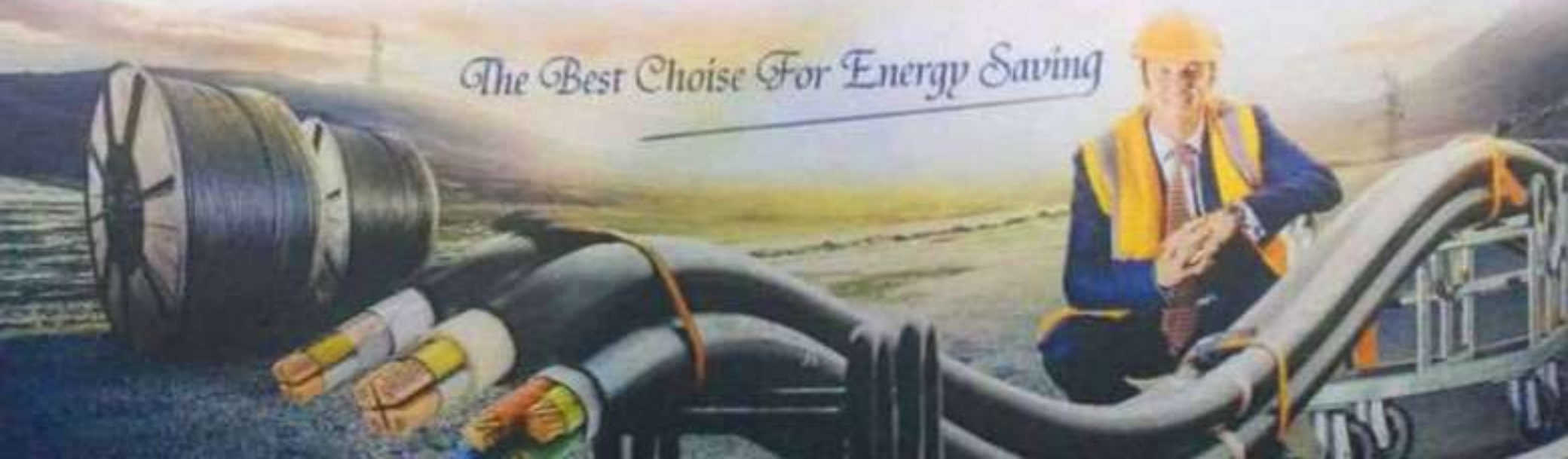
www.alahramgroupworld.com



INDEX

| | |
|--------------------------------------------|---------|
| ● About Company | Page 1 |
| ● General Information & Technical Data | Page 4 |
| ● Technical Data & Cable Parameters | Page 5 |
| ● Construction Of Low Voltage Power Cables | Page 16 |
| ● Order Code Description | Page 17 |
| ● Soled Cables | Page 18 |
| ● Over Head Cables | Page 21 |
| ● Flexible Cables | Page 27 |
| ● Stranded Cables | Page 45 |

The Best Choice For Energy Saving





E.S.C CABLES



About company

E.S.CCables is one of the leading companies in the market in the manufacturing and supplying electrical cables and wire industries.

E.S.CCables was established in 2015.

The factory is located in Industrial Zone .Badr City - Egypt

E.S.CCables offers a complete range of cables, wires and a strong distribution network covering wholesale and supply markets for government, tourism and private projects.

E.S.CCables has an integrated team of professional engineers in this field
The quality of the product is checked during all steps of production through specialized technicians starting from the receipt of raw materials until the finished product.

E.S.C Cables firmly believes that quality is the most important factor during manufacturing process in order to obtain safe and reliable products. E.S.C Cables is fully committed to manufacturing the product with the necessary quality standards. Cables and wires of E.S.C company is manufactured in accordance with the Egyptian and international standards.

The Egyptian standards (2948/2005 and 182/2011),

The international standards (IEC 60228, 60227, 60502)

and the implementation of the latest international standards for quality standards. E.S.C Cables and wires are manufactured in accordance with the results of adequate market research and customer requirements. The quality management system of complies with the quality of E.S.C company which certified to ISO 9001: 2015 and have a factory that manufactures all kinds of wires and electrical cables.

The Factory

The factory works with the latest technology which leads to manufacture a variety of high quality products such as :

1. Electrical conductors:

Solid, stranded and flexible Copper conductors and Aluminum conductors

2- Power cables:

Fixed and movable cables installation connections

3. Bared copper cables:

Stranded Bared copper and aluminum conductors

4. Control cables:

Light current systems such as speakers, Fire alarms, audio systems, etc.)

E.S.C Cables also has a test laboratory to control the quality of cables overall the production stages.

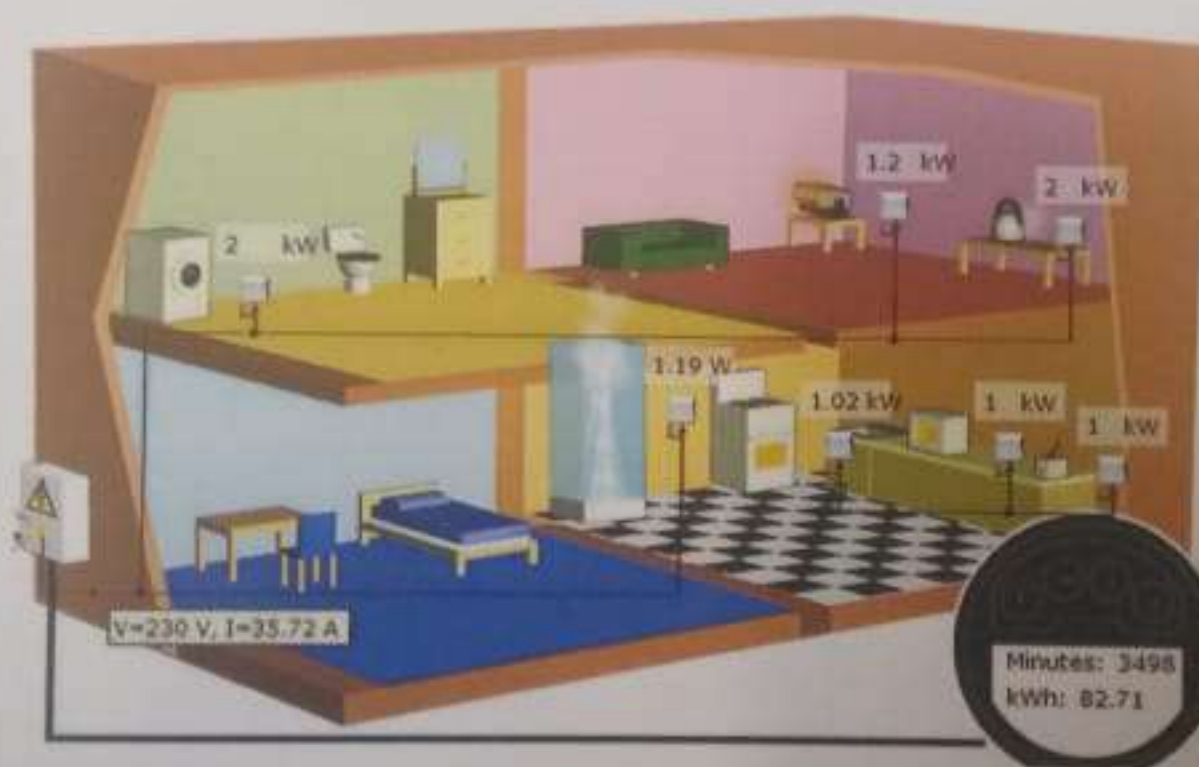
The laboratory includes all testing equipment that covers all tests provided in the standard specifications. The factory is planned to include an integrated technical management system to serve the objectives and ambitions of the company in covering the industry of wires and all kinds of cables of different quality and high quality of production capacity.

The factory was equipped with the latest production lines to meet the required production capacity.

E.S.C aims to achieve the difficult equation with the highest quality with the lowest cost Based on several factors:

- 1- Continuous development of production equipment's.
- 2- Dependence on the latest scientific techniques in the selection of raw materials.
- 3- Continuous training of human power in the company.
- 4- Continuous development of production quality control capabilities.

The Best Choice For Energy Saving





GENERAL INFORMATION & TECHNICAL DATA

Selecting of 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.
- Type of installation.
 - Underground (direct or in ducts).
 - In air.
- Specification and requirements to be met.
- Magnitude and duration of possible overload.
- Magnitude and duration of short-circuit current.
- Voltage drop.
- Length of line.
- Chemical and physical properties of soil.
- Max. and min. ambient air temperatures and soil temperature.

Voltage

The standard rated voltage of a cable is denoted by U_0/U (U_m).

where

U_0 : is the rated power-frequency voltage between conductor and earth or metallic screen.

U : is the rated power-frequency voltage between conductors.

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

| | | | | | | | | | | |
|--------------|-------|-------|-------|------|--------|-------|-------|-------|--------|---------|
| U_0/U (kV) | 0.6/1 | 1.8/3 | 3.6/6 | 6/10 | 8.7/15 | 12/20 | 18/30 | 30/66 | 76/132 | 127/220 |
| U_m (kV) | 1.2 | 3.6 | 7.2 | 12 | 17.8 | 34 | 36 | 72.5 | 145 | 240 |

Note: Cable design for 6/10, 12/20 and 18/30 kV is applicable for 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 other standard (e.g. 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 outer Jacket Marking consisting of:

- 1- Name of manufacturer - C.B.H Cables -
- 2- Type designation, size of conductor, rated voltage.
- 3- Continuous length marking every meter.
- 4- Year of manufacture.
- 5- Any special part no. on request.

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 m

- 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:

$$I_{sc,t} = \frac{I_{sc,1}}{\sqrt{t}}$$

Where

- $I_{sc,t}$: Short circuit current for t second kA
- $I_{sc,1}$: 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.

$$V_d = 2 I \ell (R \cos \theta + X \sin \theta) \quad \text{V}$$

B. Three phase circuit.

$$V_d = \sqrt{3} I \ell (R \cos \theta + X \sin \theta) \quad \text{V}$$

Where

- V_d : Voltage drop V
- I : Load current A
- R : AC Resistance Ω/km
- X : Reactance Ω/km
- $\cos \theta$: Power factor
- ℓ : Length km
- $X = \omega L 10^{-3}$ Ω/km
- $\omega = 2 \pi f$
- L = from tables mh/km

Relation between $\cos \theta$ and $\sin \theta$

| | | | | | | |
|---------------|-----|-----|-----|------|-----|-----|
| $\cos \theta$ | 1.0 | 0.9 | 0.8 | 0.71 | 0.6 | 0.5 |
|---------------|-----|-----|-----|------|-----|-----|

| | | | | | | |
|---------------|-----|------|-----|------|-----|------|
| $\sin \theta$ | 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.

Table 1

Electrical Properties

| Material | Relative Conductivity Copper 100% | Electric Resistivity at 20 °C ohm. m [10^{-9}] | 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 | 41 | 2.8264 | 0.00403 |
| Lead | 8 | 21.40 | 0.00400 |

Physical Properties

| Property | Unit | Copper | Aluminium | Lead |
|---------------------------|--------------------------|--------|-----------|----------|
| Density at 20 °C | kg / m ³ | 8890.0 | 2703.0 | 11340.00 |
| Coef. 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/m ² | 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 |

TECHNICAL DATA & CABLE PARAMETERS

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

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

Where

| | | |
|--------------|------------------------------------------|----------------------|
| R_{θ} | : Conductor DC resistance at θ °C | Ω/km |
| R_{20} | : Conductor DC resistance at 20 °C | Ω/km |
| θ | : Operating temperature | °C |
| α | : Resistance temperature coefficient | $1/^{\circ}\text{C}$ |
| | = 0.00393 for Copper | |
| | = 0.00403 for Aluminium | |

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

$$R_{AC} = R_{\theta} (1 + \gamma_0 + \gamma_1)$$

Where

γ_0 and γ_1 are proximity and skin effect factors respectively which depend on operation frequency and cable spacing.

2. Inductance

The self and mutual inductance are formulated as follow:

$$L = K + 0.2 \ln \left(\frac{S}{d} \right) \quad \text{mH/km}$$

Where

| | | |
|---|---------------------------------------------------------|-------|
| L | : Inductance | mH/km |
| K | : Constant depends on the conductor's number of wires | |
| d | : Conductor diameter | mm |
| S | : Axial spacing between cables in belfor formation | mm |
| S | : 1.28 x axial spacing between cables in flat formation | mm |

3. Capacitance

The capacitance is formulated as follow

$$C = \frac{\epsilon_r}{18k \times \ln \frac{D}{d}} \quad \mu\text{F/km}$$

Where

| | | |
|--------------|------------------------------------------------|------------------|
| C | : Capacitance | $\mu\text{F/km}$ |
| ϵ_r | : Relative permittivity of insulation material | |
| D | : Diameter over insulation | mm |
| d | : Conductor diameter | mm |

4. Insulation Resistance

The Insulation Resistance is formulated as follow

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

Where

| | | |
|---|------------------------------------------------------------------|----------------------|
| R | : Insulation resistance | M Ω/km |
| K | : Constant depends on the insulation material | |
| d | : Diameter of the conductor (including the semiconducting layer) | mm |
| D | : Diameter of the insulated core | 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.

$$I_c = U_0 \omega C \times 10^{-4} \quad \text{A/km}$$

Where

| | | |
|----------|-----------------------------------|------------------|
| I_c | : Charging current | A/km |
| U_0 | : Voltage between phase and earth | V |
| ω | : $2\pi f$ | |
| f | : frequency | Hz |
| C | : Capacitance to neutral | $\mu\text{F/km}$ |

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.

$$W_D = 2\pi f C U_0^2 \tan \delta \times 10^{-4} \quad \text{watt/km/phase}$$

Where

| | | |
|---------------|-----------------------------------|------------------|
| W_D | : Dielectric losses | watt/km/phase |
| f | : frequency | Hz |
| C | : Capacitance to neutral | $\mu\text{F/km}$ |
| U_0 | : Voltage between phase and earth | V |
| $\tan \delta$ | : Dielectric power factor | |

Table 4

Burial Depth Derating Factor

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

Table 5

Soil Thermal Resistivity Derating Factor

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

Table 6

PVC Rated Temperature Derating Factor

| Type of PVC Rated Temperature °C | 70 | 85 |
|----------------------------------|-------|-------|
| Rating factor | 1.000 | 1.195 |

Table 7

Trefall 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 | | Spacing = 0.30 M | |
| n _r | Trefoil | Flat | Trefoil | Flat | Trefoil | Flat | Flat |
| 2 | 0.77 | 0.80 | 0.82 | 0.85 | 0.88 | 0.91 | |
| 3 | 0.66 | 0.69 | 0.73 | 0.76 | 0.80 | 0.83 | |
| 4 | 0.60 | 0.63 | 0.68 | 0.71 | 0.74 | 0.77 | |
| 5 | 0.56 | 0.59 | 0.64 | 0.67 | 0.72 | 0.75 | |
| 6 | 0.53 | 0.57 | 0.61 | 0.64 | 0.70 | 0.73 | |

* L = Spacing

Table 8


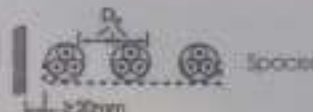



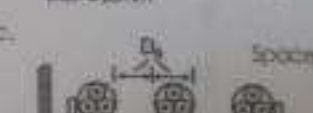
Trefoil Formation Derating Factors for Multi-core Core Cables Laid Direct in Ground

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

*L = Spacing

Table 9

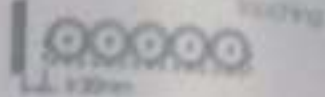
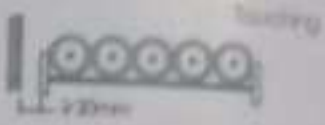
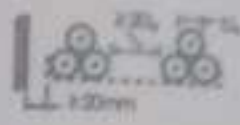
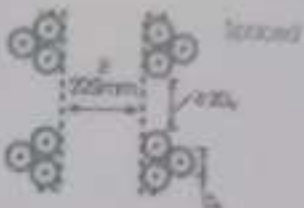
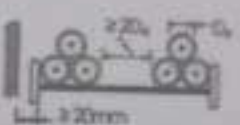
Reduction factors for groups of more than one multi-core cable in air
To be applied to the current-carrying capacity for one multi-core cable in free air

| Number of Trays | Number of Cables | | | | | | Method of installation |
|-----------------|------------------|------|------|------|------|------|----------------------------------------------------------------------------------------------------------------------------------|
| | 1 | 2 | 3 | 4 | 6 | 9 | |
| 1 | 1.00 | 0.88 | 0.82 | 0.79 | 0.76 | 0.73 | Cables on perforated trays  |
| 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 | 0.96 | 0.95 | 0.91 | - | Cables on vertical perforated trays  |
| 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  |
| 2 | 1.00 | 0.88 | 0.81 | 0.76 | 0.71 | 0.70 | |
| 1 | 1.00 | 0.91 | 0.89 | 0.88 | 0.87 | - | Cables on vertical perforated trays  |
| 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.  |
| 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 | - | Cables on ladder supports, cleats, etc.  |
| 2 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | - | |
| 3 | 1.00 | 0.98 | 0.97 | 0.96 | 0.93 | - | |

- NOTE 1 Values given are averages for the cable types and range of conductor sizes considered. The spread of values is generally less than 5%.
- NOTE 2 Factors apply to single layer groups of cables as shown above and do not apply when cables are installed in more than one layer touching each other. Values for such installations may be significantly lower and must be determined by an appropriate method.
- NOTE 3 Values are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. For closer spacing, the factor 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 factor 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)  |
| 2 | 0.96 | 0.87 | 0.81 | | |
| 3 | 0.95 | 0.85 | 0.78 | | |
| 1 | 1.00 | 0.97 | 0.96 | Three cables in horizontal formation | Ladder supports, cleats, etc. (Note 3)  |
| 2 | 0.98 | 0.93 | 0.89 | | |
| 3 | 0.97 | 0.90 | 0.85 | | |
| 1 | 1.00 | 0.98 | 0.96 | | Perforated trays (Note 3)  |
| 2 | 0.97 | 0.93 | 0.89 | | |
| 3 | 0.96 | 0.92 | 0.86 | | |
| 1 | 1.00 | 0.91 | 0.89 | Three cables in trefoil formation | Vertical perforated trays (Note 4)  |
| 2 | 1.00 | 0.90 | 0.86 | | |
| 3 | 1.00 | 1.00 | 1.00 | | |
| 1 | 0.97 | 0.95 | 0.93 | | Ladder supports, cleats, etc. (Note 3)  |
| 2 | 0.96 | 0.94 | 0.90 | | |
| 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 of values is generally less than 5%.
- NOTE 2 Factors are given for single layers of cables (or trefoil groups) as shown in the table and do not apply when cables are installed in more than one layer touching each other. Values for such installations may be significantly lower and should be determined by an appropriate method.
- NOTE 3 Values are given for vertical spacings between trays of 300 mm. For closer spacing, the factors should be reduced.
- NOTE 4 Values are given for horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing, the factors should be reduced.
- NOTE 5 For circuits having more than one cable in parallel per phase, each three phase set of conductors should be considered as a circuit for the purpose of this table.

Table 11

Max. Short Circuit Temperature for Cable Components

| Material | Item | Temp. °C |
|------------|---------------------|-------------------------------------|
| Insulation | PVC insulation | 140 For C.S.A > 300 mm ² |
| | | 160 For C.S.A ≤ 300 mm ² |
| | XLPE insulation | 250 |
| Jacket | PVC sheathing | 200 |
| | LLDPE sheathing | 180 |
| | 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 ($U_m=36$ kV).

Table 12

kA Short Circuit Current - Copper Conductor - PVC Insulated

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

Table 13

kA Short Circuit Current - Aluminium Conductor - PVC Insulated

| C.S.A. mm ² | Duration sec. | | | | | | | | | |
|------------------------|---------------|------|------|------|------|------|------|------|------|------|
| | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| 16 | 3.8 | 2.7 | 2.2 | 1.9 | 1.7 | 1.2 | 0.9 | 0.7 | 0.6 | 0.6 |
| 25 | 4.0 | 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 | 14.6 | 11.9 | 9.7 | 8.4 | 7.6 | 5.3 | 3.8 | 3.1 | 2.7 | 2.4 |
| 95 | 22.8 | 18.1 | 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 | 34.0 | 25.5 | 20.8 | 18.0 | 16.1 | 11.4 | 8.1 | 6.6 | 5.7 | 5.1 |
| 185 | 44.3 | 31.4 | 25.7 | 22.2 | 19.9 | 14.1 | 9.9 | 8.1 | 7.0 | 6.3 |
| 240 | 57.2 | 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 | 107.3 | 76.0 | 62.1 | 53.8 | 48.1 | 34.0 | 24.0 | 19.6 | 17.0 | 15.2 |
| 630 | 135.3 | 95.8 | 76.2 | 67.7 | 60.6 | 42.8 | 30.3 | 24.7 | 21.4 | 19.2 |

Table 14

kA Short Circuit Current - Copper Conductor - XLPE Insulated

| C.S.A. mm ² | Duration sec. | | | | | | | | | |
|------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| 16 | 7.2 | 5.1 | 4.2 | 3.6 | 3.2 | 2.3 | 1.6 | 1.3 | 1.1 | 1.02 |
| 25 | 11.3 | 8.0 | 6.5 | 5.7 | 5.1 | 3.6 | 2.5 | 2.1 | 1.8 | 1.60 |
| 35 | 15.8 | 11.2 | 9.1 | 7.9 | 7.1 | 5.0 | 3.5 | 2.9 | 2.5 | 2.24 |
| 50 | 22.6 | 16.0 | 13.1 | 11.3 | 10.1 | 7.2 | 5.1 | 4.1 | 3.6 | 3.20 |
| 70 | 31.7 | 22.4 | 18.3 | 15.8 | 14.2 | 10.0 | 7.1 | 5.8 | 5.0 | 4.5 |
| 95 | 43.0 | 30.4 | 24.8 | 21.5 | 19.2 | 13.6 | 9.6 | 7.8 | 6.8 | 6.1 |
| 120 | 54.3 | 38.4 | 31.3 | 27.1 | 24.3 | 17.2 | 12.1 | 9.9 | 8.6 | 7.7 |
| 150 | 67.8 | 48.0 | 39.2 | 33.9 | 30.3 | 21.5 | 15.2 | 12.4 | 10.7 | 9.6 |
| 185 | 83.7 | 59.2 | 48.3 | 41.8 | 37.4 | 26.5 | 18.7 | 15.3 | 13.2 | 11.8 |
| 240 | 108.5 | 76.7 | 62.7 | 54.3 | 48.5 | 34.3 | 24.3 | 19.8 | 17.2 | 15.3 |
| 300 | 135.7 | 95.9 | 78.3 | 67.8 | 60.7 | 42.9 | 30.3 | 24.8 | 21.5 | 19.2 |
| 400 | 160.9 | 122.9 | 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 | 164.3 | 142.4 | 127.4 | 90.1 | 63.7 | 52.0 | 45.0 | 40.3 |
| 800 | 361.8 | 255.8 | 208.9 | 180.9 | 161.8 | 114.4 | 80.9 | 66.0 | 57.2 | 51.2 |
| 1000 | 452.2 | 319.8 | 261.1 | 226.1 | 202.2 | 143.0 | 101.1 | 82.6 | 71.5 | 64.0 |
| 1200 | 542.6 | 383.7 | 313.3 | 271.3 | 242.7 | 171.6 | 121.3 | 99.1 | 85.8 | 76.7 |
| 1600 | 723.5 | 511.6 | 417.7 | 361.8 | 323.6 | 228.8 | 161.8 | 132.1 | 114.4 | 102.3 |
| 2000 | 904.4 | 639.5 | 522.2 | 452.2 | 404.5 | 286 | 202.2 | 165.1 | 143 | 127.9 |
| 2500 | 1130.3 | 799.4 | 652.7 | 565.3 | 505.6 | 357.5 | 252.8 | 204.4 | 178.8 | 159.9 |

Table 15

kA Short Circuit Current - Aluminium Conductor - XLPE Insulated

| C.S.A. mm ² | Duration Sec. | | | | | | | | | |
|------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| 16 | 4.7 | 3.4 | 2.7 | 2.4 | 2.1 | 1.5 | 1.1 | 0.9 | 0.75 | 0.67 |
| 25 | 7.4 | 5.2 | 4.3 | 3.7 | 3.3 | 2.3 | 1.7 | 1.4 | 1.2 | 1.0 |
| 35 | 10.4 | 7.3 | 6.0 | 5.2 | 4.6 | 3.3 | 2.3 | 1.9 | 1.6 | 1.5 |
| 50 | 14.8 | 10.5 | 8.6 | 7.4 | 6.6 | 4.7 | 3.3 | 2.7 | 2.3 | 2.1 |
| 70 | 20.7 | 14.7 | 12.0 | 10.4 | 9.3 | 6.6 | 4.6 | 3.8 | 3.3 | 2.9 |
| 95 | 28.1 | 19.9 | 16.3 | 14.1 | 12.6 | 8.9 | 6.3 | 5.1 | 4.5 | 4.0 |
| 120 | 35.6 | 25.1 | 20.5 | 17.8 | 15.9 | 11.2 | 8.0 | 6.5 | 5.6 | 5.0 |
| 150 | 44.4 | 31.4 | 25.7 | 22.2 | 19.9 | 14.1 | 9.9 | 8.1 | 7.0 | 6.3 |
| 185 | 54.8 | 38.8 | 31.6 | 27.4 | 24.5 | 17.3 | 12.3 | 10.0 | 8.7 | 7.8 |
| 240 | 71.1 | 50.3 | 41.1 | 35.6 | 31.8 | 22.5 | 15.9 | 13.0 | 11.2 | 10.1 |
| 300 | 88.9 | 62.9 | 51.3 | 44.4 | 39.8 | 28.1 | 19.9 | 16.2 | 14.1 | 12.6 |
| 400 | 118.5 | 83.8 | 68.4 | 59.3 | 53.0 | 37.5 | 26.5 | 21.6 | 18.7 | 16.8 |
| 500 | 148.2 | 104.8 | 85.5 | 74.1 | 66.3 | 46.9 | 33.1 | 27.0 | 23.4 | 21.0 |
| 630 | 186.7 | 132.0 | 107.8 | 93.3 | 83.5 | 59.0 | 41.7 | 34.1 | 29.5 | 26.4 |
| 800 | 237.0 | 167.6 | 136.9 | 118.5 | 108.0 | 75.0 | 53.0 | 43.3 | 37.5 | 33.5 |
| 1000 | 296.3 | 209.5 | 171.1 | 148.2 | 132.5 | 93.7 | 66.3 | 54.1 | 46.9 | 41.9 |
| 1200 | 355.6 | 251.4 | 205.3 | 177.8 | 159.0 | 112.4 | 79.5 | 64.9 | 56.2 | 50.3 |
| 1600 | 474.1 | 335.2 | 273.7 | 237 | 212 | 149.9 | 106 | 86.6 | 75 | 67 |
| 2000 | 592.6 | 419 | 342.1 | 296.3 | 265 | 187.4 | 132.5 | 108.2 | 93.7 | 83.8 |
| 2500 | 741.2 | 524.1 | 427.9 | 370.6 | 331.5 | 234.4 | 165.7 | 135.3 | 117.2 | 104.8 |





Table 16





kA Short Circuit Current - Copper Screen

| C.S.A. mm ² | Duration Sec. | | | | | | | | | |
|------------------------|---------------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| 16 | 7.3 | 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 | 11.8 | 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 mm ² | 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 mm ² | 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 | 0.223 | 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 mm ² | Copper Conductor Voltage Drop (mv / AMP / Meter) | |
|--------------------------|------------------------------------------------------|--------------------------------|
| | PVC Insulation & PVC Sheathed | XLPE Insulation & PVC Sheathed |
| | 1.5 | 20.345 |
| 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 mm ² | Aluminium Conductor Voltage Drop (mv / AMP / Meter) | |
|--------------------------|---------------------------------------------------------|--------------------------------|
| | PVC Insulation & PVC Sheathed | XLPE Insulation & PVC Sheathed |
| | 16 | 3.263 |
| 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

CONSTRUCTION OF LOW VOLTAGE CABLES

OPERATING VOLTAGE (UP TO 06 / 1 KV)

Cable Construction

1. Conductor

Copper or Aluminium conductors, solid, stranded or flexible; round or sectoral shape.

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

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

4. Bedding

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

5. Armouring

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

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

6. Sheath

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

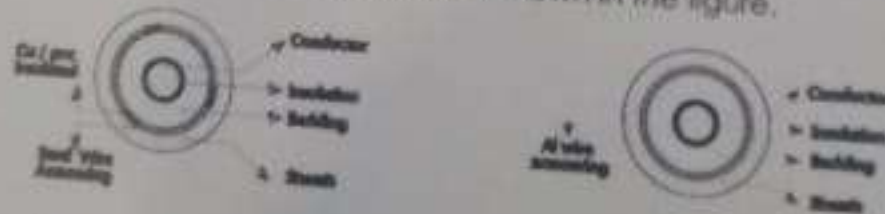
Option

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

Armouring of Single Core Cable

1. Armouring by non-magnetic material either Aluminium Tape or Aluminium Wire armouring to reduce the magnetic losses.

2. If it is required for single core cable to be armoured by steel wire armouring, the magnetic circuit around the single core cable should be interrupted by inserting insulated copper wires between the steel wires as shown in the figure.



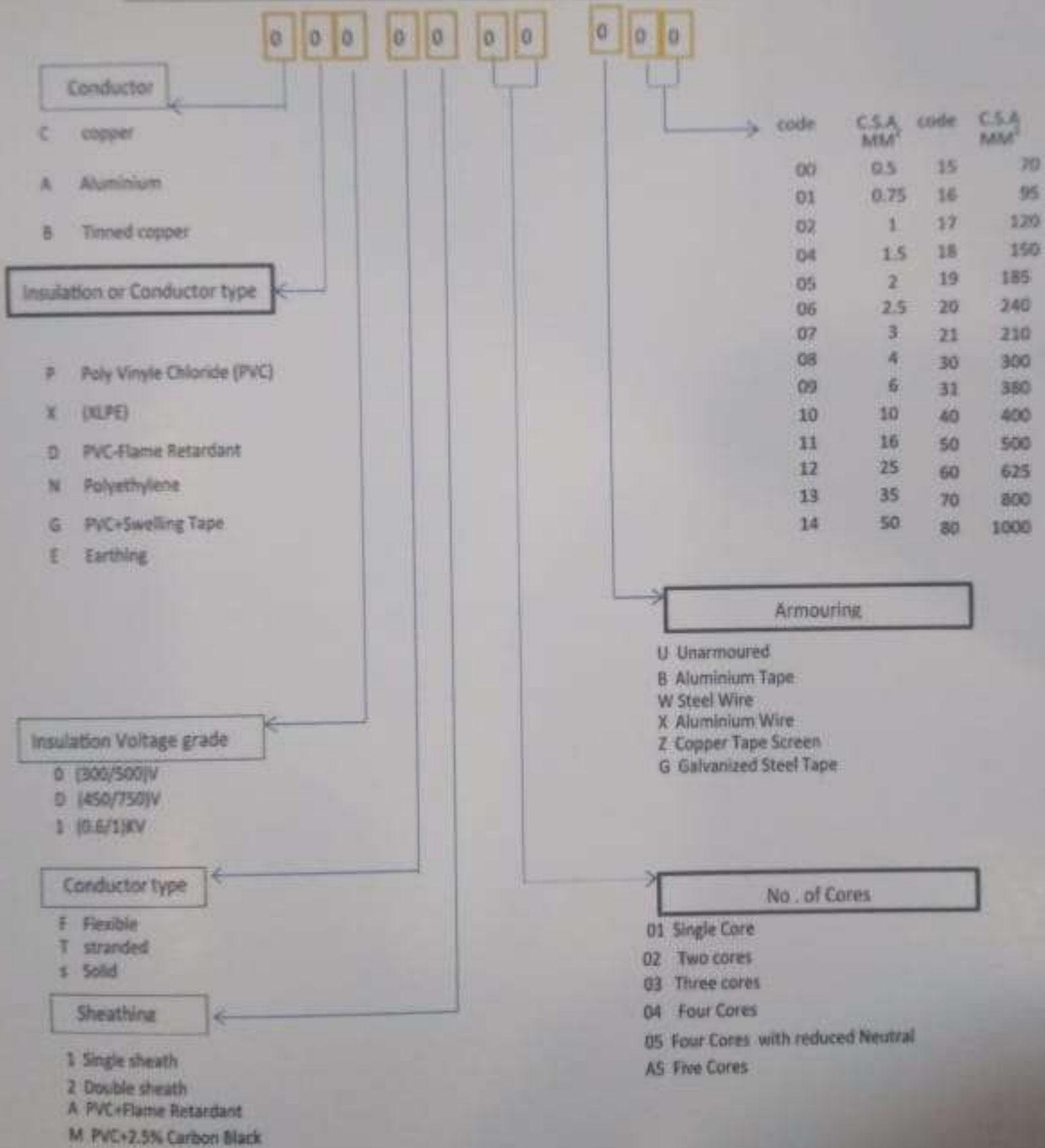
Armouring of Single Core Cable

You can request our cables through this code:



1-cable code as per the catalogue .

2-if your required cable /conductor is out of our catalodue range ,you can use the following codes to determine your cable.



Low Voltage Power Cables



Solid Cables

111-Single Core Solid copper conductor

111.1 Accordig to IEC-60228 (450/750)V...CU/PVC



Solid Cables

Solid cables are often favored because they usually more affordable than the stranded variety due to their cheaper production costs. These cables are simple yet quite durable. As single, thick strands of cable, they are quite resistant to threats and very easy to produce. Solid cables also have a much more compact diameter compared to stranded cables. Yet this reduced size does not reduce the current carrying ability of solid cables. Add in the fact that solid cables are not as prone to failure as a result of corrosion and it is easy to see why they are held in high regard.

General characteristics

- Transmits electrical signals better over longer distances
- Lower attenuation (resistance)
- More likely to break with repetitive bending
- Lower Cost
- Used for horizontal cabling in Ethernet networks

Low voltage cables

111-Single Core cable with Solid copper conductor

111.1

According to IEC-60228 (450/750)V

Description

- Solid Copper Conductor Insulated With Polyvinyl Chloride (CU/PVC).
- Cables are produced according to IEC 60228.

Application

- Transmission of power inside buildings for houses, Office and for all constructions.
- Transmission of power from transformers to buildings.
- Connections in electrical circuits in some lighting applications

| Product Code | Conductor Solid Copper Class I | | | | | Insulation PVC | | | | Current Rating in Air | | Approx. weight kg/km |
|--------------|----------------------------------------------------|-------------------|---------------------------------|-----------------------------|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------------|-----------|----------------------|
| | Conductor Nominal Cross Section (mm ²) | Number of Strands | Conductor Nominal Diameter (mm) | Max. No. Insulation Strands | Max. No. Insulation Strands | Approx. Nominal Thickness (mm) | Approx. Nominal Thickness (mm) | Approx. Nominal Thickness (mm) | Max. Number Insulation Strands | Per Strand | Per Cable | |
| 111.1.01.01 | 1.5 | 1 | 1.5 | 1.5 | 12.1 | 0.7 | 2.6 | 3.2 | 0.011 | 17 | 13 | 20 |
| 111.1.01.02 | 2 | 1 | 1.7 | 1.7 | 9.14 | 0.8 | 3 | 3.7 | 0.010 | 19 | 15 | 27 |
| 111.1.01.03 | 2.5 | 1 | 1.9 | 1.9 | 7.41 | 0.8 | 3.2 | 3.9 | 0.010 | 24 | 19 | 31 |
| 111.1.01.04 | 3 | 1 | 2.1 | 2.1 | 6.13 | 0.8 | 3.3 | 4.1 | 0.009 | 27 | 21 | 37 |
| 111.1.01.05 | 4 | 1 | 2.4 | 2.4 | 4.61 | 0.8 | 3.6 | 4.4 | 0.0085 | 32 | 23 | 47 |
| 111.1.01.06 | 6 | 1 | 2.9 | 2.9 | 3.08 | 0.8 | 4.1 | 5 | 0.0070 | 40 | 29 | 68 |
| 111.1.01.07 | 10 | 1 | 3.7 | 3.7 | 1.83 | 1 | 5.3 | 6.6 | 0.0070 | 57 | 41 | 117 |

Overhead Conductors

111.1-Bare Soft drawn copper conductors

Accordig to IEC-60228

111.1-Bare Hard drawn copper conductors

Accordig to IEC-60228

111.1-Hard drawn Aluminium conductors

Accordig to IEC-61089

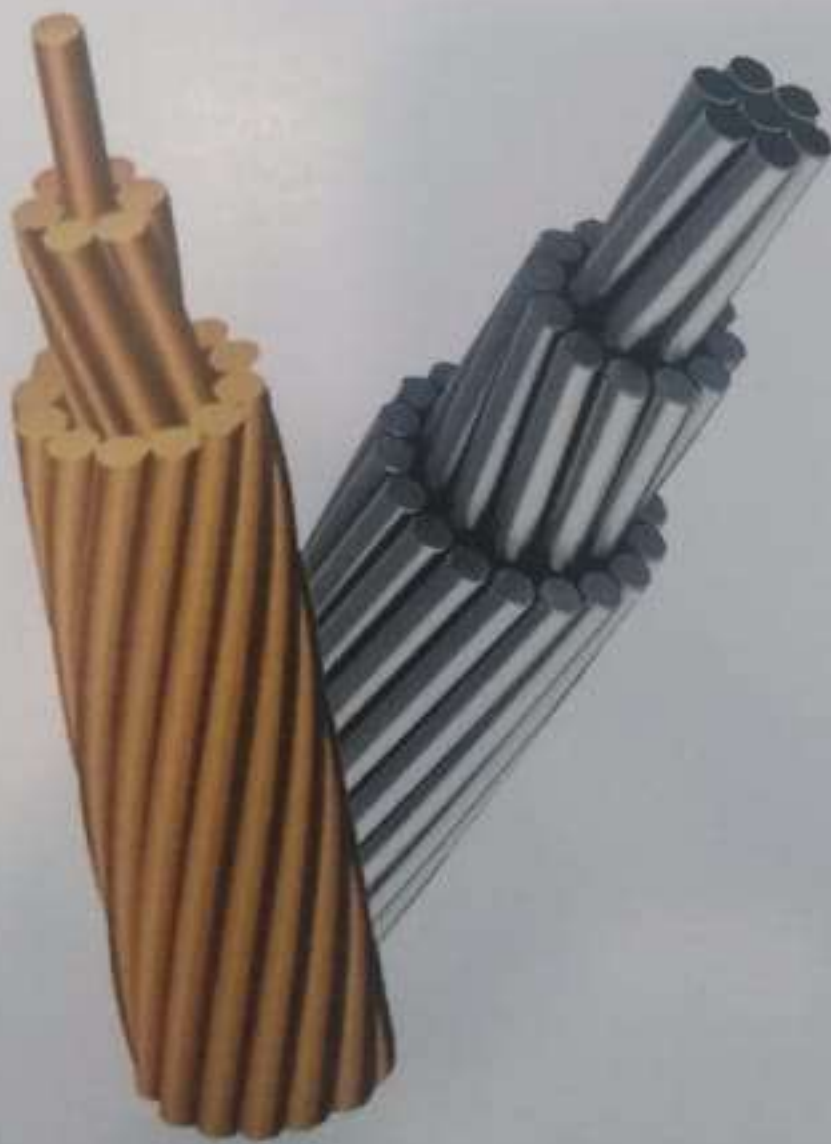


Over Head Conductors

Overhead Transmission networks are an essential part of a country's infrastructure and are generally massive un-dertaking implemented in the developing regions.

Overhead conductors are classified by the types of materials used for conductors, types of reinforcing cores used, and either it is bare or insulated.

This catalogue contains design, construction and technical data of C.B.H whole range of overhead conductors including bare soft or Hard drawn copper conductors. aluminium conductors.



Overhead Conductors

1111-Overhead conductors Bare Soft drawn copper conductor

111.1

According to IEC-60228

Description

- Bare soft drawn copper conductors
Conductors are produced according to IEC 60228 CLASS 2

Application

- Used for grounding electrical systems where high conductivity and flexibility are required.



| Product - Code | Bare soft drawn | | | | | Approx. Weight kg/km |
|----------------|--------------------------------------------------|-------------------------|------------------------------------|------------------------------------------|---------------------------------------------|-------------------------|
| | Conductor Nominal C.S.A (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC resistance at 20°C 1ohm/km | |
| CPDF1 01 U 04 | 10 | 7 | 1.43 | 3.7 | 1.8300 | 86.5 |
| CPDF1 01 U 05 | 16 | 7 | 1.75 | 4.7 | 1.1500 | 137 |
| CPDF1 01 U 06 | 25 | 7 | 2.18 | 5.8 | 0.7270 | 217 |
| CPDF1 01 U 07 | 35 | 7 | 2.65 | 6.9 | 0.5240 | 298 |
| CPDF1 01 U 08 | 50 | 19 | 1.68 | 8.2 | 0.3870 | 410 |
| CPDF1 01 U 09 | 70 | 19 | 2.16 | 10.1 | 0.2680 | 595 |
| CPDF1 01 U 10 | 95 | 19 | 2.65 | 11.3 | 0.1930 | 820 |
| CPDF1 01 U 11 | 120 | 19 | 3.05 | 12.7 | 0.1530 | 1040 |
| CPDF1 01 U 12 | 150 | 19 | 3.38 | 14.1 | 0.1240 | 1277 |
| CPDF1 01 U 13 | 185 | 37 | 2.63 | 15.8 | 0.0991 | 1610 |
| CPDF1 01 U 14 | 240 | 34 | 3.23 | 18.2 | 0.0754 | 2120 |
| CPDF1 01 U 15 | 300 | 61 | 2.64 | 20.6 | 0.0601 | 2630 |
| CPDF1 01 U 16 | 400 | 61 | 2.98 | 23.2 | 0.0470 | 3390 |
| CPDF1 01 U 17 | 500 | 61 | 3.33 | 26.6 | 0.0366 | 4420 |

Overhead Conductors

1111-Overhead conductors Bare Hard drawn copper conductor

111.2

According to IEC-60228

Description

- Bare hard drawn copper conductors.
Conductors are produced according to IEC 60228 CLASS 2

Application

- Used in overhead electrical distribution networks.



| Product-Code | Bare Hard drawn | | | | | |
|---------------|--------------------------------------------------|-------------------------|------------------------------------|------------------------------------------|----------------------------------------------|----------------------------|
| | Conductor Nominal C.S.A.(mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC resistance at 20°C (ohm/km) | Approx. Weight kg/km |
| CPDF1 01 U 04 | 10 | 7 | 1.43 | 3.7 | 1.8290 | 90 |
| CPDF1 01 U 05 | 16 | 7 | 1.75 | 4.7 | 1.1540 | 143 |
| CPDF1 01 U 06 | 25 | 7 | 2.18 | 5.8 | 0.7563 | 218 |
| CPDF1 01 U 07 | 35 | 7 | 2.65 | 6.9 | 0.5337 | 310 |
| CPDF1 01 U 08 | 50 | 19 | 1.68 | 8.2 | 0.3819 | 437 |
| CPDF1 01 U 09 | 70 | 19 | 2.16 | 10.1 | 0.2806 | 596 |
| CPDF1 01 U 10 | 95 | 19 | 2.65 | 11.3 | 0.1980 | 845 |
| CPDF1 01 U 11 | 120 | 19 | 3.05 | 12.7 | 0.1578 | 1060 |
| CPDF1 01 U 12 | 150 | 19 | 3.38 | 14.1 | 0.1264 | 1337 |
| CPDF1 01 U 13 | 185 | 37 | 2.63 | 15.8 | 0.1024 | 1649 |
| CPDF1 01 U 14 | 240 | 34 | 3.23 | 18.2 | 0.07528 | 2209 |
| CPDF1 01 U 15 | 300 | 61 | 2.64 | 20.6 | 0.06097 | 2725 |
| CPDF1 01 U 16 | 400 | 61 | 2.98 | 23.2 | 0.0456 | 3640 |
| CPDF1 01 U 17 | 500 | 61 | 3.33 | 26.6 | 0.0365 | 4545 |

Overhead Conductors

1111-Overhead conductors Hard drawn Aluminium conductor

111.3

According to IEC-60228

Description

- Hard drawn Aluminium wires, stranded in successive layers, in opposite direction to form the Aluminium stranded conductor. Conductors are produced according to IEC 61089

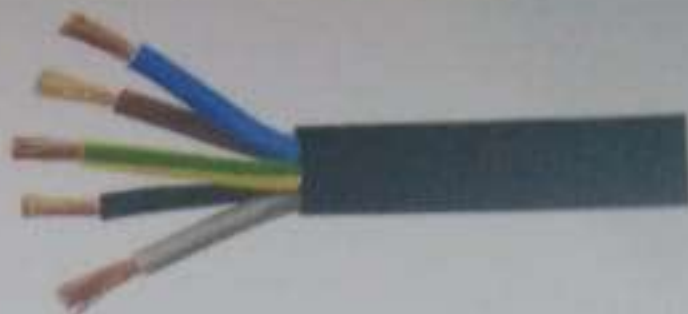


Application

- used for aerial distribution lines having relatively short spans, aerial feeders and bus bars of substations.

| Product - Code | Hard drawn Aluminium | | | | Max. DC resistance at 20°C (ohm/km) | Approx. Weight (kg/km) |
|----------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|------------------------|
| | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | | |
| CPDF1 01 U 04 | 16 | 7 | 1.7 | 5.10 | 1.7986 | 43.4 |
| CPDF1 01 U 05 | 25 | 7 | 2.1 | 6.30 | 1.1787 | 66.3 |
| CPDF1 01 U 06 | 35 | 7 | 2.5 | 7.50 | 0.8317 | 93.9 |
| CPDF1 01 U 07 | 50 | 7 | 1.8 | 9.00 | 0.5944 | 132.9 |
| CPDF1 01 U 08 | 70 | 19 | 2.1 | 10.5 | 0.4367 | 180.9 |
| CPDF1 01 U 09 | 95 | 19 | 2.5 | 12.5 | 0.3081 | 256.3 |
| CPDF1 01 U 10 | 120 | 19 | 2.8 | 14.0 | 0.2456 | 321.5 |
| CPDF1 01 U 11 | 150 | 37 | 2.25 | 15.8 | 0.1960 | 405.7 |
| CPDF1 01 U 12 | 185 | 37 | 2.5 | 17.5 | 0.1588 | 500.9 |
| CPDF1 01 U 13 | 240 | 61 | 2.25 | 20.3 | 0.1193 | 671.1 |
| CPDF1 01 U 14 | 300 | 61 | 2.5 | 22.5 | 0.0966 | 828.5 |
| CPDF1 01 U 15 | 400 | 61 | 2.89 | 26.0 | 0.0723 | 1107.1 |
| CPDF1 01 U 16 | 500 | 61 | 3.23 | 29.1 | 0.0579 | 1382.9 |

Flexible Cables



1-Single Core Flexible copper conductor

- 1.1 Accordig to IEC-60227 (300/500)V..... CU/PVC
- 1.2 Accordig to IEC-60227 (450/750)V..... CU/PVC
- 1.3 Accordig to IEC-60502 (600/1000)V..... CU/PVC/PVC
- 1.4 Accordig to IEC-60502 (600/1000)V..... CU/PVC/PVC

2-Multi Core Flexible copper conductor

- 2.1 Accordig to IEC-60227 (300/500)-Two Core..... CU/PVC/PVC
- 2.2 Accordig to IEC-60227 (300/500)V-Three Core..... CU/PVC/PVC
- 2.3 Accordig to IEC-60227 (300/500)V-Four Core..... CU/PVC/PVC
- 2.4 Accordig to IEC-60227(300/500)V-Five Core..... CU/PVC/PVC
- 2.5 Accordig to IEC-60502(600/1000)V-Two Core..... CU/PVC/PVC
- 2.55 Accordig to IEC-60502(600/1000)V-Two Core..... CU/PVC/PVC
- 2.6 Accordig to IEC-60502(600/1000)V-Three Core..... CU/PVC/PVC
- 2.66 Accordig to IEC-60502(600/1000)V-Three Core..... CU/PVC/PVC
- 2.7 Accordig to IEC-60502(600/1000)V-Four Core..... CU/PVC/PVC
- 2.77 Accordig to IEC-60502(600/1000)V-Four Core..... CU/PVC/PVC
- 2.8 Accordig to IEC-60502(600/1000)V-Four Core/0.5N..... CU/PVC/PVC
- 2.88 Accordig to IEC-60502(600/1000)V-Four Core/0.5N..... CU/PVC/PVC



Flexible Cables



Flexible cables, are transferred to the installation site On wooden rollers or drums. It is used in applications that need a lot of movement such as cutting machines , drill ... etc.

Flexible cables consist of a set of copper wires with small diameters to achieve the best flexibility of the cable during use.

The insulation material used in these cables must withstand tensile stresses and resistance to atmospheric factors.



This type of cable is manufactured and tested carefully as it is used by humans in most applications of life as used in the delivery of electricity in most domestic appliances.



Low Voltage Cables

1 - Single Core Cable With Flexible Copper Conductor

1.1

According to IEC-60227 (300 / 500) V



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride (CU/PVC).
- Cables are produced according to IEC 60227.

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 | Conductor: Flexible copper class-5 | | | | | Insulation: PVC | | | | |
|---------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|---------------------------|-----------------------------------|------------------------------------|--------------------------------------------|------------------------|
| | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | Current rating in air (A) | Average Insulation Thickness (mm) | Max Diameter after insulation (mm) | Min. Insulation resistance at 50°C (MΩ.km) | Approx. Weight (kg/km) |
| CPGF1 01 U 00 | 0.5 | 16 | 0.20 | 0.9 | 39.0 | 2 | 0.6 | 2.6 | 0.013 | 8 |
| CPGF1 01 U 01 | 0.75 | 24 | 0.20 | 1.1 | 26.0 | 10 | 0.6 | 2.8 | 0.011 | 12.2 |
| CPGF1 01 U 02 | 1 | 32 | 0.20 | 1.3 | 19.5 | 13 | 0.6 | 3.0 | 0.010 | 16.1 |

Low Voltage Cables

1 - Single Core Cable With Flexible Copper Conductor

1.2

According to IEC-60227 (450 / 750) V



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride (CU/PVC).
- Cables are produced according to IEC 60227.

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 | Conductor: Flexible copper class-5 | | | | | Insulation: PVC | | | | |
|----------------|------------------------------------------|-------------------|------------------------------|---------------------------|-------------------------------------|---------------------------|----------------------------------|----------------------------------------|---------------------------------------------------------------|------------------------|
| | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter of Each Strand (mm) | Strand Circumference (mm) | Max. DC Resistance at 20°C (Ohm/km) | Current rating in air (A) | Strand Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Min. Insulation Resistance at 20°C (kV.km/mm ² .s) | Approx. Weight (kg/km) |
| CPDF1 01 U 04 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 17 | 0.7 | 3.8/3.4 | 0.010 | 21 |
| CPDF1 01 U 05 | 2 | 40 | 0.25 | 1.65 | 9.89 | 20 | 0.8 | 3.1/3.7 | 0.0095 | 25.9 |
| CPDF1 01 U 06 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 24 | 0.8 | 3.4/4.1 | 0.009 | 34 |
| CPDF1 01 U 07 | 3 | 42 | 0.30 | 2.45 | 6.61 | 27 | 0.8 | 3.6/4.5 | 0.008 | 40 |
| CPDF1 01 U 08 | 4 | 56 | 0.30 | 2.65 | 4.95 | 32 | 0.8 | 3.9/4.8 | 0.007 | 50 |
| CPDF1 01 U 09 | 6 | 64 | 0.30 | 3.30 | 3.30 | 40 | 0.8 | 4.4/5.3 | 0.006 | 71 |
| CPDF1 01 U 10 | 10 | 140 | 0.30 | 4.20 | 1.91 | 57 | 1.0 | 5.7/6.8 | 0.0056 | 120 |
| CPDF1 01 U 11 | 16 | 224 | 0.30 | 5.20 | 1.21 | 76 | 1.0 | 6.7/8.1 | 0.0046 | 179 |
| CPDF1 01 U 12 | 25 | 350 | 0.30 | 7.50 | 0.78 | 103 | 1.2 | 8.4/10.2 | 0.0044 | 276 |
| CPDF1 01 U 13 | 35 | 490 | 0.30 | 9.25 | 0.554 | 128 | 1.2 | 9.7/11.7 | 0.0038 | 375 |
| CPDF1 01 U 14 | 50 | 700 | 0.30 | 10.50 | 0.386 | 156 | 1.4 | 11.5/13.9 | 0.0037 | 542 |
| CPDF1 01 U 15 | 70 | 980 | 0.30 | 12.6 | 0.272 | 200 | 1.4 | 13.2/16 | 0.0032 | 780 |
| CPDF1 01 U 16 | 95 | 1350 | 0.30 | 14.7 | 0.206 | 251 | 1.6 | 15.1/18.2 | 0.0032 | 957 |
| CPDF1 01 U 17 | 120 | 1680 | 0.30 | 16.30 | 0.161 | 293 | 1.6 | 16.7/20.2 | 0.0029 | 1243 |
| CPDF1 01 U 18 | 150 | 2100 | 0.30 | 19.0 | 0.129 | 335 | 1.8 | 18.6/22.5 | 0.0029 | 1548 |
| CPDF1 01 U 19 | 185 | 2590 | 0.30 | 21.0 | 0.106 | 390 | 2 | 20.6/24.9 | 0.0029 | 1885 |
| CPDF1 01 U 20 | 240 | 3360 | 0.30 | 24.0 | 0.0801 | 471 | 2.2 | 22.5/26.4 | 0.0026 | 2400 |
| CPDF1 01 U 30 | 300 | 4200 | 0.30 | 27.0 | 0.0641 | 540 | 2.4 | 26.5/31.6 | 0.0028 | 3260 |

Low Voltage Cables

1 - Single Core Cable With Flexible Copper Conductor

1.3

According to IEC-60502 (600 / 1000) V



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/PVC /PVC).
- Cables are produced according to IEC 60502.

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 | Conductor: Flexible copper class-5 | | | | | Insulation : PVC | | | |
|----------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-----------------------------------|----------------------------|-----------------------------------|----------------------------------------|-----------------------------------------------|
| | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C Ohm/km | Current rating in air Free | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Max. Insulation resistance at 30°C (M Ohm.km) |
| CP1F1 01 U 04 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 0.8 | 3.2 | 1.4 | 6.0 |
| CP1F1 01 U 05 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 0.8 | 3.6 | 1.4 | 6.4 |
| CP1F1 01 U 08 | 4 | 56 | 0.30 | 2.65 | 4.95 | 1.0 | 4.65 | 1.4 | 7.45 |
| CP1F1 01 U 09 | 6 | 64 | 0.30 | 3.30 | 3.30 | 1.0 | 5.30 | 1.4 | 8.10 |
| CP1F1 01 U 10 | 10 | 140 | 0.30 | 4.20 | 1.91 | 1.0 | 6.20 | 1.4 | 9.00 |
| CP1F1 01 U 11 | 16 | 224 | 0.30 | 5.20 | 1.21 | 1.0 | 7.20 | 1.4 | 10.0 |
| CP1F1 01 U 12 | 25 | 350 | 0.30 | 7.50 | 0.78 | 1.2 | 9.9 | 1.4 | 12.7 |
| CP1F1 01 U 13 | 35 | 490 | 0.30 | 9.25 | 0.554 | 1.2 | 11.65 | 1.4 | 14.45 |
| CP1F1 01 U 14 | 50 | 700 | 0.30 | 10.50 | 0.386 | 1.4 | 13.30 | 1.5 | 16.30 |
| CP1F1 01 U 15 | 70 | 980 | 0.30 | 12.6 | 0.272 | 1.4 | 15.40 | 1.5 | 18.40 |
| CP1F1 01 U 16 | 95 | 1330 | 0.30 | 14.7 | 0.206 | 1.6 | 17.90 | 1.6 | 21.10 |
| CP1F1 01 U 17 | 120 | 1680 | 0.30 | 16.30 | 0.161 | 1.6 | 19.50 | 1.7 | 22.90 |
| CP1F1 01 U 18 | 150 | 2100 | 0.30 | 19.0 | 0.129 | 1.8 | 22.60 | 1.8 | 26.20 |
| CP1F1 01 U 19 | 185 | 2590 | 0.30 | 21.0 | 0.106 | 2.0 | 25.00 | 1.9 | 28.80 |
| CP1F1 01 U 20 | 240 | 3360 | 0.30 | 24.0 | 0.0801 | 2.2 | 28.40 | 2.0 | 32.40 |
| CP1F1 01 U 30 | 300 | 4200 | 0.30 | 27.0 | 0.0641 | 2.4 | 31.80 | 2.1 | 36.00 |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.1

According to IEC-60227 (300 / 500) V - Two Core Cables



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60227.

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 | Cable Size | Conductor Flexible copper class-5 | | | | | | Insulation : PVC | | Over sheathed : PVC | | |
|--------------------|-----------------|------------------------------------------|-------------------|------------------------------|---------------------------------|------------------------------------|-----------------------------|-----------------------------------|----------------------------------------|--------------------------------------|-------------------------------|-----------------------------------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max DC Resistance at 20°C (Ohm/km) | Current rating in air (Amp) | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Over sheathed Nominal Thickness (mm) | Approx. Overall diameter (mm) | Min. Insulation resistance at 50% RH (ohm.km) |
| CPDF1 02 U 00 | (*) 2X0.5 | 0.5 | 16 | 0.20 | 0.9 | 39 | 6 | 0.5 | 2.0-2.4 | 0.6 | 4.6-5.9 | 0.012 |
| CPDF1 02 U 01 | 2X0.75 | 0.75 | 24 | 0.20 | 1.1 | 26.0 | 11 | 0.6 | 2.2-2.6 | 0.8 | 5.7-7.2 | 0.011 |
| CPDF1 02 U 02 | 2X1 | 1.0 | 32 | 0.20 | 1.3 | 19.5 | 13 | 0.6 | 2.3-2.9 | 0.8 | 5.9-7.5 | 0.010 |
| CPDF1 02 U 04 | 2X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 16 | 0.7 | 2.8-3.4 | 0.8 | 6.8-8.6 | 0.010 |
| CPDF1 02 U 05 | 2X2 | 2.0 | 40 | 0.25 | 1.85 | 9.89 | 19 | 0.8 | 3.1-3.7 | 1.0 | 7.5-9.5 | 0.0095 |
| CPDF1 02 U 06 | 2X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 22 | 0.8 | 3.4-4.1 | 1.0 | 8.4-10.6 | 0.009 |
| CPDF1 02 U 07 | (#) 2X3 | 3 | 42 | 0.30 | 2.45 | 6.61 | 27 | 0.8 | 3.6-4.4 | 1.2 | 9.6-12.6 | 0.008 |
| CPDF1 02 U 08 | (#) 2X4 | 4 | 56 | 0.30 | 2.65 | 4.95 | 32 | 0.8 | 3.9-4.8 | 1.2 | 10.0-13.0 | 0.007 |
| CPDF1 02 U 09 | (#) 2X6 | 6 | 84 | 0.30 | 3.30 | 3.30 | 40 | 0.8 | 4.4-5.3 | 1.2 | 11.0-14.0 | 0.006 |
| CPDF1 02 U 10 | (#) 2X10 | 10 | 140 | 0.30 | 4.20 | 1.91 | 57 | 1.0 | 5.7-6.8 | 1.4 | 13.5-17.5 | 0.0056 |
| CPDF1 02 U 11 | (#) 2X16 | 16 | 224 | 0.30 | 5.20 | 1.21 | 76 | 1.0 | 6.7-8.1 | 1.4 | 15.5-20.0 | 0.0046 |
| CPDF1 02 U 12 | (#) 2X25 | 25 | 350 | 0.30 | 7.50 | 0.78 | 103 | 1.2 | 8.4-10.2 | 1.4 | 18.5-24.0 | 0.0044 |
| CPDF1 02 U 13 | (#) 2X35 | 35 | 490 | 0.30 | 9.25 | 0.554 | 128 | 1.2 | 9.7-11.7 | 1.6 | 21.0-27.5 | 0.0038 |
| CPDF1 02 U 00 Flat | (*) 2X0.5 Flat | 0.5 | 16 | 0.20 | 0.9 | 39 | 6 | 0.8 | 1.8-2.5-3.0-3.0 | | | 0.016 |
| CPDF1 02 U 01 Flat | (*) 2X0.75 Flat | 0.75 | 24 | 0.20 | 1.1 | 26.0 | 11 | 0.8 | 1.9-2.7-3.4-3.2 | | | 0.014 |
| CPDF1 02 U 02 Flat | (*) 2X1 Flat | 1.0 | 32 | 0.20 | 1.3 | 19.5 | 13 | 0.8 | 1.8-2.6-3.3-3.4 | | | 0.012 |

(*) : 300/300 V Cable

(#) : Special Cable

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.2

According to IEC-60227 (300 / 500) V - Three Core Cables



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60227.

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 | Cable Size | Conductor: Flexible copper class-5 | | | | | | Insulation : PVC | | Over sheathed : PVC | | |
|----------------|------------|-------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|---------------------------|-----------------------------------|----------------------------------------|---------------------------|-------------------------------|--------------------------------------------|
| | | Conductor Nominal C.A. (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | Current rating in air (A) | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Unshielded Stranding (mm) | Approx. Overall diameter (mm) | Min. Insulation resistance at 50°C (MΩ.km) |
| CPDF1 03 U 00 | (*) 3X0.5 | 0.5 | 14 | 0.20 | 0.8 | 39 | 8 | 0.5 | 1.0-2.4 | 0.6 | 5.0-6.3 | 0.012 |
| CPDF1 03 U 01 | 3X0.75 | 0.75 | 24 | 0.20 | 1.1 | 26.0 | 11 | 0.6 | 2.2-2.6 | 0.8 | 6.0-6.7 | 0.011 |
| CPDF1 03 U 02 | 3X1 | 1.0 | 32 | 0.20 | 1.3 | 19.5 | 13 | 0.6 | 2.5-2.8 | 0.8 | 6.3-8.0 | 0.010 |
| CPDF1 03 U 04 | 3X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 16 | 0.7 | 2.8-3.4 | 0.9 | 7.4-9.4 | 0.010 |
| CPDF1 03 U 05 | 3X2 | 2.0 | 40 | 0.25 | 1.85 | 9.89 | 19 | 0.8 | 3.1-3.7 | 1.0 | 8.4-10.4 | 0.0095 |
| CPDF1 03 U 06 | 3X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 22 | 0.8 | 3.4-4.1 | 1.1 | 9.2-11.4 | 0.009 |
| CPDF1 03 U 07 | (#) 3X3 | 3 | 42 | 0.30 | 2.45 | 6.61 | 27 | 0.8 | 3.8-4.4 | 1.2 | 10.1-13.1 | 0.008 |
| CPDF1 03 U 08 | (#) 3X4 | 4 | 56 | 0.30 | 2.65 | 4.95 | 32 | 0.8 | 3.9-4.8 | 1.2 | 10.5-13.5 | 0.007 |
| CPDF1 03 U 09 | (#) 3X6 | 6 | 84 | 0.30 | 3.30 | 3.30 | 40 | 0.8 | 4.4-5.3 | 1.4 | 12.0-15.5 | 0.006 |
| CPDF1 03 U 10 | (#) 3X10 | 10 | 140 | 0.30 | 4.20 | 1.91 | 57 | 1.0 | 5.7-6.8 | 1.4 | 14.5-19.0 | 0.0056 |
| CPDF1 03 U 11 | (#) 3X16 | 16 | 224 | 0.30 | 5.20 | 1.21 | 76 | 1.0 | 6.7-8.1 | 1.4 | 16.5-21.5 | 0.0046 |
| CPDF1 03 U 12 | (#) 3X25 | 25 | 350 | 0.30 | 7.50 | 0.78 | 103 | 1.2 | 8.4-10.2 | 1.6 | 20.5-26.0 | 0.0044 |
| CPDF1 03 U 13 | (#) 3X35 | 35 | 490 | 0.30 | 9.25 | 0.554 | 128 | 1.2 | 9.7-11.7 | 1.6 | 22.0-29.0 | 0.0038 |

(*) : 300/300 V Cable

(#) : Special Cable

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.3

According to IEC-60227 (300 / 500) V - Four Core Cables



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60227.

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 | Cable Size | Conductor: Flexible copper class 5 | | | | | | Insulation: PVC | | Over sheathed: PVC | | |
|----------------|------------|------------------------------------|-------------------|------------------------------|---------------------------------|---------------------------------------|---------------------------|-----------------------------------|----------------------------------------|---------------------------|-------------------------------|--------------------------------------------|
| | | Conductor Nominal CSA (mm²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. Str. Resistance at 20°C (Ohm/km) | Current rating in air (A) | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Insulation Thickness (mm) | Approx. Overall Diameter (mm) | Min. Insulation Resistance at 70°C (MΩ.km) |
| CP0F1 04 U 00 | (*) 4X0.5 | 0.5 | 16 | 0.20 | 0.8 | 39 | 8 | 0.5 | 10.24 | 0.6 | 6.073 | 0.012 |
| CP0F1 04 U 01 | 4X0.75 | 0.75 | 24 | 0.20 | 1.1 | 26.0 | 10 | 0.6 | 12.28 | 0.8 | 6.683 | 0.011 |
| CP0F1 04 U 02 | 4X1 | 1.0 | 32 | 0.20 | 1.3 | 18.5 | 12 | 0.6 | 15.28 | 0.9 | 7.193 | 0.010 |
| CP0F1 04 U 04 | 4X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.5 | 15 | 0.7 | 18.34 | 1.0 | 8.4183 | 0.018 |
| CP0F1 04 U 05 | 4X2 | 2.0 | 40 | 0.25 | 1.85 | 9.89 | 17 | 0.8 | 21.37 | 1.0 | 9.317 | 0.025 |
| CP0F1 04 U 06 | 4X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 20 | 0.8 | 24.41 | 1.1 | 10.1525 | 0.036 |
| CP0F1 04 U 07 | (#) 4X3 | 3 | 42 | 0.30 | 2.45 | 6.61 | 27 | 0.8 | 3.6-4.4 | 1.2 | 11.5-13.5 | 0.028 |
| CP0F1 04 U 08 | (#) 4X4 | 4 | 56 | 0.30 | 2.65 | 4.95 | 32 | 0.8 | 3.94.8 | 1.4 | 12.0-15.0 | 0.007 |
| CP0F1 04 U 09 | (#) 4X6 | 6 | 84 | 0.30 | 3.30 | 3.30 | 40 | 0.8 | 4.45.3 | 1.4 | 13.0-17.0 | 0.006 |
| CP0F1 04 U 10 | (#) 4X10 | 10 | 140 | 0.30 | 4.20 | 1.91 | 57 | 1.0 | 5.76.8 | 1.4 | 16.0-20.0 | 0.0056 |
| CP0F1 04 U 11 | (#) 4X14 | 14 | 224 | 0.30 | 5.20 | 1.21 | 76 | 1.0 | 6.78.1 | 1.4 | 18.0-23.0 | 0.0046 |
| CP0F1 04 U 12 | (#) 4X25 | 25 | 350 | 0.30 | 7.50 | 0.78 | 103 | 1.2 | 8.410.2 | 1.6 | 22.5-28.5 | 0.0044 |
| CP0F1 04 U 13 | (#) 4X35 | 35 | 490 | 0.30 | 9.25 | 0.554 | 128 | 1.2 | 9.711.7 | 1.6 | 24.5-32.0 | 0.0038 |
| CP0F1 04 U 14 | (#) 4X50 | 50 | 700 | 0.30 | 10.5 | 0.386 | 156 | 1.4 | 11.5-13.9 | 1.8 | 28.0-37.0 | 0.0037 |
| CP0F1 04 U 15 | (#) 4X70 | 70 | 980 | 0.30 | 12.6 | 0.272 | 200 | 1.4 | 13.2-16 | 2.0 | 33.0-43.0 | 0.0032 |
| CP0F1 04 U 16 | (#) 4X95 | 95 | 1330 | 0.30 | 14.7 | 0.206 | 251 | 1.6 | 15.1-18.2 | 2.2 | 37.0-47.0 | 0.0032 |

(*) : 300/300 V Cable

(#) : Special Cable

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.4

According to IEC-60227 (300 / 500) V - Five Core Cables



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60227.

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 | Cable Size | Conductor: Flexible copper class 5 | | | | | | Insulation: PVC | | Over sheathed: PVC | | |
|----------------|------------|------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|---------------------------|-----------------------------------|----------------------------------------|--------------------------------------|-------------------------------|----------------------------------------------|
| | | Conductor Nominal CSA (mm²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | Current rating in air (A) | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Over sheathed Nominal Thickness (mm) | Approx. Overall diameter (mm) | Min. Insulation resistance at 50% RH (kV.km) |
| CP0F1 AS U 00 | (*) SK0.5 | 0.5 | 16 | 0.20 | 0.9 | 39 | 8 | 0.5 | 2.024 | 0.7 | 6.5-8.0 | 0.012 |
| CP0F1 AS U 01 | SK0.75 | 0.75 | 24 | 0.20 | 1.1 | 26.0 | 10 | 0.6 | 2.226 | 0.9 | 7.4-9.1 | 0.011 |
| CP0F1 AS U 02 | SK1 | 1.0 | 32 | 0.20 | 1.3 | 19.5 | 12 | 0.6 | 2.529 | 0.9 | 7.8-9.4 | 0.010 |
| CP0F1 AS U 04 | SK1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 15 | 0.7 | 2.834 | 1.1 | 9.3-11.6 | 0.010 |
| CP0F1 AS U 05 | SK2 | 2.0 | 40 | 0.25 | 1.85 | 9.89 | 17 | 0.8 | 3.137 | 1.2 | 10.3-12.8 | 0.0095 |
| CP0F1 AS U 06 | SK2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 20 | 0.8 | 3.441 | 1.2 | 11.2-13.9 | 0.009 |
| CP0F1 AS U 07 | (#) SK3 | 3 | 42 | 0.30 | 2.45 | 6.61 | 27 | 0.8 | 3.6-4.4 | 1.2 | 12.5-15.5 | 0.008 |
| CP0F1 AS U 08 | (#) SK4 | 4 | 56 | 0.30 | 2.65 | 4.95 | 32 | 0.8 | 3.948 | 1.4 | 13.0-17.0 | 0.007 |
| CP0F1 AS U 09 | (#) SK6 | 6 | 84 | 0.30 | 3.30 | 3.30 | 40 | 0.8 | 4.453 | 1.4 | 14.5-18.5 | 0.006 |
| CP0F1 AS U 10 | (#) SK10 | 10 | 140 | 0.30 | 4.20 | 1.91 | 57 | 1.0 | 5.78.8 | 1.4 | 17.5-22.0 | 0.0056 |
| CP0F1 AS U 11 | (#) SK16 | 16 | 224 | 0.30 | 5.20 | 1.21 | 76 | 1.0 | 6.78.1 | 1.6 | 20.5-26 | 0.0046 |
| CP0F1 AS U 12 | (#) SK25 | 25 | 350 | 0.30 | 7.50 | 0.78 | 102 | 1.2 | 8.4-10.2 | 1.6 | 24.5-31.5 | 0.0044 |
| CP0F1 AS U 13 | (#) SK35 | 35 | 490 | 0.30 | 9.25 | 0.554 | 128 | 1.2 | 9.7-11.7 | 1.6 | 27.0-35.0 | 0.0038 |

(*) : 300/300 V Cable

(#) : Special Cable

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.5

According to IEC-60502 (600 / 1000) V - Two Core Cables



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed(CU/PVC/PVC).
- Cables are produced according to IEC 60502.

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 | Cable Size | Conductor : Flexible Copper(class-5) | | | | | Approx. overall diameter (mm) | Current Rating (A) |
|----------------|------------|--------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|--------------------|
| | | Conductor Nominal C.S.A (mm ²) | Number of strands | Diameter of each strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | In Free air |
| CP1F1 02 U 04 | 2X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 10.2 | 20 |
| CP1F1 02 U 06 | 2X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 11.1 | 28 |
| CP1F1 02 U 08 | 2X4 | 4.0 | 56 | 0.30 | 2.65 | 4.95 | 13.1 | 39 |
| CP1F1 02 U 09 | 2X6 | 6.0 | 84 | 0.30 | 3.30 | 3.30 | 14.4 | 50 |
| CP1F1 02 U 10 | 2X10 | 10.0 | 140 | 0.30 | 4.20 | 1.91 | 16.2 | 66 |
| CP1F1 02 U 11 | 2X16 | 16.0 | 224 | 0.30 | 5.20 | 1.21 | 18.2 | 88 |
| CP1F1 02 U 12 | 2X25 | 25.0 | 350 | 0.30 | 7.50 | 0.78 | 23.6 | 116 |
| CP1F1 02 U 13 | 2X35 | 35.0 | 490 | 0.30 | 9.25 | 0.554 | 26.1 | 143 |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.55

According to IEC-60502 (600 / 1000) V - Two Core Cables



Description

- Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed(CU/PVC/PVC).
- Cables are produced according to IEC 60502.

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 | Cable Size | Conductor : Flexible Copper(class-5) | | | | | Approx. overall diameter (mm) | Current Rating (A) |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|--------------------|
| | | Conductor Nominal CSA (mm ²) | Number of strands | Diameter of each strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | In Free air |
| CX1F1 02 U 04 | 2X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 9.8 | 20 |
| CX1F1 02 U 06 | 2X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 10.7 | 28 |
| CX1F1 02 U 08 | 2X4 | 4.0 | 56 | 0.30 | 2.65 | 4.95 | 11.9 | 39 |
| CX1F1 02 U 09 | 2X6 | 6.0 | 84 | 0.30 | 3.30 | 3.30 | 13.2 | 50 |
| CX1F1 02 U 10 | 2X10 | 10.0 | 140 | 0.30 | 4.20 | 1.91 | 15.0 | 66 |
| CX1F1 02 U 11 | 2X16 | 16.0 | 224 | 0.30 | 5.20 | 1.21 | 17.0 | 88 |
| CX1F1 02 U 12 | 2X25 | 25.0 | 350 | 0.30 | 7.50 | 0.78 | 22.4 | 116 |
| CX1F1 02 U 13 | 2X35 | 35.0 | 490 | 0.30 | 9.25 | 0.554 | 24.9 | 143 |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.6

According to IEC-60502 (600 / 1000) V - Three Core Cables



Description

Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed(CU/PVC/PVC).

Cables are produced according to IEC 60502.

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 | Cable Size | Conductor : Flexible Copper(class-5) | | | | | Approx. overall diameter (mm) | Current Rating (A) |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|--------------------|
| | | Conductor Nominal CSA (mm ²) | Number of strands | Diameter of each strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | In Free air |
| CP1F1 03 U 04 | 3X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 10.7 | 18 |
| CP1F1 03 U 06 | 3X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.96 | 11.7 | 22 |
| CP1F1 03 U 08 | 3X4 | 4.0 | 56 | 0.30 | 2.65 | 4.95 | 13.8 | 31 |
| CP1F1 03 U 09 | 3X6 | 6.0 | 84 | 0.30 | 3.30 | 3.30 | 15.2 | 39 |
| CP1F1 03 U 10 | 3X10 | 10.0 | 140 | 0.30 | 4.20 | 1.91 | 17.2 | 53 |
| CP1F1 03 U 11 | 3X16 | 16.0 | 224 | 0.30 | 5.20 | 1.21 | 19.3 | 72 |
| CP1F1 03 U 12 | 3X25 | 25.0 | 350 | 0.30 | 7.50 | 0.78 | 25.2 | 94 |
| CP1F1 03 U 13 | 3X35 | 35.0 | 490 | 0.30 | 9.25 | 0.554 | 28 | 110 |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.66

According to IEC-60502 (600 / 1000) V - Three Core Cables



Description

Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/XLPE/PVC).

Cables are produced according to IEC 60502.

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 | Cable Size | Conductor : Flexible Copper(class-5) | | | | | Approx. overall diameter (mm) | Current Rating (A) |
|---------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-----------------------------------|-------------------------------|--------------------|
| | | Conductor Nominal CSA (mm ²) | Number of strands | Diameter of each strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ω/km) | | In Free air |
| CX1F1 03 U 04 | 3X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 10.3 | 18 |
| CX1F1 03 U 06 | 3X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 11.3 | 22 |
| CX1F1 03 U 08 | 3X4 | 4.0 | 56 | 0.30 | 2.65 | 4.95 | 12.5 | 31 |
| CX1F1 03 U 09 | 3X6 | 6.0 | 84 | 0.30 | 3.30 | 3.30 | 14.0 | 39 |
| CX1F1 03 U 10 | 3X10 | 10.0 | 140 | 0.30 | 4.20 | 1.91 | 15.9 | 53 |
| CX1F1 03 U 11 | 3X16 | 16.0 | 224 | 0.30 | 5.20 | 1.21 | 18.0 | 72 |
| CX1F1 03 U 12 | 3X25 | 25.0 | 350 | 0.30 | 7.50 | 0.78 | 23.9 | 94 |
| CX1F1 03 U 13 | 3X35 | 35.0 | 490 | 0.30 | 9.25 | 0.554 | 26.6 | 110 |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.7

According to IEC-60502 (600 / 1000) V - Four Core Cables



Description

Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/PVC/PVC).

Cables are produced according to IEC 60502.

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 | Cable Size | Conductor: Flexible Copper(class-S) | | | | | Approx. overall diameter (mm) | Current Rating (A) In Free air |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|-----------------------------------|
| | | Conductor Nominal (kVA/mm ²) | Number of strands | Diameter of each strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | |
| CP1F1 04 U 04 | 4X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 11.6 | 18 |
| CP1F1 04 U 06 | 4X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 12.7 | 22 |
| CP1F1 04 U 08 | 4X4 | 4.0 | 56 | 0.30 | 2.65 | 4.95 | 15.1 | 31 |
| CP1F1 04 U 09 | 4X6 | 6.0 | 84 | 0.30 | 3.30 | 3.30 | 16.6 | 39 |
| CP1F1 04 U 10 | 4X10 | 10.0 | 140 | 0.30 | 4.20 | 1.91 | 18.8 | 53 |
| CP1F1 04 U 11 | 4X16 | 16.0 | 224 | 0.30 | 5.20 | 1.21 | 21.2 | 72 |
| CP1F1 04 U 12 | 4X25 | 25.0 | 350 | 0.30 | 7.50 | 0.78 | 28.0 | 94 |
| CP1F1 04 U 13 | 4X35 | 35.0 | 490 | 0.30 | 9.25 | 0.554 | 31.2 | 110 |
| CP1F1 04 U 14 | 4X50 | 50.0 | 700 | 0.30 | 10.50 | 0.386 | 36.5 | 138 |
| CP1F1 04 U 15 | 4X70 | 70.0 | 980 | 0.30 | 12.6 | 0.272 | 42.0 | 171 |
| CP1F1 04 U 16 | 4X95 | 95.0 | 1330 | 0.30 | 14.7 | 0.206 | 48.5 | 209 |
| CP1F1 04 U 17 | 4X120 | 120.0 | 1680 | 0.30 | 16.30 | 0.161 | 52.0 | 242 |
| CP1F1 04 U 18 | 4X150 | 150.0 | 2100 | 0.30 | 19.0 | 0.129 | 60.5 | 275 |
| CP1F1 04 U 19 | 4X185 | 185.0 | 2590 | 0.30 | 21.0 | 0.106 | 66.0 | 314 |
| CP1F1 04 U 20 | 4X240 | 240.0 | 3360 | 0.30 | 24.0 | 0.0801 | 75.5 | 374 |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor

2.77

According to IEC-60502 (600 / 1000) V - Four Core Cables



Description

Flexible Copper Conductor Insulated With Polyvinyl Chloride PVC And PVC sheathed (CU/XLPE/PVC).

Cables are produced according to IEC 60502.

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 | Cable Size | Conductor (Flexible Copper class 5) | | | | | Approx. overall diameter (mm) | Current Rating (A) in free air |
|---------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-----------------------------------|-------------------------------|--------------------------------|
| | | Conductor Nominal CSA (mm ²) | Number of strands | Diameter of each strand (mm) | Nominal Conductor Diameter (mm) | Max DC Resistance @ 20°C (Ohm/km) | | |
| CK1F1 04 U 04 | 4X1.5 | 1.5 | 30 | 0.25 | 1.60 | 13.3 | 11.1 | 18 |
| CK1F1 04 U 05 | 4X2.5 | 2.5 | 50 | 0.25 | 2.01 | 7.98 | 12.2 | 22 |
| CK1F1 04 U 08 | 4X4 | 4.0 | 56 | 0.30 | 2.65 | 4.95 | 13.6 | 31 |
| CK1F1 04 U 09 | 4X6 | 6.0 | 84 | 0.30 | 3.30 | 3.30 | 15.2 | 39 |
| CK1F1 04 U 10 | 4X10 | 10.0 | 140 | 0.30 | 4.20 | 1.91 | 17.4 | 53 |
| CK1F1 04 U 11 | 4X16 | 16.0 | 224 | 0.30 | 5.20 | 1.21 | 19.8 | 72 |
| CK1F1 04 U 12 | 4X25 | 25.0 | 350 | 0.30 | 7.50 | 0.78 | 26.3 | 94 |
| CK1F1 04 U 13 | 4X35 | 35.0 | 490 | 0.30 | 9.25 | 0.554 | 29.5 | 110 |
| CK1F1 04 U 14 | 4X50 | 50.0 | 700 | 0.30 | 10.50 | 0.386 | 34.5 | 138 |
| CK1F1 04 U 15 | 4X70 | 70.0 | 980 | 0.30 | 12.6 | 0.272 | 40.5 | 171 |
| CK1F1 04 U 16 | 4X95 | 95.0 | 1330 | 0.30 | 14.7 | 0.206 | 45.9 | 209 |
| CK1F1 04 U 17 | X120 | 120.0 | 1680 | 0.30 | 16.30 | 0.161 | 50.6 | 242 |
| CK1F1 04 U 18 | X150 | 150.0 | 2100 | 0.30 | 19.0 | 0.129 | 58.6 | 275 |
| CK1F1 04 U 19 | X185 | 185.0 | 2590 | 0.30 | 21.0 | 0.106 | 64.8 | 314 |
| CK1F1 04 U 20 | X240 | 240.0 | 3360 | 0.30 | 24.0 | 0.0801 | 73.1 | 374 |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor
2.8

According to IEC-60502 (600 / 1000) V - Four Core Cables
With Reduced Neutral



Description

Flexible Copper Conductor Insulated
With Polyvinyl Chloride PVC
And PVC sheathed (CU/PVC/PVC).

Cables are produced according to IEC 60502.

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 | Cable Size | Conductor: Stranded copper class-5 | | | | | | Approx. Overall diameter (mm) | Current Rating (A) in Air |
|---------------|------------|------------------------------------------|-------------------|------------------------------|-----------|---------------------------------|------|-------------------------------|------------------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | | Nominal Conductor Diameter (mm) | | | |
| CP1F1 05 U 13 | 3X35+16 | 35 16 | 490 224 | 0.30 0.30 | 9.25 5.2 | 0.554 1.21 | 28.6 | 110 | |
| CP1F1 05 U 14 | 3X50+25 | 50 25 | 700 350 | 0.30 0.30 | 10.5 7.5 | 0.386 0.780 | 34.0 | 138 | |
| CP1F1 05 U 15 | 3X70+35 | 70 35 | 980 490 | 0.30 0.30 | 12.6 9.25 | 0.272 0.554 | 39.4 | 171 | |
| CP1F1 05 U 16 | 3X95+50 | 95 50 | 1330 700 | 0.30 0.30 | 14.7 10.5 | 0.206 0.386 | 46.0 | 209 | |
| CP1F1 05 U 17 | 3X120+70 | 120 70 | 1680 980 | 0.30 0.30 | 16.3 12.6 | 0.161 0.272 | 50.0 | 242 | |
| CP1F1 05 U 18 | 3X150+70 | 150 70 | 2100 980 | 0.30 0.30 | 19.0 12.6 | 0.129 0.272 | 56.0 | 275 | |
| CP1F1 05 U 19 | 3X185+95 | 185 95 | 2590 1330 | 0.30 0.30 | 21.0 14.7 | 0.106 0.206 | 62.0 | 314 | |
| CP1F1 05 U 20 | 3X240+120 | 240 120 | 3360 1680 | 0.30 0.30 | 24.0 16.3 | 0.0801 0.161 | 69.0 | 374 | |

Low Voltage Cables

2 - Multi Core Cable With Flexible Copper Conductor
2.88

According to IEC-60502 (600 / 1000) V - Four Core Cables
With Reduced Neutral



Description

Flexible Copper Conductor Insulated
With Polyvinyl Chloride PVC
And PVC sheathed (CU/XLPE/PVC).

Cables are produced according to IEC 60502.

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 | Cable Size | Conductor: Stranded copper class-5 | | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | | |
|----------------|------------|------------------------------------------|-------------------|------|------------------------------|------|---------------------------------|-------------------------------|-----------------------------------|--------|-------|------|-----|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | | Diameter Of Each Strand (mm) | | Nominal Conductor Diameter (mm) | | Max. DC Resistance at 20°C (Ω/km) | In | Out | | |
| CX1F1 05 U 13 | 3X35+16 | 35 | 16 | 490 | 224 | 0.30 | 0.30 | 9.25 | 5.2 | 0.554 | 1.21 | 26.9 | 110 |
| CX1F1 05 U 14 | 3X50+25 | 50 | 25 | 700 | 350 | 0.30 | 0.30 | 10.5 | 7.5 | 0.386 | 0.780 | 32.5 | 138 |
| CX1F1 05 U 15 | 3X70+35 | 70 | 35 | 980 | 490 | 0.30 | 0.30 | 12.6 | 9.25 | 0.272 | 0.554 | 37.8 | 171 |
| CX1F1 05 U 16 | 3X95+50 | 95 | 50 | 1330 | 700 | 0.30 | 0.30 | 14.7 | 10.5 | 0.206 | 0.386 | 43.0 | 209 |
| CX1F1 05 U 17 | 3X120+70 | 120 | 70 | 1680 | 980 | 0.30 | 0.30 | 16.8 | 12.6 | 0.161 | 0.272 | 48.1 | 242 |
| CX1F1 05 U 18 | 3X150+70 | 150 | 70 | 2100 | 980 | 0.30 | 0.30 | 19.0 | 12.6 | 0.129 | 0.272 | 54.1 | 275 |
| CX1F1 05 U 19 | 3X185+95 | 185 | 95 | 259 | 1330 | 0.30 | 0.30 | 21.0 | 14.7 | 0.106 | 0.206 | 60.0 | 314 |
| CX1F1 05 U 20 | 3X240+120 | 240 | 120 | 3360 | 1680 | 0.30 | 0.30 | 24.0 | 16.8 | 0.0801 | 0.161 | 67.4 | 374 |

Stranded Cables



1-Single Core Stranded copper conductor

- 11.1 According to IEC-60227 (300/500)VCU/PVC
- 11.2 According to IEC-60227 (450/750)VCU/PVC
- 11.3 According to IEC-60502 (600/1000)VCU/PVC/PVC
- 11.4 According to IEC-60502 (600/1000)VCU/XLPE/PVC

2-Multi Core Stranded copper conductor

- 22.1 According to IEC-60227 (300/500)V-Two CoreCU/PVC/PVC
- 22.2 According to IEC-60227 (300/500)V-Three CoreCU/PVC/PVC
- 22.3 According to IEC-60227 (300/500)V-Four CoreCU/PVC/PVC
- 22.4 According to IEC-60227 (300/500)V-Five CoreCU/PVC/PVC
- 22.5 According to IEC-60502 (600/1000)V-Two CoreCU/PVC/PVC
- 22.55 According to IEC-60502 (600/1000)V-Two CoreCU/XLPE/PVC
- 22.6 According to IEC-60502 (600/1000)V-Three CoreCU/PVC/PVC
- 22.66 According to IEC-60502 (600/1000)V-Three CoreCU/XLPE/PVC
- 22.7 According to IEC-60502 (600/1000)V-Four CoreCU/PVC/PVC
- 22.77 According to IEC-60502 (600/1000)V-Four CoreCU/XLPE/PVC
- 22.8 According to IEC-60502 (600/1000)V-Four Core/0.5NCU/PVC/PVC
- 22.88 According to IEC-60502 (600/1000)V-Four Core/0.5NCU/XLPE/PVC



Stranded Cables



Stranded cable consists of multiple strands of wires wrapped around each other in each conductor.

Stranded cable is much more flexible and consequently suited to applications which demand flexibility and reshaping.



The Stranded cables are more rigid than the flexible cables to fit their function as they are used for outdoor & indoor installations in dry & wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations

Low Voltage Cables

11 - Single Core Cable With Stranded Copper Conductor

11.1

According to IEC-60227 (300 / 500) V



Description

- Stranded Copper Conductor Insulated With Poly vinyl Chloride (CU/PVC) .
- Cables are produced according to IEC 60227.

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Conductor: Stranded copper class-2 | | | | | | Insulation : PVC | | | |
|----------------|--------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-----------------------|------------------|-----------------------------------|-------------------------------------|-----------------------------------------------|
| | Conductor Nominal C.S.A (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | Current rating in air | | Average Insulation Thickness (mm) | Max. Diameter after Insulation (mm) | Min. Insulation resistance at 20°C (MΩ.cm.km) |
| | | | | | | Free | In Pipes | | | |
| CP011 01 U 00 | 0.5 | 1 | 0.80 | 0.80 | 36.0 | 2 | 2 | 0.6 | 2.4 | 0.015 |
| CP011 01 U 01 | 0.75 | 1 | 1.0 | 1.0 | 24.5 | 10 | 7 | 0.6 | 2.6 | 0.012 |
| CP011 01 U 02 | 1 | 1 | 1.12 | 1.12 | 18.1 | 13 | 10 | 0.6 | 2.8 | 0.011 |

Low Voltage Cables

11 - Single Core Cable With Stranded Copper Conductor

11.2

According to IEC-60227 (450 / 750) V



Description

- Stranded Copper Conductor Insulated With Polyvinyl Chloride (CU/PVC) .

Cables are produced according to IEC 60227.

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Conductor Stranded copper class-2 | | | | | | Insulation : PVC | | | Approx. Weight kg/km | |
|----------------|-----------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-----------------------|------------------|-----------------------------------|----------------------------------------|----------------------|------------------------------------------------|
| | Conductor Nominal CSA (mm²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | Current rating in air | | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | | Min. Insulation Resistance at 20°C (kV.ohm.km) |
| CPDT1 01 U 04 | 1.5 | 7 | 0.53 | 1.60 | 12.1 | 17 | 13 | 0.7 | 2.7-3.3 | 0.010 | 21 |
| CPDT1 01 U 05 | 2 | 7 | 0.60 | 1.80 | 9.14 | 19 | 15 | 0.8 | 3.1-3.8 | 0.009 | 28 |
| CPDT1 01 U 06 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 24 | 19 | 0.8 | 3.3-4.0 | 0.009 | 33 |
| CPDT1 01 U 07 | 3 | 7 | 0.74 | 2.25 | 6.13 | 27 | 21 | 0.8 | 3.5-4.3 | 0.0085 | 39 |
| CPDT1 01 U 08 | 4 | 7 | 0.85 | 2.55 | 4.61 | 32 | 23 | 0.8 | 3.8-4.6 | 0.0077 | 50 |
| CPDT1 01 U 09 | 6 | 7 | 1.04 | 3.15 | 3.08 | 40 | 29 | 0.8 | 4.3-5.2 | 0.0065 | 71 |
| CPDT1 01 U 10 | 10 | 7 | 1.35 | 4.05 | 1.83 | 57 | 41 | 1.0 | 5.6-6.7 | 0.0065 | 117 |
| CPDT1 01 U 11 | 16 | 7 | 1.70 | 5.1 | 1.15 | 76 | 54 | 1.0 | 6.4-7.8 | 0.0050 | 177 |
| CPDT1 01 U 12 | 25 | 19 | 1.30 | 6.3 | 0.727 | 103 | 70 | 1.2 | 8.1-9.7 | 0.0050 | 278 |
| CPDT1 01 U 13 | 35 | 19 | 1.50 | 7.3 | 0.524 | 138 | 87 | 1.2 | 9.0-10.9 | 0.0043 | 371 |
| CPDT1 01 U 14 | 50 | 19 | 1.80 | 9.0 | 0.387 | 156 | 106 | 1.4 | 10.6-12.8 | 0.0043 | 514 |
| CPDT1 01 U 15 | 70 | 19 | 2.15 | 10.75 | 0.268 | 200 | 131 | 1.4 | 12.1-14.6 | 0.0035 | 711 |
| CPDT1 01 U 16 | 95 | 19 | 2.5 | 12.5 | 0.193 | 251 | 166 | 1.6 | 14.1-17.1 | 0.0035 | 967 |
| CPDT1 01 U 17 | 120 | 37 | 2.02 | 14.15 | 0.153 | 293 | 190 | 1.6 | 15.6-18.8 | 0.0032 | 1240 |
| CPDT1 01 U 18 | 150 | 37 | 2.25 | 15.75 | 0.121 | 335 | 219 | 1.8 | 17.3-20.9 | 0.0032 | 1500 |
| CPDT1 01 U 19 | 185 | 37 | 2.50 | 17.3 | 0.0991 | 300 | 250 | 2.0 | 19.3-23.3 | 0.0032 | 1852 |
| CPDT1 01 U 20 | 240 | 61 | 2.25 | 20.25 | 0.0794 | 471 | 300 | 2.2 | 22.0-26.6 | 0.0032 | 2457 |
| CPDT1 01 U 30 | 300 | 61 | 2.50 | 22.5 | 0.0601 | 540 | 340 | 2.4 | 24.5-29.6 | 0.0030 | 2977 |

Low Voltage Cables

11 - Single Core Cable With Stranded Copper Conductor

11.3

According to IEC-60227 (600 / 1000) V



Description

- Stranded Copper Conductor Insulated With Polyvinyl Chloride And PVC Sheathed (CU/PVC/PVC) .
- Cables are produced according to IEC 60502.

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Conductor Stranded copper - class-2 | | | | | Insulation (PVC) | | Overheath (PVC) | | Approx. Weight kg/km |
|----------------|--------------------------------------------|-------------------|------------------------------|---------------------------------|-----------------------------------|-----------------------------------|----------------------------------------|--------------------------|-------------------------------|----------------------|
| | Conductor Nominal C.S.A (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C Ohm/km | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Overheath Thickness (mm) | Approx. Overall Diameter (mm) | |
| CP1T1 01 U04 | 1.5 | 7 | 0.53 | 1.60 | 12.10 | 0.8 | 3.2 | 1.4 | 6.0 | 49 |
| CP1T1 01 U06 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 0.8 | 3.6 | 1.4 | 6.4 | 62 |
| CP1T1 01 U08 | 4 | 7 | 0.85 | 2.55 | 4.61 | 1.0 | 4.55 | 1.4 | 7.35 | 86 |
| CP1T1 01 U09 | 6 | 7 | 1.04 | 3.15 | 3.08 | 1.0 | 5.15 | 1.4 | 7.95 | 115 |
| CP1T1 01 U10 | 10 | 7 | 1.35 | 4.05 | 1.83 | 1.0 | 6.05 | 1.4 | 8.85 | 165 |
| CP1T1 01 U11 | 16 | 7 | 1.70 | 5.1 | 1.15 | 1.0 | 7.1 | 1.4 | 9.9 | 231 |
| CP1T1 01 U12 | 25 | 19 | 1.30 | 6.5 | 0.727 | 1.2 | 8.9 | 1.4 | 11.7 | 343 |
| CP1T1 01 U13 | 35 | 19 | 1.50 | 7.5 | 0.524 | 1.2 | 9.9 | 1.4 | 12.7 | 445 |
| CP1T1 01 U14 | 50 | 19 | 1.80 | 9 | 0.387 | 1.4 | 11.8 | 1.4 | 14.6 | 600 |
| CP1T1 01 U15 | 70 | 19 | 2.15 | 10.75 | 0.268 | 1.4 | 13.55 | 1.5 | 16.55 | 805 |
| CP1T1 01 U16 | 95 | 19 | 2.5 | 12.5 | 0.193 | 1.6 | 15.7 | 1.5 | 18.7 | 1085 |
| CP1T1 01 U17 | 120 | 37 | 2.02 | 14.15 | 0.153 | 1.6 | 17.35 | 1.6 | 20.55 | 1350 |
| CP1T1 01 U18 | 150 | 37 | 2.25 | 15.75 | 0.121 | 1.8 | 19.35 | 1.7 | 22.75 | 1654 |
| CP1T1 01 U19 | 185 | 37 | 2.50 | 17.5 | 0.0991 | 2.0 | 21.5 | 1.7 | 24.9 | 2030 |
| CP1T1 01 U20 | 240 | 61 | 2.25 | 20.25 | 0.0754 | 2.2 | 24.65 | 1.9 | 28.45 | 2675 |
| CP1T1 01 U20 | 300 | 61 | 2.50 | 22.5 | 0.0601 | 2.4 | 27.3 | 2.0 | 31.3 | 3280 |

Low Voltage Cables

11 - Single Core Cable With Stranded Copper Conductor
11.4

According to IEC-60227 (600 / 1000) V

Stranded copper conductor

XLPE Insulation
PVC Sheath



Description

- Stranded Copper Conductor Insulated With XLPE And PVC Sheathed (CU/X.L.P.E/PVC) .
- Cables are produced according to IEC 60502.

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

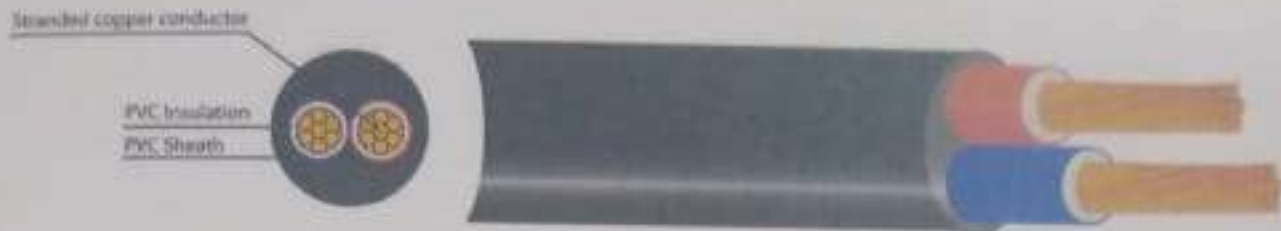
| Product - Code | Conductor: Stranded copper class-2 | | | | | Insulation : XLPE | | Overheath: PVC | | Approx. Weight kg/100m |
|----------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-----------------------------------|-----------------------------------|----------------------------------------|----------------------------------|-------------------------------|------------------------|
| | Conductor Nominal (CSA/mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal conductor Diameter (mm) | Max. DC Resistance at 20°C Ohm/km | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Overheath Nominal Thickness (mm) | Approx. Overall Diameter (mm) | |
| CX1T1 01 U 04 | 1.5 | 7 | 0.53 | 1.60 | 12.10 | 0.7 | 3.00 | 1.4 | 5.8 | 43 |
| CX1T1 01 U 06 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 0.7 | 3.40 | 1.4 | 6.2 | 57 |
| CX1T1 01 U 08 | 4 | 7 | 0.85 | 2.55 | 4.61 | 0.7 | 3.95 | 1.4 | 6.75 | 80 |
| CX1T1 01 U 09 | 6 | 7 | 1.04 | 3.15 | 3.08 | 0.7 | 4.55 | 1.4 | 7.35 | 102 |
| CX1T1 01 U 10 | 10 | 7 | 1.35 | 4.05 | 1.83 | 0.7 | 5.45 | 1.4 | 8.25 | 150 |
| CX1T1 01 U 11 | 16 | 7 | 1.70 | 5.1 | 1.15 | 0.7 | 6.5 | 1.4 | 9.3 | 210 |
| CX1T1 01 U 12 | 25 | 19 | 1.30 | 6.5 | 0.727 | 0.9 | 8.3 | 1.4 | 11.1 | 315 |
| CX1T1 01 U 13 | 35 | 19 | 1.50 | 7.5 | 0.524 | 0.9 | 9.3 | 1.4 | 12.1 | 410 |
| CX1T1 01 U 14 | 50 | 19 | 1.80 | 9 | 0.387 | 1.0 | 11.0 | 1.4 | 13.8 | 555 |
| CX1T1 01 U 15 | 70 | 19 | 2.15 | 10.75 | 0.268 | 1.1 | 12.95 | 1.5 | 15.95 | 760 |
| CX1T1 01 U 16 | 95 | 19 | 2.5 | 12.5 | 0.193 | 1.1 | 14.7 | 1.5 | 17.7 | 1015 |
| CX1T1 01 U 17 | 120 | 37 | 2.02 | 14.15 | 0.153 | 1.2 | 16.55 | 1.6 | 19.75 | 1280 |
| CX1T1 01 U 18 | 150 | 37 | 2.25 | 15.75 | 0.121 | 1.4 | 18.55 | 1.6 | 21.75 | 1570 |
| CX1T1 01 U 19 | 185 | 37 | 2.50 | 17.5 | 0.0991 | 1.6 | 20.7 | 1.7 | 24.10 | 1920 |
| CX1T1 01 U 20 | 240 | 61 | 2.25 | 20.25 | 0.0754 | 1.7 | 23.65 | 1.8 | 27.25 | 2530 |
| CX1T1 01 U 30 | 300 | 61 | 2.50 | 22.5 | 0.0601 | 1.8 | 26.1 | 1.9 | 29.9 | 3105 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor

22.1

According to IEC-60227 (450 / 750) V - Two Core Cables



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed(CU/PVC/PVC).
- Cables are produced according to IEC 60227 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product -Code | Cable Size | Conductor Stranded copper class-2 | | | | | Insulation : PVC | | Overheath : PVC | | |
|---------------|------------|-----------------------------------------|-------------------|------------------------------|---------------------------------|-----------------------------------|-----------------------------------|----------------------------------------|--------------------------|-------------------------------|------------------------------------------|
| | | Conductor Nominal CSA(mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ω/km) | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Overheath Thickness (mm) | Approx. Overall Diameter (mm) | Min. Insulation Resistance @ 70°C (Ω.km) |
| CP0T1 02 U 04 | 2X1.5 | 1.5 | 7 | 0.53 | 1.6 | 12.1 | 0.7 | 2.7-3.3 | 1.2 | 7.8-10.5 | 0.010 |
| CP0T1 02 U 05 | 2X2 | 2.0 | 7 | 0.60 | 1.8 | 9.14 | 0.8 | 3.1-3.8 | 1.2 | 7.5-9.5 | 0.0095 |
| CP0T1 02 U 06 | 2X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 0.8 | 3.3-4.0 | 1.2 | 9.0-12.0 | 0.008 |
| CP0T1 02 U 08 | 2X4 | 4.0 | 7 | 0.85 | 2.35 | 4.61 | 0.8 | 3.8-4.6 | 1.2 | 10.0-13.0 | 0.0077 |
| CP0T1 02 U 09 | 2X6 | 6.0 | 7 | 1.04 | 3.15 | 3.08 | 0.8 | 4.3-5.2 | 1.2 | 11.0-14.0 | 0.0065 |
| CP0T1 02 U 10 | 2X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 1.0 | 5.6-6.7 | 1.4 | 13.5-17.5 | 0.0065 |
| CP0T1 02 U 11 | 2X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 1.0 | 6.4-7.8 | 1.4 | 15.5-20.0 | 0.0052 |
| CP0T1 02 U 12 | 2X25 | 25.0 | 19 | 1.30 | 6.5 | 0.737 | 1.2 | 8.1-9.7 | 1.4 | 18.5-24.0 | 0.005 |
| CP0T1 02 U 13 | 2X35 | 35.0 | 19 | 1.50 | 7.5 | 0.534 | 1.2 | 9.0-10.9 | 1.8 | 21.0-27.5 | 0.0044 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.2
According to IEC-60227 (450 / 750) V Three Core Cables



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed (CU/PVC/PVC).

- Cables are produced according to IEC 60227 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Insulation: PVC | | Oversheath: PVC | | |
|----------------|------------|------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-----------------------------------|----------------------------------------|-----------------------------------|-------------------------------|--------------------------------------------------|
| | | Conductor Nominal CSA (mm²) | Number of Strands | Diameter of Each Strand (mm) | Nominal conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Oversheath Nominal Thickness (mm) | Approx. Overall Diameter (mm) | Min. Insulation resistance at 70°C (MΩ.km/1000V) |
| CP0T1 03 U 04 | 3X1.5 | 1.5 | 7 | 0.53 | 1.6 | 12.1 | 0.7 | 2.7:3.3 | 1.2 | 8.2:11.0 | 0.010 |
| CP0T1 03 U 05 | 3X2 | 2.0 | 7 | 0.60 | 1.8 | 9.14 | 0.8 | 3.1:3.8 | 1.2 | 9.2:12.0 | 0.0085 |
| CP0T1 03 U 06 | 3X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 0.8 | 3.3:4.0 | 1.2 | 9.4:12.5 | 0.009 |
| CP0T1 03 U 08 | 3X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 0.8 | 3.8:4.6 | 1.2 | 10.5:13.5 | 0.0077 |
| CP0T1 03 U 09 | 3X6 | 6.0 | 7 | 1.04 | 3.15 | 3.08 | 0.8 | 4.3:5.2 | 1.4 | 12.0:15.5 | 0.0065 |
| CP0T1 03 U 10 | 3X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 1.0 | 5.6:6.7 | 1.4 | 14.5:19.0 | 0.0065 |
| CP0T1 03 U 11 | 3X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 1.0 | 6.4:7.8 | 1.4 | 16.5:21.5 | 0.0052 |
| CP0T1 03 U 12 | 3X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 1.2 | 8.1:9.7 | 1.6 | 20.1:26 | 0.005 |
| CP0T1 03 U 13 | 3X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 1.2 | 9.0:10.9 | 1.6 | 23.0:29.0 | 0.0044 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor

22.3

According to IEC-60227 (450 / 750) V - Four Core Cables



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60227 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Insulation : PVC | | Oversheath : PVC | | |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|------------------------------------|-----------------------------------|----------------------------------------|-----------------------------------|-------------------------------|----------------------------------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max DC Resistance at 20°C (Ohm/km) | Average Insulation Thickness (mm) | Approx. Diameter after Insulation (mm) | Oversheath Nominal Thickness (mm) | Approx. Overall Diameter (mm) | Min. Insulation Resistance @ 20°C (M Ohm.km) |
| CP0T1 04 U 04 | 4X1.5 | 1.5 | 7 | 0.53 | 1.6 | 12.1 | 0.7 | 2.733 | 1.2 | 9.012.0 | 0.010 |
| CP0T1 04 U 05 | 4X2 | 2.0 | 7 | 0.60 | 1.8 | 9.14 | 0.8 | 3.138 | 1.2 | 10.112.5 | 0.0095 |
| CP0T1 04 U 06 | 4X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 0.8 | 3.340 | 1.2 | 10.013.5 | 0.009 |
| CP0T1 04 U 08 | 4X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 0.8 | 3.846 | 1.4 | 12.015.0 | 0.0077 |
| CP0T1 04 U 09 | 4X6 | 6.0 | 7 | 1.04 | 3.15 | 3.06 | 0.8 | 4.352 | 1.4 | 13.017.0 | 0.0065 |
| CP0T1 04 U 10 | 4X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 1.0 | 5.667 | 1.4 | 16.020.5 | 0.0065 |
| CP0T1 04 U 11 | 4X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 1.0 | 6.478 | 1.4 | 18.023.5 | 0.0052 |
| CP0T1 04 U 12 | 4X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 1.2 | 8.197 | 1.6 | 22.526.5 | 0.005 |
| CP0T1 04 U 13 | 4X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 1.2 | 9.010.0 | 1.6 | 24.532.0 | 0.0044 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor 22.4

According to IEC-60227 (450 / 750) V - Five Core Cables



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed(CU/PVC/PVC).
- Cables are produced according to IEC 60227 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Insulation: PVC | | Overbush: PVC | | |
|----------------|------------|--------------------------------------------|-------------------|------------------------------|---------------------------------|------------------------------------|-----------------------------------|----------------------------------------|---------------------------------|-------------------------------|--------------------------------------------|
| | | Conductor Nominal C.S.A (mm ²) | Number of Strands | Diameter of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max DC Resistance at 20°C (Ohm/km) | Average Insulation Thickness (mm) | Approx. Diameter after insulation (mm) | Overbush Nominal Thickness (mm) | Approx. Overall diameter (mm) | Min. Insulation resistance at 70°C (MΩ.km) |
| CP0T1 05 U 04 | 5X1.5 | 15 | 7 | 0.53 | 1.6 | 12.1 | 0.7 | 2.733 | 1.2 | 9.812.5 | 0.010 |
| CP0T1 05 U 05 | 5X2 | 20 | 7 | 0.60 | 1.8 | 9.14 | 0.8 | 3.138 | 1.2 | 10.312.8 | 0.0095 |
| CP0T1 05 U 06 | 5X2.5 | 25 | 7 | 0.67 | 2.01 | 7.41 | 0.8 | 3.340 | 1.2 | 11.014.5 | 0.009 |
| CP0T1 05 U 08 | 5X4 | 40 | 7 | 0.85 | 2.55 | 4.61 | 0.8 | 3.846 | 1.4 | 13.017.0 | 0.0077 |
| CP0T1 05 U 09 | 5X6 | 60 | 7 | 1.04 | 3.15 | 3.08 | 0.8 | 4.352 | 1.4 | 14.518.5 | 0.0065 |
| CP0T1 05 U 10 | 5X10 | 100 | 7 | 1.35 | 4.05 | 1.83 | 1.0 | 5.657 | 1.4 | 17.522.0 | 0.0065 |
| CP0T1 05 U 11 | 5X16 | 160 | 7 | 1.70 | 5.1 | 1.15 | 1.0 | 6.478 | 1.6 | 20.526 | 0.0052 |
| CP0T1 05 U 12 | 5X25 | 250 | 19 | 1.30 | 6.5 | 0.727 | 1.2 | 8.197 | 1.6 | 24.531.5 | 0.005 |
| CP0T1 05 U 13 | 5X35 | 350 | 19 | 1.50 | 7.5 | 0.534 | 1.2 | 9.010.9 | 1.6 | 27.635.0 | 0.0044 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.5

According to IEC-60502 (600 / 1000) V - Two Core Cables



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60502 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product-Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | Approx. Weight kg/km |
|---------------|------------|--------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|--------------------|---------|--------|----------------------|
| | | Conductor Nominal C.S.A (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | Over Ground | In Duct | In Air | |
| CP1T1 02 U 04 | 2X1.5 | 1.5 | 7 | 0.53 | 1.60 | 12.1 | 10.0 | 24 | 19 | 30 | 120 |
| CP1T1 02 U 06 | 2X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 10.8 | 30 | 25 | 38 | 145 |
| CP1T1 02 U 08 | 2X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 12.7 | 40 | 32 | 39 | 205 |
| CP1T1 02 U 09 | 2X6 | 6.0 | 7 | 1.04 | 3.15 | 3.06 | 13.9 | 50 | 40 | 50 | 255 |
| CP1T1 02 U 10 | 2X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 15.7 | 65 | 55 | 66 | 425 |
| CP1T1 02 U 11 | 2X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 17.8 | 85 | 68 | 80 | 580 |
| CP1T1 02 U 12 | 2X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 21.4 | 110 | 85 | 116 | 845 |
| CP1T1 02 U 13 | 2X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 23.4 | 130 | 105 | 143 | 1090 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.55
According to IEC-60502 (600 / 1000) V - Two Core Cables



Description

- Stranded Copper Conductor Insulated With XLPE And PVC sheathed(CU/XLPE/PVC).
- Cables are produced according to IEC 60502 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | Approx. Weight kg/km |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|--------------------|----------|--------|----------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | Direct in Ground | In Ducts | In Air | |
| CX1T1 02 U 04 | 2X1.5 | 1.5 | 7 | 0.53 | 1.60 | 12.1 | 9.6 | 30 | 25 | 25 | 105 |
| CX1T1 02 U 06 | 2X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 10.4 | 37 | 32 | 34 | 135 |
| CX1T1 02 U 08 | 2X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 11.5 | 50 | 40 | 46 | 175 |
| CX1T1 02 U 09 | 2X6 | 6.0 | 7 | 1.04 | 3.15 | 3.08 | 12.7 | 63 | 52 | 60 | 225 |
| CX1T1 02 U 10 | 2X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 14.5 | 82 | 69 | 79 | 360 |
| CX1T1 02 U 11 | 2X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 16.6 | 106 | 83 | 105 | 505 |
| CX1T1 02 U 12 | 2X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 20.2 | 139 | 107 | 139 | 750 |
| CX1T1 02 U 13 | 2X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 22.2 | 166 | 134 | 166 | 980 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.6

According to IEC-60502 (600 / 1000) V - Three Core Cables



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60502 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | Approx. Weight kg/km |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|--------------------|---------|--------|----------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | Disc. in Ground | In Duct | In Air | |
| CP1T1 03 U 04 | 3X1.5 | 1.5 | 7 | 0.53 | 1.60 | 12.1 | 10.5 | 21 | 18 | 18 | 145 |
| CP1T1 03 U 06 | 3X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 11.3 | 27 | 23 | 22 | 190 |
| CP1T1 03 U 08 | 3X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 13.4 | 35 | 30 | 31 | 270 |
| CP1T1 03 U 09 | 3X6 | 6.0 | 7 | 1.04 | 3.15 | 3.08 | 14.7 | 45 | 36 | 39 | 340 |
| CP1T1 03 U 10 | 3X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 16.6 | 60 | 48 | 53 | 485 |
| CP1T1 03 U 11 | 3X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 18.9 | 75 | 60 | 72 | 685 |
| CP1T1 03 U 12 | 3X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 22.7 | 100 | 80 | 94 | 895 |
| CP1T1 03 U 13 | 3X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 24.9 | 120 | 95 | 110 | 1300 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.66

According to IEC-60502 (600 / 1000) V - Three Core Cables



Description

- Stranded Copper Conductor Insulated With XLPE And PVC sheathed(CU/XLPE/PVC).
- Cables are produced according to IEC 60502 .

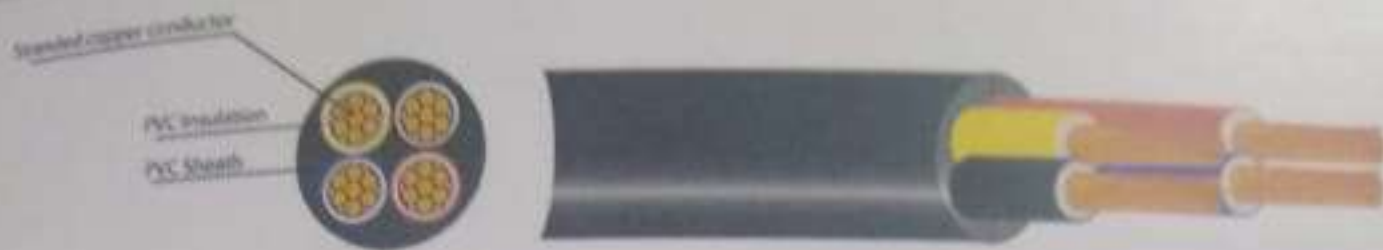
Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | Approx. Weight kg/km |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|----------------------------------|-------------------------------|--------------------|----------|--------|----------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max DC Resistance at 20°C (Ω/km) | | Disc. In Ground | In Ducts | In Air | |
| CX1T1 03 U 04 | 3X1.5 | 1.5 | 7 | 0.53 | 1.60 | 12.1 | 10.1 | 26 | 23 | 22 | 130 |
| CX1T1 03 U 06 | 3X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 10.9 | 35 | 29 | 32 | 165 |
| CX1T1 03 U 08 | 3X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 12.1 | 45 | 36 | 41 | 225 |
| CX1T1 03 U 09 | 3X6 | 6.0 | 7 | 1.04 | 3.15 | 3.08 | 13.4 | 57 | 45 | 50 | 295 |
| CX1T1 03 U 10 | 3X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 15.3 | 75 | 60 | 68 | 430 |
| CX1T1 03 U 11 | 3X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 17.6 | 97 | 75 | 89 | 620 |
| CX1T1 03 U 12 | 3X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 21.4 | 128 | 102 | 120 | 910 |
| CX1T1 03 U 13 | 3X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 23.6 | 155 | 120 | 145 | 1205 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.7
According to IEC-60502 (600 / 1000) V - Four Core Cables



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60502 .

Application

For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product-Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | Approx. Weight kg/km |
|--------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|-------------------------------------|-------------------------------|--------------------|----------|--------|----------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max. DC Resistance at 20°C (Ohm/km) | | Direct in Ground | In Ducts | In Air | |
| CP11 04 U 04 | 4X1.5 | 1.5 | 7 | 0.53 | 1.60 | 12.1 | 11.3 | 21 | 18 | 18 | 180 |
| CP11 04 U 06 | 4X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 12.3 | 27 | 23 | 22 | 230 |
| CP11 04 U 08 | 4X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 14.6 | 35 | 30 | 31 | 335 |
| CP11 04 U 09 | 4X6 | 6.0 | 7 | 1.04 | 3.15 | 3.08 | 16.0 | 45 | 36 | 39 | 425 |
| CP11 04 U 10 | 4X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 18.2 | 60 | 48 | 53 | 635 |
| CP11 04 U 11 | 4X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 20.7 | 75 | 60 | 72 | 880 |
| CP11 04 U 12 | 4X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 25.1 | 100 | 80 | 94 | 1295 |
| CP11 04 U 13 | 4X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 27.5 | 120 | 95 | 110 | 1700 |
| CP11 04 U 14 | 4X50 | 50.0 | 19 | 1.80 | 9.0 | 0.387 | 32.5 | 145 | 115 | 138 | 2225 |
| CP11 04 U 15 | 4X70 | 70.0 | 19 | 2.15 | 10.75 | 0.268 | 36.9 | 175 | 145 | 171 | 3065 |
| CP11 04 U 16 | 4X95 | 95.0 | 19 | 2.5 | 12.5 | 0.193 | 42.5 | 210 | 165 | 209 | 4175 |
| CP11 04 U 17 | 4X120 | 120.0 | 37 | 2.02 | 14.15 | 0.153 | 46.9 | 240 | 195 | 242 | 5205 |
| CP11 04 U 18 | 4X150 | 150.0 | 37 | 2.25 | 15.75 | 0.121 | 51.7 | 270 | 220 | 275 | 6400 |
| CP11 04 U 19 | 4X185 | 185.0 | 37 | 2.5 | 17.5 | 0.0991 | 57.5 | 300 | 245 | 314 | 7980 |
| CP11 04 U 20 | 4X240 | 240.0 | 61 | 2.25 | 20.25 | 0.0754 | 65.7 | 345 | 290 | 374 | 10330 |
| CP11 04 U 30 | 4X300 | 300.0 | 61 | 2.5 | 22.5 | 0.0601 | 72.5 | 390 | 320 | 440 | 12915 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.77

According to IEC-60502 (600 / 1000) V - Four Core Cables



Description

- Stranded Copper Conductor Insulated With XLPE And PVC sheathed(CU/XLPE/PVC).
- Cables are produced according to IEC 60502 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | Approx. Overall Diameter (mm) | Current Rating (A) | | | Approx. Weight kg/km |
|----------------|------------|------------------------------------------|-------------------|------------------------------|---------------------------------|------------------------------------|-------------------------------|--------------------|----------|--------|----------------------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | Diameter Of Each Strand (mm) | Nominal Conductor Diameter (mm) | Max DC Resistance at 20°C (Ω/km/A) | | Over to Ground | In Earth | In Air | |
| CX17104U04 | 4X1.5 | 1.5 | 7 | 0.53 | 1.60 | 12.1 | 10.8 | 26 | 23 | 22 | 150 |
| CX17104U06 | 4X2.5 | 2.5 | 7 | 0.67 | 2.01 | 7.41 | 11.8 | 35 | 29 | 32 | 205 |
| CX17104U08 | 4X4 | 4.0 | 7 | 0.85 | 2.55 | 4.61 | 13.1 | 45 | 36 | 41 | 280 |
| CX17104U09 | 4X6 | 6.0 | 7 | 1.04 | 3.15 | 3.08 | 14.6 | 57 | 45 | 50 | 365 |
| CX17104U10 | 4X10 | 10.0 | 7 | 1.35 | 4.05 | 1.83 | 16.8 | 75 | 60 | 68 | 565 |
| CX17104U11 | 4X16 | 16.0 | 7 | 1.70 | 5.1 | 1.15 | 19.3 | 97 | 75 | 89 | 795 |
| CX17104U12 | 4X25 | 25.0 | 19 | 1.30 | 6.5 | 0.727 | 23.6 | 128 | 102 | 120 | 1185 |
| CX17104U13 | 4X35 | 35.0 | 19 | 1.50 | 7.5 | 0.524 | 26.1 | 155 | 120 | 145 | 1575 |
| CX17104U14 | 4X50 | 50.0 | 19 | 1.80 | 9.0 | 0.387 | 30.4 | 185 | 145 | 179 | 2060 |
| CX17104U15 | 4X70 | 70.0 | 19 | 2.15 | 10.75 | 0.268 | 35.5 | 220 | 180 | 225 | 2905 |
| CX17104U16 | 4X95 | 95.0 | 19 | 2.5 | 12.5 | 0.193 | 39.9 | 265 | 210 | 268 | 3910 |
| CX17104U17 | 4X120 | 120.0 | 37 | 2.02 | 14.15 | 0.153 | 44.8 | 305 | 245 | 310 | 4915 |
| CX17104U18 | 4X150 | 150.0 | 37 | 2.25 | 15.75 | 0.121 | 49.8 | 335 | 275 | 352 | 6035 |
| CX17104U19 | 4X185 | 185.0 | 37 | 2.5 | 17.5 | 0.0991 | 55.4 | 375 | 310 | 404 | 7540 |
| CX17104U20 | 4X240 | 240.0 | 61 | 2.25 | 22.5 | 0.0754 | 63.1 | 435 | 365 | 483 | 9785 |
| CX17104U30 | 4X300 | 300.0 | 61 | 2.5 | 22.5 | 0.0601 | 69.4 | 490 | 405 | 562 | 12190 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.8

According to IEC-60502 (600 / 1000) V - Four Core Cables
With Reduced Neutral



Description

- Stranded Copper Conductor Insulated With Poly Vinyl Chloride (PVC) And PVC sheathed (CU/PVC/PVC).
- Cables are produced according to IEC 60502 .

Application

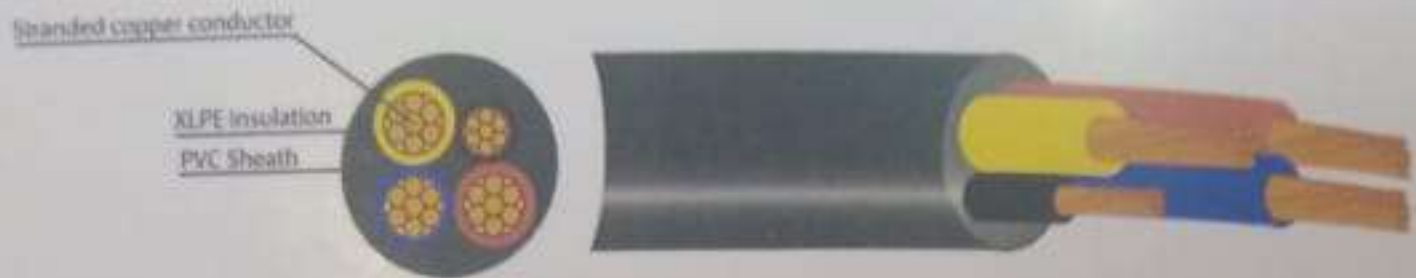
- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product-Code | Cable Size | Conductor Stranded copper class 2 | | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | Approx Weight kg/km | | | | |
|--------------|------------|------------------------------------------|-------------------|--------------------------------|--------------------------------|----------------------------------|--------------------------------|-------------------------------|--------------------|---------|--------|---------------------|-----|-----|-----|-------|
| | | Conductor Nominal (3x4 mm ²) | Number of Strands | Conductor Dia Each Strand (mm) | Approx Conductor Diameter (mm) | Min. DC Resistance @ 20°C (Ω/km) | U ₀ /U _m | | In Ground | In Duct | In Air | | | | | |
| CP118E-U-13 | 3X35+16 | 35 | 16 | 19 | 7 | 1.50 | 1.70 | 7.5 | 5.1 | 0.524 | 1.15 | 25.9 | 120 | 95 | 110 | 1505 |
| CP118E-U-14 | 3X50+25 | 50 | 25 | 19 | 19 | 1.80 | 1.30 | 8.0 | 6.5 | 0.387 | 0.727 | 30.6 | 145 | 115 | 138 | 2115 |
| CP118E-U-15 | 3X70+35 | 70 | 35 | 19 | 19 | 2.15 | 1.50 | 10.75 | 7.50 | 0.268 | 0.524 | 34.8 | 175 | 145 | 171 | 2725 |
| CP118E-U-16 | 3X95+50 | 95 | 50 | 19 | 19 | 2.50 | 1.80 | 12.5 | 9.0 | 0.193 | 0.387 | 40.0 | 210 | 165 | 200 | 3090 |
| CP118E-U-17 | 3X120+70 | 120 | 70 | 37 | 19 | 2.02 | 2.15 | 14.15 | 10.75 | 0.153 | 0.268 | 44.5 | 240 | 195 | 242 | 4675 |
| CP118E-U-18 | 3X150+90 | 150 | 90 | 37 | 19 | 2.25 | 2.15 | 15.75 | 10.75 | 0.121 | 0.268 | 48.4 | 270 | 220 | 275 | 6580 |
| CP118E-U-19 | 3X185+95 | 185 | 95 | 37 | 19 | 2.50 | 2.50 | 17.5 | 12.5 | 0.0991 | 0.193 | 53.9 | 300 | 245 | 314 | 7625 |
| CP118E-U-20 | 3X240+120 | 240 | 120 | 61 | 37 | 2.25 | 2.02 | 20.25 | 14.15 | 0.0754 | 0.153 | 61.0 | 345 | 290 | 374 | 9080 |
| CP118E-U-21 | 3X300+150 | 300 | 150 | 61 | 37 | 2.50 | 2.25 | 22.5 | 15.75 | 0.0601 | 0.121 | 67.5 | 390 | 320 | 440 | 11260 |

Low Voltage Cables

22 - Multi Core Cable With Stranded Copper Conductor
22.88

According to IEC-60502 (600 / 1000) V - Four Core Cables
With Reduced Neutral



Description

- Stranded Copper Conductor Insulated With XLPE And PVC sheathed(CU/XLPE/PVC).
- Cables are produced according to IEC 60502 .

Application

- For Outdoor and Indoor installations in dry and wet locations. They are normally used for power distribution in Urban Networks, Industrial plants as well as thermopower and hydropower stations.

| Product - Code | Cable Size | Conductor: Stranded copper class-2 | | | | | | Approx. Overall diameter (mm) | Current Rating (A) | | | Approx. Weight kg/km | | | | |
|----------------|------------|------------------------------------------|-------------------|----|------------------------------|------|---------------------------------|-------------------------------|----------------------------------|-----------------|----------|----------------------|--------|-----|-----|-------|
| | | Conductor Nominal CSA (mm ²) | Number of Strands | | Diameter Of Each Strand (mm) | | Nominal Conductor Diameter (mm) | | Max DC Resistance at 20°C Ohm/km | Dist. in Ground | In Ducts | | In Air | | | |
| CK1T1 05 U 13 | 3X35+16 | 35 | 16 | 19 | 7 | 1.50 | 1.70 | 7.5 | 5.1 | 0.524 | 1.15 | 24.4 | 155 | 120 | 142 | 1390 |
| CK1T1 05 U 14 | 3X50+25 | 50 | 25 | 19 | 19 | 1.80 | 1.30 | 9.0 | 6.5 | 0.387 | 0.727 | 28.8 | 185 | 145 | 179 | 1825 |
| CK1T1 05 U 15 | 3X70+35 | 70 | 35 | 19 | 19 | 2.15 | 1.50 | 10.75 | 7.50 | 0.268 | 0.524 | 33.1 | 220 | 180 | 215 | 2540 |
| CK1T1 05 U 16 | 3X95+50 | 95 | 50 | 19 | 19 | 2.50 | 1.80 | 12.5 | 9.0 | 0.193 | 0.387 | 37.7 | 265 | 210 | 268 | 3435 |
| CK1T1 05 U 17 | 3X120+70 | 120 | 70 | 37 | 19 | 2.02 | 2.15 | 14.15 | 10.75 | 0.153 | 0.268 | 42.5 | 305 | 245 | 310 | 4400 |
| CK1T1 05 U 18 | 3X150+70 | 150 | 70 | 37 | 19 | 2.25 | 2.15 | 15.75 | 10.75 | 0.121 | 0.268 | 46.5 | 335 | 275 | 352 | 5255 |
| CK1T1 05 U 19 | 3X185+95 | 185 | 95 | 37 | 19 | 2.50 | 2.50 | 17.5 | 12.5 | 0.0991 | 0.193 | 51.7 | 375 | 310 | 404 | 6640 |
| CK1T1 05 U 20 | 3X240+120 | 240 | 120 | 61 | 37 | 2.25 | 2.02 | 20.25 | 14.15 | 0.0754 | 0.153 | 58.7 | 435 | 365 | 463 | 8555 |
| CK1T1 05 U 30 | 3X300+150 | 300 | 150 | 61 | 37 | 2.50 | 2.25 | 22.5 | 15.75 | 0.0601 | 0.121 | 64.8 | 490 | 405 | 562 | 10640 |



www.alahramgroupworld.com



مجموعة مصانع وشركات الأهرام جروب الدولية
Al Ahram Group International Factories & Companies



مجموعة مصانع وشركات الأهرام جروب الدولية

Al Ahram Group International Factories & Companies

www.alahramgroupworld.com

EGY. +201272496660
UAE. +971507456568
LON. +447926201960


email: info@alahramgroup-eg.net

