# LOW VOLTAGE POWER CABLES

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# GENERAL
## INTRODUCTION

Bahra Cables Company was established in 2008 to serve Saudi & GCC Markets. It is based in Bahra industrial city located 25km from Jeddah. Bahra Cables Factory occupies over 200,000 square meters of prime manufacturing space together with associated design offices, laboratories and storage area. It specializes in Manufacturing and Distributing Electric Cables.

Bahra Cables Company is committed to the production of the best product quality and service, utilizing cutting edge European Technology in its manufacturing. The core technologies in production processes, material applications and logistic procedures were provided by German experts with key functions being managed by German engineers.

The organization has a lean vertical management structure which is designed to integrate with a highly developed IT-based structure. This partnership allows the rapid flow of information through the management chain and facilitates timely response in the best traditions of 'hands on' management. Bahra Cables Company has the flexibility to provide a versatile product range to serve the construction, electric utilities, distribution, industrial, oil & gas and petrochemical sectors. The cables produced comply with both American standards ( UL , ANSI and ICEA ) and European standards ( IEC, BS, NF and VDE specifications.)

The scope of this catalogue is to provide an in depth view of the technical information of the low voltage cables 0.6/1.0KV, with PVC or XLPE insulation to IEC 60502-1 and XLPE insulation to BS 5467.

Bahra Cables Company Catalogues is about Control & Auxiliary cables, Power and control Tray Cables to UL 1277, cables having low emission of smoke and corrosive gases (LSF) to IEC60502-1 or BS 6724 are available upon request.

## AREA

Bahra Cables Company has a total land area of about 200,000sqm at disposal.
The built area, including offices and plant, of start up phase is more than 30,000sqm.
The factory extension under construction is more than 20,000sqm already.
The total available stock yard for storage is more than 20,000sqm

## PRODUCT SCOPE

BAHRA CABLES COMPANY is committed to deliver the highest standard wires and power cables to the local market, GCC and for export.
To do so, Bahra Cables Company produces a versatile product range cover most of our customer needs:

- Flexible wires and cables up to 300 mm2 to IEC 60227 , BS 6004 & BS 6500 .
- Building wires, THHN/THWN & THW to UL 8.3, with conductor sizes starting from 16 AWG.
- Thermosetting insulated wires types XHHW-2 , XHHW, XHH, RHW-2, RHW &RHH to UL44
- Building wires ( NYA) to IEC 60227 and BS 6004, from 1.5 mm2 and above.
- LV power Cables with PVC and XLPE insulation to IEC 60502-1, BS 5476, BS 7889 and UL 1277.
- MV cables to IEC 60502-2 up to 18/30 (36) kv and to BS 6622 up to 19/33 (36) kv.
- Low smoke and fume , zero halogen building wire ( LSFZH) to BS 7211 , with thermo setting insulation which is alternative to wire type (NYA) , where the application requires higher standards of safety against the emission of smoke, fumes and toxic gases.
- LV cables with LSFZH, thermosetting insulation which under exposure of to fire generate low emission of smoke, fumes and toxic gases and zero halogens. The cables are produced according to BS 6724, IEC 60502-1 and tested to IEC 61034 , IEC 60754 & IEC 60332.
- MV cables with LSFZH to BS 7835.
- HV cables up to 69 kv to IEC 60840, and to ANSI / ICEA S-108-720, with conductor sizes up to 1200 mm2.

The future product scope will be extended to Extra High Voltage cables up to 480 kv and conductor cross sections bigger than 2000 mm2.

## FACTORY MACHINERY

All production machines are top of the line of the cables machinery suppliers. From start up with wire drawing lines to extrusion lines, to assembly machines up to the laboratories and the final test fields, all technical equipment is provided with the highest European standards of electronic control equipment and measuring devices which insures that the requirements of different quality standards are met.

All machines/production lines are prepared for data communication and data exchange bottom up and top down using the most modern decentralized control software at the lines (PLC) combined with an efficient central steering and a planning system focused on the demand of cable manufacturers. This way, full traceability will be guaranteed from production start to end, by being able to follow up the machines involved and the material used.

## LOGISTICS

All material flow in BCC from incoming raw material up to outgoing cables will be planned and controlled by a complete software system. Herein a classical ERP system will be enhanced and completed by the most modern MES (Manufacturing Executive System) which has a unique focus on the specific problematic issues of cables manufacturing with longitudinal products being winded up and winded off.

**The Manufacturing Executive System - MES - covers:**

## PLANNING

The planning system is active on several levels. For the proper function, all master data (material properties, dimensions, etc.) are saved and permanently maintained in the central database based on

- Cable design
- Planning of Sales Orders
- Planning of Production Orders

## DATA COMMUNICATION

The exchange of data is important in several areas.

- Incoming inspection
- Raw Materials - Status quo of production orders
- Finished goods
- Shipping status

Bahra Cables Company is willing to provide advice and assistance on all matters concerning PVC and XLPE insulated power cables. Please contact the Technology Department for any query.

## QUALITY IS OUR MAIN TARGET

Bahra Cables Company is born to be one of the leading Power Cables Manufacturers in Saudi Arabia and the GCC area. We are working in different axes to completely fulfill customers satisfaction which is the milestone of our business, such axes are:

1. Product quality complying with the local and international standards

2. Product Reliability is starting from the time of product design to fit for the intended application and environmental conditions, to the selection of the raw material from only the highest class suppliers with internationally trusted reputation. Our state of art testing equipments and the strict quality procedures ensure the product quality and integrity so we can guarantee that our cables are defect free and suitable for the intended application through the cable service lifetime.

3. High Performance of the product and service through cooperation between experienced staff from Germany and local experts who are aware of the local market requirements and the highest international standards of cables manufacturing. Such cooperation in knowhow is invested to provide our customer with the best service and support.

4. Bahra Cables Company's Quality Management System conforms to the ISO 9001: 2008 International Management Quality System Standard with scope of Design and Manufacturing of Electrical Power Cables and Wires. BCC is certified by American Systems Registrar (ASR), ANAB Accredited.

5. Bahra Cables Company has UL Registration for wire types such as THHN., THWN, THW, XHHW-2, XHW, XHH, RHW-2, RHW & RHH, cables Type TC (Low voltage control cables and Low Voltage Power Cables for tray and direct buried applications) with Registration No. E326088, E326089, & E326090 respectively, which only implies that Bahra Cables Company is committed to provide customer satisfaction through quality product and services.

6. Bahra Cables Company is frequently testing its products at internationally reputable labs, diversity of products have been tested and confirmed compliance to the international standard at KEMA, IPH, SAG(Berlin), BSI and BASEC Labs.

# TECHNICAL INFORMATION
## GENERAL

### PRODUCT RANGE

Cables can be categorized with different criteria, for example the Voltage rate , Conductor Material, Insulation Material and Armouring type.

This Catalogue is intended for Low Voltage Power Cables, Aluminum and Copper conductors of voltage range:0.6/1.0 kV

### CABLE TYPES

1) Copper Conductor Cables
2) Aluminum Conductor Cables
3) Thermoplastic / PVC insulated cables
4) Thermoset / XLPE insulated cables
5) Armoured / Nonarmoured Cables

Single core cables up to and including 1000 $mm^2$

2 core cables up to and including 95 $mm^2$

3, 4 core & 4 core with reduced neutral cables up to and including 500 $mm^2$

### APPLICABLE STANDARDS

IEC 60502 (Part 1)"PVC/ XLPE insulated cables" single core /multi-core

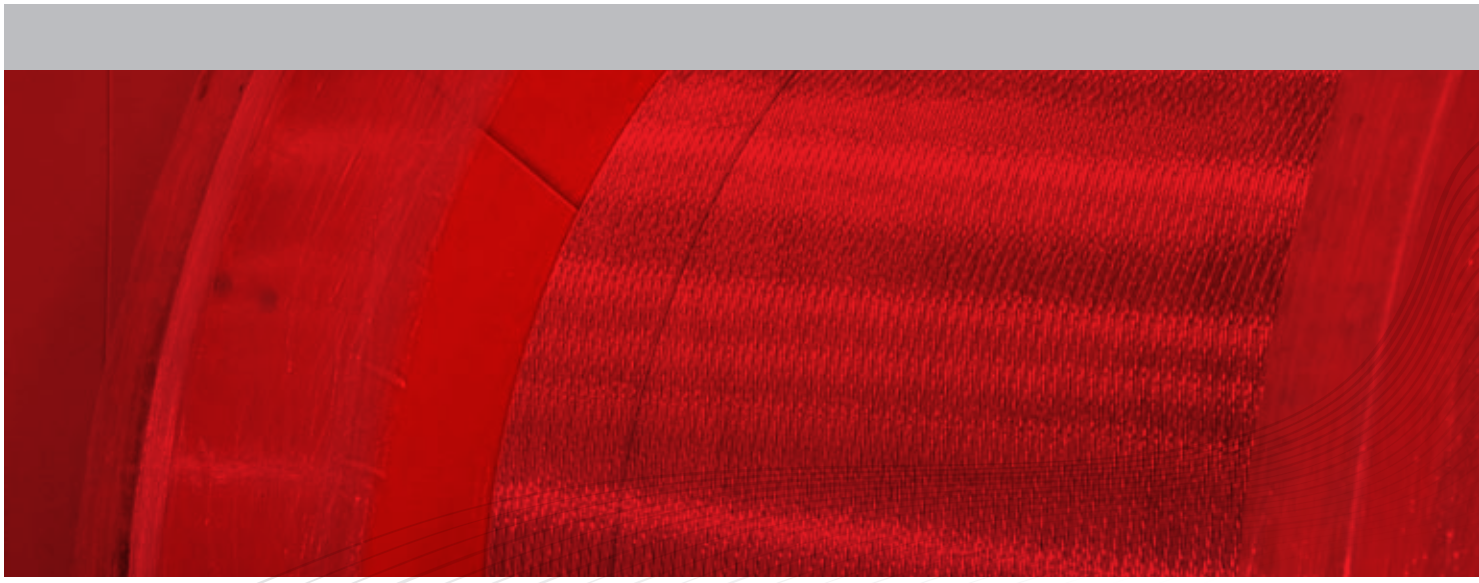
BS 5467 for XLPE insulated Armoured cables

BS 7889 for XLPE insulated single core unarmoured cables

UL 83, THW, THW-2, THHN/THWN,

UL 44 XHHW-2, XHHW, XHH, RHW-2, RHW & RHH wires

Any other customer or International standards e.g. ANSI/ACEA, VDE/DIN, NF , etc..



## 1. NOMINAL VOLTAGE

The Nominal voltage is to be expressed with two values of alternative current Uo/U in V (volt)
Uo/U : Phase to earth voltage
Uo : Voltage between conductor and earth
U : Voltage between phases (conductors)

## 2. RESISTANCE

The Values of conductor DC resistance are dependent on temperature as given by :

| | |
|---|---|
| $Rt = R20 \times [1 + \alpha (t - 20)]$ | Ω/km |
| Rt : conductor DC resistance at t ° C | Ω/km |
| R20 : conductor DC resistance at 20 ° C | Ω/km |
| t : operating temperature | ° C |

$\alpha$ : resistance temperature coefficient
= 0.00393 for copper
= 0.00403 for aluminum

Generally DC resistance is based on IEC 60228 To calculate AC resistance of the conductor at the operating temperature as the following:
RAC = Rt x[ 1+ ys + yp ]
ys : skin effect factor
yp : proximity effect
Generally AC resistance is based on IEC 60287

## 3. CAPACITANCE

$$C = \frac{\epsilon_r}{18 \ln \frac{D}{d}}$$ μF/km

| | |
|---|---|
| C : Operating capacitance | μF/km |
| D : Diameter over insulation | mm |
| d : Conductor diameter | mm |

$\epsilon r$ :Relative permittivity of insulation material
$\epsilon r$ = 4.8 for PVC
$\epsilon r$ = 2.3 for XLPE

## 4. INDUCTANCE

| | |
|---|---|
| $L = K + 0.2 \ln ( 2s/d)$ | mH/km |
| L : Inductance | mH/km |

K :Constant depends on number of wires of conductor
d: Conductor diameter
S : Axial spacing between cables ( Trefoil formation )
S : 1.26 x axial spacing between cables( Flat formation)

## 5. REACTANCE

The inductive reactance per phase of a cable may be obtained by the formula:

| | |
|---|---|
| $X = 2 \pi f L \times 10^{-3}$ | Ω/km |
| X: Reactance | Ω/km |
| f : Frequency | Hz |
| L : Inductance | mH/km |

## 6. IMPEDANCE

$$Z = \sqrt{R^2_{ac} + X^2}$$ Ω/km

| | |
|---|---|
| Z : Phase impedance of cable | Ω/km |
| Rac : AC resistance at operating temperature | Ω/km |
| X : Reactance | Ω/km |

## 7. INSULATION RESISTANCE

$$R = \frac{1000}{2 * \pi} * LN (D/d)$$

| | |
|---|---|
| R : Insulation resistance at 20° C | MΩ.km |
| D : Insulated conductor diameter | mm |
| d : Conductor diameter | mm |

## 8.CHARGING CURRENT

$I = Uo \times 2\Pi f \times C \times 10^{-6}$

| | |
|---|---|
| I : Charging current | A/km |
| Uo : voltage between phase and earth | V |
| C : Capacitance to neutral | μF/km |

## 9. DIELECTRIC LOSSES

$D = 2 \pi f C Uo^2 \tan \delta 10^{-6}$

| | |
|---|---|
| D : Dielectric losses | watt/km/phase |
| Uo : Voltage between phase and earth | V |
| C : Capacitance to neutral | μF/km |
| tan δ : Dielectric power factor | |

## 10. CABLE SHORT CIRCUIT CAPACITY

| | |
|---|---|
| $ISC(t) = ISC(1) / \sqrt{t}$ | kA |
| ISC(t): Short circuit for t second | kA |
| ISC(1): Short circuit for 1 second | kA |

Data about short circuit are tabulated from table 28 to table 30

## 11. VOLTAGE DROP

When the current flows in conductor, there is a voltage drop between the ends of the conductor. For low voltage cable network of normal operation, it is advisable of a voltage drop of 3-5 %. To calculate voltage drop as the following:

1- for single phase circuit:

$Vd = 2I \iota ( R \cos\phi + X \sin\phi )$

2- for three phase circuit :

$Vd = \sqrt{3} I \iota ( R \cos\phi + X \sin\phi )$

| | |
|---|---|
| Vd : Voltage drop | V |
| I : Load current | A |
| R : AC resistance | Ω/km |
| X : Reactance | Ω/km |
| ι : Length | km |
| cosϕ : Power factor | |

- Relation between cosϕ and sinϕ as following:

| | | | | | | |
|---|---|---|---|---|---|---|
| cosϕ | 1.0 | 0.9 | 0.8 | 0.71 | 0.6 | 0.5 |
| sinϕ | 0.0 | 0.44 | 0.6 | 0.71 | 0.8 | 0.87 |

## 1.0 CONDUCTORS

A conductor is the metallic part of cables that is carrying the electric current

Conductor materials are :

1.1 Plain annealed or tin coated copper conductor (to BS EN 1977, ASTM B3, ASTM B49 & ASTM B 33)

1.2 Aluminum (to ASTM B233)

The conductor structure is complying to the requirements of BS EN 60228 (IEC 60228) class 2 stranded, non Compacted , compacted or compacted sector shaped conductors. The shape codes are:

re, round solid
rm, round stranded
rmc, round compacted stranded
sm, sectoral stranded

## 2.0 INSULATION

2.1 Each core conductor is insulated by extruded plastic material as will follow; the insulation thickness is selected based on the designated voltage rate complying with IEC 60502-1 & BS 5467 suitable for 0.6/1.0 KV.

2.2 The insulation integrity is controlled online by an AC spark tester with test methods specified in BS EN 62230 and using test voltages specified in BS5099.

2.3 Insulation Material :
Insulation material is selected to match the desired customer require ments and customer specification.

2.3.1 Standard Polyvinyl chloride type (PVC/A 70 oC) complying with IEC 60502-1 requirements or Types (TI1 70 oC) & heat resistant PVC type TI-3 (90 oC) complying with BS EN 50363-3.

2.3.2 Cross Linked Polyethylene XLPE complying with IEC 60502.
The XLPE is selected to comply with the requirements of GP8 evaluation as specified in BS 7655-1.3

2.3.3 Bahra Cables' standard insulation color codes are described in Table-1 (i.e. used in the products of this catalogue), meanwhile the color code as per BS 5467 is offered to our customers upon their request.

Table 1: Insulated Core Color Codes

| Number of Cores | Colors to IEC 60502-1 | Colors to BS 5467 (A:2008) |
|---|---|---|
| 1 | Red or Black | Brown or Blue |
| 2 | Red & Black | Brown & Blue |
| 3 | Red, Yellow and Blue | Brown, Black and Grey |
| 4 | Red, Yellow, Blue and Black | Blue, Brown, Black and Grey |
| 5 | Red, Yellow, Blue, Black and Green / Yellow | Green / Yellow, Blue, Brown, Black and Grey |

2.3.4 The insulation is covered by Ultra-violet (UV) resistant Masterbatch. This zprotects the insulation from deterioration when exposed to continuous sunlight, the UV resistance performance of the Insulation is assessed by using the Arc Xenon test as per UL 1581

## 3.0 CABLE ASSEMBLY

The Insulated cores are laid up together to form the laid up cable cores. Extruded suitable polymer compound or non-hygroscopic polypropylene filler is applied (when required) between laid up cores to provide a circular shape to the cable.

Polypropylene tape(s) or PETP (Polyester) tape(s) is used as a barrier tape over the laid up cores. Such tape(s) will bind the cores together and prevents them from opening out, acts as a separator between different polymers used in a cable and works as a heat barrier between the cores and the extruded bedding.

## 4.0 BEDDING

It could be also called inner sheath or inner jacket, which serves as a bedding under cable armouring to protect the laid up cores and as a separation sheath. The bedding is an extruded PVC Type 9 Compound as per BS 7655-4.2.

## 5.0 ARMOURING

The cable intended for tray application does not require armour in general , while it is recommended to have an armour for the cables intended for Direct Burial application. The armour provides mechanical protection against crushing forces. Armour also can serve as an Earth Continuity Conductor (ECC). The armouring type could be:

5.1 One layer of Galvanized Round Steel Wire to BS EN 10257 is applied helically over the bedding.

5.2 Double Galvanized Steel Tape applied over each other, with a suitable overlap, one layer covers the gap of the other layer.

5.3 Aluminum wire armouring for a single Core Cable acts as non magnetic armour.

## 6.0 OUTERSHEATH (OUTERJACKET)

6.1 It is the outer protection part of the cable against the surrounding environment.

6.2 Several materials can be used as oversheath based on the intended application.

6.2.1 General purpose PVC Type ST2 compound as specified in IEC 60502-1, or its equivalent PVC Type 9 to BS 7655-4.2.

6.2.2 High density Polyethylene HDPE compound fulfill and exceed the requirements of Type ST7 IEC 60502-1 for cables that require to be abrasion resistant, protected against water ingress and strong Environmental Stress Crack Resistant (ESCR).

6.2.3 Halogen Free Flame Retardant (HFFR) compounds complying with ST8 to IEC 60502-1 or Types LTS 1 & LTS 4 to BS 7655: section 6 for cables installed in intrinsically safe locations and where the cables require to be low smoke, low fume and low toxic gas emitting in case of fire. Cables to this category are complying with the requirements of BS 6724.

6.2.4 The standard sheath color is Black, meanwhile other colors such as Red and Light Blue can also be provided as per customer request and in this case suitable UV proved additive is added to the Master batch to ensure resistance to sunlight.

6.2.5 When the cable is required to be antitermite / antivermin, a special additive is added to the sheathing compound.

6.2.6 All cables produced at Bahra Cables Company with PVC or Halogen free jackets are complying with the flame retardant test to IEC 60332-1. Whenever a requirement for more severe tests as IEC 60332-3 is needed, a jacketing compound with Oxygen index value more than 30% will be used.

## 7.0 INSTALLATION

Low voltage cables with both PVC and XLPE insulation are suitable for indoor and outdoor applications. For more information customers may refer to BS 7671 IEE wiring regulation seventeenth edition

The following recommendations should be followed to achieve the optimal cable service

1. Armoured cables are not recommended for tray applications, as they are heavy in weight and extra loads are exerted on the tray.
2. Unarmoured cables are not recommended for direct buried applications, except if the quoted cables are designed and produced to pass direct burial test requirements (example, direct burial tests described in UL 1277 and UL 1581).
3. A PVC jacket is a very stable material against a wide range of chemicals, while HDPE jacketed cables can serve better in wet locations.
4. A recommended minimum bending radius is included in Table 2, the cable jacket may be damaged if the cable is bended in diameters less than these values.

Table 2 : Cables bending radius

| Cable Type | Cable Minimum Bending Radius |
|---|---|
| Circular Copper Conductors Armoured / Unarmoured | 6D |
| Shaped Copper or Aluminum Conductors, Armoured / Unarmoured | 8D |

D: Cable diameter

## 1 CURRENT RATING ASSUMPTIONS

1.1 The calculation of the current ratings, Current rating equations (100% load factor) and calculation of losses are based on IEC 60287 series , and the values of Current ratings for under ground applications (In Duct or Direct Buried) are derived from the latest issue of ERA Report 'Current Rating Standards 69.30 Part V'. The ratings for a cable installed in Air are adopted from BS 7671 IEE Wiring Regulations, seventeenth edition.

1.2 Bahra Cables Company offers heat resistant PVC type TI-3 (90 oC) as insulation, which almost has the same current carrying capacity as XLPE 90 °C operating temperature.

1.3 The calculation is based on the standard dimensions of cables based on IEC 60502-1, which may have a slight difference from the applied cable dimension which are following the best common manufacturing practices.

1.4 The values given in the tables are for one circuit installed thermally isolated from other circuits or any other heat source.

1.5 The basis of the standard conditions is the climatic condition of the Kingdom of Saudi Arabia, which is:

| | |
|---|---|
| Ambient Air Temperature: | 40 °C |
| Ambient Ground Temperature: | 35 °C |
| Depth of laying in ground: | 0.50 m |
| Soil Thermal Resistivity | 1.2 K.m/W |

1.6 For other Installation conditions or any value of different air/ ground temperature, depth of laying, different soil thermal resistivity the customer is advised to multiply the tabulated current rating by the de-rating factor values as in tables 3 to 7 for direct buried cablse in ground and tables 9 to 12 for cables installed in ducts.

## 2 INSTALLATION CONDITIONS FOR DIRECT BURIAL CABLES

For a cable installed direct buried, the following tables will be used to calculate the current rates based on the actual soil thermal resistivity, Ground ambient temperature and the Depth of Laying.

Table 3 : Rating factors for ground temperature variation

| Ground Temparature | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C |
|---|---|---|---|---|---|---|---|---|---|
| Cable Type | | | | | | | | | |
| PVC Insulated | 1.18 | 1.15 | 1.1 | 1.04 | 1 | 0.95 | 0.88 | 0.83 | 0.77 |
| XLPE Insulated | 1.16 | 1.13 | 1.09 | 1.03 | 1 | 0.95 | 0.89 | 0.84 | 0.79 |

Table 4 : Rating factors for depth of laying (to center of cable or trefoil group of cables)

| Depth of Laying (m) | upto 70mm² | 95mm² to 240mm² | Above 300mm² |
|---|---|---|---|
| 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 |
| 2.50 | 0.90 | 0.87 | 0.84 |

Table 5 : Rating factors for variation in thermal resistivity of soil (average values)

| Size of Cables mm² | Soil Thermal Resistivity ( °C.m/W) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0.8 | 0.9 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
| | Single Core Cables | | | | | | |
| Upto 150 | 1.16 | 1.12 | 1.07 | 0.91 | 0.81 | 0.73 | 0.66 |
| From 185 to 300 | 1.17 | 1.12 | 1.07 | 0.91 | 0.80 | 0.73 | 0.66 |
| From 400 to 1000 | 1.17 | 1.12 | 1.07 | 0.91 | 0.80 | 0.73 | 0.66 |
| | Multi Core Cables | | | | | | |
| Upto16 | 1.12 | 1.08 | 1.05 | 0.93 | 0.84 | 0.77 | 0.72 |
| From 25 to 150 | 1.14 | 1.10 | 1.06 | 0.92 | 0.82 | 0.75 | 0.69 |
| From 185 to 500 | 1.15 | 1.10 | 1.07 | 0.92 | 0.81 | 0.74 | 0.67 |

Table 6 : Group rating factors for circuits of three single core cables in trefoil or laid flat touching, in horizontal formation

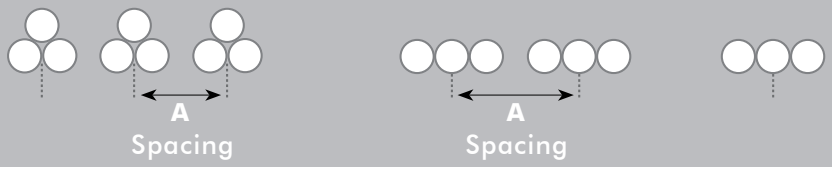
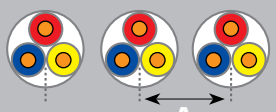
| Number of Circuits |  | | | | | |
|---|---|---|---|---|---|---|
| | Nil (cables Touching) | | Cable to Cable Clearance A | | | |
| | Trefoil | Flat Laying | 0.15m | 0.30m | 0.45m | 0.60m |
| 2 | 0.78 | 0.81 | 0.83 | 0.88 | 0.91 | 0.93 |
| 3 | 0.66 | 0.7 | 0.73 | 0.79 | 0.84 | 0.87 |
| 4 | 0.61 | 0.64 | 0.68 | 0.73 | 0.79 | 0.85 |
| 5 | 0.56 | 0.6 | 0.64 | 0.73 | 0.79 | 0.85 |
| 6 | 0.53 | 0.57 | 0.61 | 0.71 | 0.78 | 0.82 |

Table 7 : Group rating factors for multicore cables in horizontal formation

| Number of Cables in Group |  | | | | |
|---|---|---|---|---|---|
| | Cable to Cable Clearance A | | | | |
| | Touching | 0.15m | 0.30m | 0.45m | 0.60 |
| 2 | 0.81 | 0.87 | 0.91 | 0.93 | 0.95 |
| 3 | 0.70 | 0.78 | 0.84 | 0.88 | 0.90 |
| 4 | 0.63 | 0.74 | 0.81 | 0.86 | 0.89 |
| 5 | 0.59 | 0.70 | 0.78 | 0.84 | 0.87 |
| 6 | 0.55 | 0.68 | 0.77 | 0.83 | 0.87 |

## 3 INSTALLATION CONDITIONS FOR CABLES IN DUCTS

A duct is an enclosure of metal or insulating material other than conduits or cable trunking, intended for the protection of cables which are drawn in after errection of the ducting.
The recommended relation between the cable size and duct size is as in table 8

Table 8 : Recommended duct dimensions and cable sizes

| Number of Cables in Group | Duct | |
|---|---|---|
| | Inside Diameter (mm) | Outside Diameter (mm) |
| Upto and including 65 | 100 | 130 |
| Above 65 upto and including 90 | 125 | 160 |

As the same principal of cables installed in direct burial methods above, the current carrying capacities of cables depends on the installed condition, the rating is calculated based on the values in section 1.5 page10.

The de-rating factors of other conditions should be considered to calculate the actual possible maximum current carrying capacity of the cables.

Tables 9-13 are for the factors to be multiplied by the tabulated current.

Table 9 : Rating factors for ground temperature variation

| Ground Temparature | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C |
|---|---|---|---|---|---|---|---|---|---|
| Cable Type | | | | | | | | | |
| PVC Insulated | 1.18 | 1.15 | 1.1 | 1.04 | 1 | 0.95 | 0.88 | 0.83 | 0.77 |
| XLPE Insulated | 1.16 | 1.13 | 1.09 | 1.03 | 1 | 0.95 | 0.89 | 0.84 | 0.79 |

Table 10 : Rating factors for variation in thermal resistivity of soil (average values)

| Size of Cables mm² | Soil Thermal Resistivity ( °C.m/W) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0.8 | 0.9 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
| | Single Core Cables | | | | | | |
| Upto 150 | 1.10 | 1.07 | 1.04 | 0.94 | 0.86 | 0.80 | 0.76 |
| From 185 to 300 | 1.11 | 1.08 | 1.05 | 0.93 | 0.85 | 0.79 | 0.75 |
| From 400 to 1000 | 1.12 | 1.08 | 1.05 | 0.93 | 0.84 | 0.78 | 0.74 |
| | Multi Core Cables | | | | | | |
| Upto16 | 1.04 | 1.03 | 1.02 | 0.97 | 0.92 | 0.88 | 0.86 |
| From 25 to 150 | 1.06 | 1.04 | 1.03 | 0.95 | 0.90 | 0.85 | 0.81 |
| From 185 to 500 | 1.07 | 1.05 | 1.03 | 0.95 | 0.88 | 0.83 | 0.78 |

Table 11 : Rating factors of depth of laying (to center of duct or trefoil group of ducts)

| Depth of Laying (m) | Single Core | Multi Core |
|---|---|---|
| 0.50 | 1.00 | 1.00 |
| 0.60 | 0.98 | 0.99 |
| 0.80 | 0.95 | 0.98 |
| 1.00 | 0.93 | 0.96 |
| 1.25 | 0.91 | 0.95 |
| 1.50 | 0.89 | 0.94 |
| 1.75 | 0.88 | 0.94 |
| 2.00 | 0.87 | 0.93 |
| 2.50 | 0.86 | 0.92 |
| 3.00 or more | 0.85 | 0.91 |

Table 12 : Group rating factors for single core cables in trefoil Single way ducts, horizontal (average values)

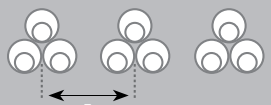
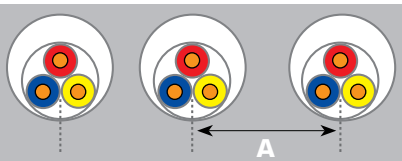
| Number of Circuits |  | | |
|---|---|---|---|
| | Cable to Cable Clearance A | | |
| | Touching | 0.45m | 0.60m |
| 2 | 0.87 | 0.91 | 0.93 |
| 3 | 0.78 | 0.84 | 0.87 |
| 4 | 0.74 | 0.81 | 0.85 |
| 5 | 0.70 | 0.79 | 0.83 |
| 6 | 0.69 | 0.78 | 0.82 |

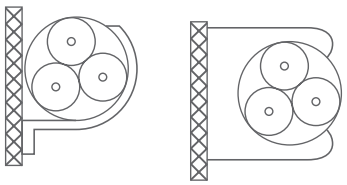
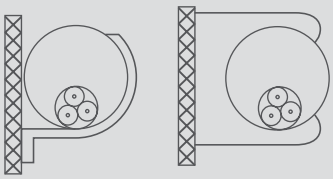
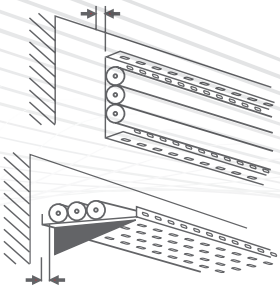
Table 13 : Group rating factors for multicore cables in single way ducts Horizontal formation (average values)

| Number of Cables in Group |  | | | |
|---|---|---|---|---|
| | Cable to Cable Clearance A | | | |
| | Nil Cables Touching | 0.30m | 0.45m | 0.60 |
| 2 | 0.90 | 0.93 | 0.95 | 0.96 |
| 3 | 0.83 | 0.88 | 0.91 | 0.93 |
| 4 | 0.79 | 0.85 | 0.89 | 0.92 |
| 5 | 0.75 | 0.83 | 0.88 | 0.91 |
| 6 | 0.73 | 0.82 | 0.87 | 0.90 |
| 2 | 0.88 | 0.91 | 0.93 | 0.94 |
| 3 | 0.80 | 0.85 | 0.88 | 0.90 |
| 4 | 0.76 | 0.81 | 0.85 | 0.88 |
| 5 | 0.72 | 0.78 | 0.83 | 0.86 |
| 6 | 0.69 | 0.76 | 0.81 | 0.85 |

## 4 INSTALLATION CONDITIONS FOR CABLES IN AIR

Cables installed in air could have many forms of installation methods as described in BS 7671 IEE wiring regulation 17th edition. Some of these methods are like C or B (for cables on Trefoil format laying as in table 14) or like E or F (For cables laid Flat vertically or horizontally as in table 14). It is assumed that the cables are not exposed to the direct sunlight and away from any external heat sources. The de-rating factors for cables laid in free air are as in tables 15 through 17. Additionally there are more de-rating factors tables for other methods of installation, the user has to review BS7671- IEE Wiring Regulations for Electrical Installations, 17th Edition for detailed information.

Table 14 : Installation methods for cables

| Installation Method | Description | Current Carrying Capacity Reference |
|---|---|---|
|  | Single Core or multi core cables: Fixed on (clipped direct) or spaced less than 0.3 times the cable diameter from a wall | C |
|  | Multi core cable in conduit, spaced less than 0.3 x conduit diameter | B |
|  | Cables run horizontally or vertically flat on perforated tray For multi core cable De = Cable diameter, And for 3 single core cables De = 3xcable diameter | E or F |

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**Important note for single core cables:**

The conductors of an A.C. circuit installed in a ferromagnetic enclosure shall be arranged so that all line conductors and the neutral conductor, if any, and the appropriate protective conductor are contained in the same enclosure.

When such conductors enter a ferrous enclosure, they shall be arranged such that the conductors are only collectively surrounded by ferrous material.

Table 15 : Rating factors for other ambient air temperatures

| Air Temparature | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C | 60°C |
|---|---|---|---|---|---|---|---|---|
| Cable Type | | | | | | | | |
| PVC Insulated | 1.18 | 1.15 | 1.08 | 1.00 | 0.90 | 0.82 | 0.70 | 0.59 |
| XLPE Insulated | 1.12 | 1.10 | 1.055 | 1.00 | 0.96 | 0.90 | 0.835 | 0.78 |

Table 16 : Rating factors of one or more circuits of single core cables laid in free air

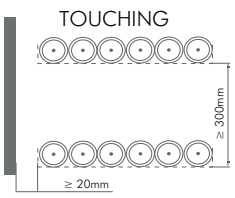
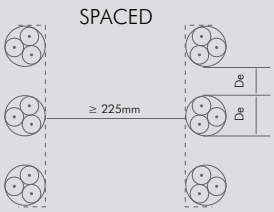
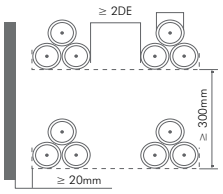
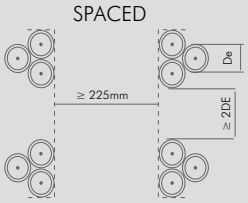
| Number of Trays | Number of three phases circuits | | | Installation form | Type |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | | |
| 1 | 0.98 | 0.91 | 0.87 |  | Three cables in horizontal formation |
| 2 | 0.96 | 0.87 | 0.81 | | |
| 3 | 0.95 | 0.85 | 0.78 | | |
| 1 | 0.96 | 0.86 | - |  | Three cables in vertical formation |
| 2 | 0.95 | 0.84 | - | | |
| 1 | 1.00 | 0.98 | 0.96 |  | Three cables in trefoil formation |
| 2 | 0.97 | 0.93 | 0.89 | | |
| 3 | 0.96 | 0.92 | 0.86 | | |
| 1 | 1.00 | 0.91 | 0.89 |  | |
| 2 | 1.00 | 0.90 | 0.86 | | |

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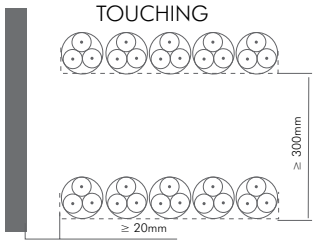
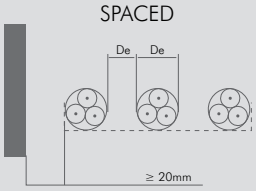
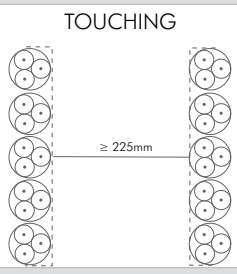
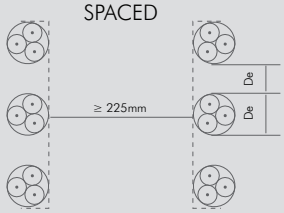
Table 17 : Rating factors for groups of more than one multi core cable laid in free air

| Number of Trays | Number of Cables | | | Installation form | Type |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | | |
| 1 | 1.00 | 0.88 | 0.82 |  | Cables in horizontal formation |
| 2 | 1.00 | 0.87 | 0.80 | | |
| 3 | 1.00 | 0.86 | 0.79 | | |
| 1 | 1.00 | 1.00 | 0.98 |  | |
| 2 | 1.00 | 0.99 | 0.96 | | |
| 3 | 1.00 | 0.98 | 0.95 | | |
| 1 | 1.00 | 0.88 | 0.82 |  | Cables in vertical formation |
| 2 | 1.00 | 0.88 | 0.81 | | |
| 1 | 1.00 | 0.91 | 0.89 |  | |
| 2 | 1.00 | 0.91 | 0.88 | | |

## 5 CURRENT CARRYING CAPACITY

Table 18 : Single core cables with conductors PVC 70 °C insulated and PVC Sheathed. 0.6/1 KV

| Conductor | Conductor Resistance | | | Current Carrying Capacity | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | In Ground | | | In Air | | |
| Cross Sectional Area mm² | DC at 20°C Maximum ohm/km | AC at 70°C in Flat Formation Approx ohm/km | AC at 70°C in Trefoil Formation Approx ohm/km | Direct Laid (Flat) Approx Amps | Direct Laid (Trefoil) Approx Amps | In Duct Approx Amps | Free (Flat) Approx Amps | Free (Trefoil) Approx Amps | In Pipes Approx Amps |
| 1.5 | 12.1 | 14.5 | 14.5 | 25 | 24 | 18 | 20 | 18 | 15 |
| 2.5 | 7.41 | 8.87 | 8.87 | 33 | 31 | 24 | 27 | 23 | 19 |
| 4 | 4.61 | 5.52 | 5.52 | 42 | 41 | 31 | 36 | 31 | 25 |
| 6 | 3.08 | 3.69 | 3.69 | 53 | 51 | 39 | 46 | 40 | 32 |
| 10 | 1.83 | 2.19 | 2.19 | 70 | 68 | 52 | 62 | 54 | 43 |
| 16 | 1.15 | 1.38 | 1.38 | 91 | 87 | 67 | 83 | 71 | 56 |
| 25 | 0.727 | 0.870 | 0.870 | 116 | 112 | 87 | 109 | 94 | 73 |
| 35 | 0.524 | 0.627 | 0.627 | 140 | 134 | 104 | 135 | 116 | 89 |
| 50 | 0.387 | 0.463 | 0.464 | 166 | 158 | 125 | 164 | 141 | 107 |
| 70 | 0.268 | 0.321 | 0.322 | 204 | 194 | 154 | 208 | 179 | 134 |
| 95 | 0.193 | 0.232 | 0.232 | 245 | 233 | 186 | 259 | 222 | 163 |
| 120 | 0.153 | 0.184 | 0.185 | 279 | 264 | 212 | 301 | 258 | 188 |
| 150 | 0.124 | 0.150 | 0.151 | 313 | 296 | 238 | 345 | 296 | 213 |
| 185 | 0.0991 | 0.1200 | 0.1215 | 354 | 334 | 270 | 399 | 343 | 243 |
| 240 | 0.0754 | 0.0922 | 0.0941 | 412 | 385 | 313 | 476 | 407 | 285 |
| 300 | 0.0601 | 0.0743 | 0.0767 | 466 | 433 | 353 | 551 | 469 | 324 |
| 400 | 0.0470 | 0.0593 | 0.0623 | 531 | 488 | 399 | 642 | 542 | 369 |
| 500 | 0.0366 | 0.0476 | 0.0513 | 603 | 546 | 449 | 747 | 624 | 417 |
| 630 | 0.0283 | 0.0386 | 0.0431 | 686 | 609 | 501 | 875 | 717 | 470 |

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Table 19 : Three and four core cable with copper conductor, PVC 70°C insulated and PVC sheathed

| Conductor | Conductor Resistance | | In Ground | | | In Air | | |
|---|---|---|---|---|---|---|---|---|
| | | | Unarmoured | | Armoured | Unarmoured | | Armoured |
| Cross Sectional Area mm² | DC at 20°C Maximum ohm/km | AC at 70°C Approx ohm/km | Direct Laid Approx Amps | Laid in Duct Approx Amps | Direct Laid Approx Amps | Free Approx Amps | In pipes Method C Approx Amps | Free Approx Amps |
| 1.5 | 12.1 | 14.5 | 21 | 18 | - | 16 | 14 | - |
| 2.5 | 7.41 | 8.87 | 27 | 23 | - | 22 | 19 | - |
| 4 | 4.61 | 5.52 | 36 | 30 | 36 | 29 | 24 | 29 |
| 6 | 3.08 | 3.69 | 45 | 37 | 45 | 37 | 31 | 37 |
| 10 | 1.83 | 2.19 | 60 | 50 | 60 | 50 | 41 | 51 |
| 16 | 1.15 | 1.38 | 78 | 65 | 78 | 66 | 54 | 66 |
| 25 | 0.727 | 0.870 | 100 | 83 | 100 | 87 | 70 | 88 |
| 35 | 0.524 | 0.628 | 125 | 101 | 124 | 106 | 84 | 109 |
| 50 | 0.387 | 0.464 | 149 | 121 | 147 | 130 | 102 | 133 |
| 70 | 0.268 | 0.323 | 183 | 148 | 180 | 163 | 126 | 167 |
| 95 | 0.193 | 0.232 | 219 | 178 | 215 | 201 | 154 | 204 |
| 120 | 0.153 | 0.185 | 249 | 203 | 245 | 233 | 177 | 235 |
| 150 | 0.124 | 0.151 | 280 | 229 | 273 | 268 | 202 | 268 |
| 185 | 0.0991 | 0.121 | 315 | 259 | 306 | 308 | 230 | 305 |
| 240 | 0.0754 | 0.0939 | 364 | 301 | 349 | 364 | 269 | 355 |
| 300 | 0.0601 | 0.0764 | 409 | 339 | 387 | 417 | 306 | 401 |
| 400 | 0.0470 | 0.0619 | 465 | 386 | 428 | 485 | 352 | 454 |
| 500 | 0.0366 | 0.0507 | 520 | 441 | 468 | 554 | 406 | 506 |

Table 20 : Single core cables with copper conductor, XLPE insulated and PVC sheathed, 0.6/1 kv

| Conductor | Conductor Resistance | | | Current Carrying Capacity | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | In Ground | | | In Air | | |
| Cross Sectional Area mm² | DC at 20°C Maximum ohm/km | AC at 90°C in Flat Formation Approx ohm/km | AC at 90°C in Trefoil Formation Approx ohm/km | Direct Laid (Flat) Approx Amps | Direct Laid (Trefoil) Approx Amps | In Duct Approx Amps | Free (Flat) Approx Amps | Free (Trefoil) Approx Amps | In Pipes Approx Amps |
| 1.5 | 12.1 | 15.2 | 15.2 | 31 | 30 | 22 | 27 | 22 | 19 |
| 2.5 | 7.41 | 9.45 | 9.45 | 40 | 39 | 29 | 36 | 29 | 24 |
| 4 | 4.61 | 5.88 | 5.88 | 52 | 50 | 38 | 47 | 38 | 32 |
| 6 | 3.08 | 3.93 | 3.93 | 65 | 63 | 47 | 60 | 49 | 40 |
| 10 | 1.83 | 2.33 | 2.33 | 87 | 83 | 63 | 82 | 66 | 54 |
| 16 | 1.15 | 1.47 | 1.47 | 112 | 107 | 82 | 109 | 88 | 70 |
| 25 | 0.727 | 0.927 | 0.927 | 144 | 137 | 105 | 145 | 116 | 92 |
| 35 | 0.524 | 0.668 | 0.669 | 172 | 165 | 127 | 178 | 143 | 112 |
| 50 | 0.387 | 0.494 | 0.494 | 204 | 195 | 151 | 218 | 175 | 134 |
| 70 | 0.268 | 0.342 | 0.343 | 251 | 238 | 187 | 277 | 222 | 168 |
| 95 | 0.193 | 0.247 | 0.248 | 301 | 286 | 225 | 344 | 274 | 205 |
| 120 | 0.153 | 0.196 | 0.197 | 345 | 327 | 258 | 409 | 326 | 237 |
| 150 | 0.124 | 0.159 | 0.16 | 385 | 363 | 290 | 461 | 367 | 269 |
| 185 | 0.0991 | 0.128 | 0.129 | 436 | 410 | 330 | 534 | 425 | 308 |
| 240 | 0.0754 | 0.098 | 0.100 | 507 | 474 | 382 | 638 | 505 | 361 |
| 300 | 0.0601 | 0.079 | 0.0815 | 573 | 532 | 431 | 740 | 583 | 411 |
| 400 | 0.0470 | 0.0629 | 0.0661 | 645 | 600 | 489 | 865 | 676 | 469 |
| 500 | 0.0366 | 0.0504 | 0.0543 | 744 | 673 | 550 | 1009 | 779 | 533 |
| 630 | 0.0283 | 0.0407 | 0.0453 | 847 | 752 | 615 | 1184 | 900 | 603 |

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Table 21 : Three and four core cable with copper conductor, XLPE insulated and PVC sheathed, 0.6/1 kv

| Conductor | Conductor Resistance | | In Ground | | | In Air | | |
|---|---|---|---|---|---|---|---|---|
| Cross Sectional Area | DC at 20°C | AC at 90°C | Unarmoured | | Armoured | Unarmoured | | Armoured |
| | | | Direct Laid | Laid in Duct | Direct Laid | Free | In pipes | Free |
| $mm^2$ | Maximum ohm/km | Approx ohm/km | Approx Amps | Approx Amps | Approx Amps | Approx Amps | Approx Amps | Approx Amps |
| 1.5 | 12.1 | 15.4 | 27 | 22 | - | 22 | 18 | - |
| 2.5 | 7.41 | 9.45 | 35 | 29 | - | 29 | 24 | - |
| 4 | 4.61 | 5.88 | 45 | 37 | 46 | 38 | 31 | 39 |
| 6 | 3.08 | 3.93 | 56 | 46 | 57 | 48 | 39 | 50 |
| 10 | 1.83 | 2.33 | 76 | 62 | 76 | 67 | 52 | 67 |
| 16 | 1.15 | 1.47 | 98 | 80 | 98 | 88 | 68 | 89 |
| 25 | 0.727 | 0.927 | 128 | 104 | 128 | 118 | 90 | 120 |
| 35 | 0.524 | 0.669 | 157 | 125 | 158 | 142 | 107 | 149 |
| 50 | 0.387 | 0.494 | 187 | 149 | 188 | 175 | 129 | 182 |
| 70 | 0.268 | 0.343 | 229 | 183 | 229 | 220 | 161 | 229 |
| 95 | 0.193 | 0.248 | 276 | 220 | 274 | 272 | 196 | 280 |
| 120 | 0.153 | 0.197 | 313 | 251 | 310 | 316 | 226 | 322 |
| 150 | 0.124 | 0.160 | 350 | 283 | 346 | 363 | 258 | 368 |
| 185 | 0.0991 | 0.129 | 395 | 321 | 387 | 418 | 295 | 420 |
| 240 | 0.0754 | 0.0998 | 458 | 372 | 444 | 496 | 346 | 491 |
| 300 | 0.0601 | 0.0812 | 516 | 420 | 494 | 571 | 394 | 557 |
| 400 | 0.0470 | 0.0656 | 584 | 478 | 549 | 665 | 454 | 635 |
| 500 | 0.0366 | 0.0536 | 655 | 538 | 597 | 760 | 515 | 705 |

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Table 22 : Single core cables with aluminum conductor, XLPE insulated and PVC sheathed, 0.6/1 kv

| Conductor | Conductor Resistance | | | Current Carrying Capacity | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | In Ground | | | In Air | | |
| Cross Sectional Area mm² | DC at 20°C Maximum ohm/km | AC at 90°C in Flat Formation Approx ohm/km | AC at 90°C in Trefoil Formation Approx ohm/km | Direct Laid (Flat) Approx Amps | Direct Laid (Trefoil) Approx Amps | In Duct Approx Amps | Free (Flat) Approx Amps | Free (Trefoil) Approx Amps | In Pipes Approx Amps |
| 16 | 1.91 | 2.45 | 2.45 | 87 | 83 | 63 | 85 | 68 | 54 |
| 25 | 1.20 | 1.54 | 1.54 | 111 | 107 | 82 | 112 | 90 | 71 |
| 35 | 0.868 | 1.113 | 1.113 | 133 | 128 | 98 | 138 | 111 | 87 |
| 50 | 0.641 | 0.822 | 0.822 | 158 | 151 | 117 | 169 | 135 | 104 |
| 70 | 0.443 | 0.568 | 0.569 | 194 | 185 | 145 | 215 | 172 | 131 |
| 95 | 0.320 | 0.411 | 0.411 | 233 | 222 | 175 | 266 | 213 | 159 |
| 120 | 0.253 | 0.325 | 0.325 | 266 | 252 | 201 | 312 | 249 | 184 |
| 150 | 0.206 | 0.265 | 0.265 | 298 | 282 | 226 | 357 | 285 | 209 |
| 185 | 0.164 | 0.211 | 0.212 | 339 | 320 | 257 | 416 | 332 | 241 |
| 240 | 0.125 | 0.161 | 0.163 | 395 | 371 | 300 | 497 | 396 | 283 |
| 300 | 0.100 | 0.130 | 0.131 | 448 | 419 | 340 | 578 | 459 | 324 |
| 400 | 0.0778 | 0.1016 | 0.1037 | 514 | 479 | 390 | 681 | 540 | 375 |
| 500 | 0.0605 | 0.0799 | 0.0826 | 590 | 546 | 446 | 801 | 631 | 432 |
| 630 | 0.0469 | 0.0632 | 0.0666 | 681 | 621 | 509 | 954 | 746 | 498 |

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Table 23 : Three and four core cable with aluminum conductor, XLPE insulated and PVC sheathed, 0.6/1 kv

| Conductor | Conductor Resistance | | In Ground | | | In Air | | |
|---|---|---|---|---|---|---|---|---|
| | | | Unarmoured | | Armoured | Unarmoured | | Armoured |
| Cross Sectional Area mm² | DC at 20°C Maximum ohm/km | AC at 90°C Approx ohm/km | Direct Laid (Flat) Approx Amps | Laid in Duct (Trefoil) Approx Amps | Direct Laid Approx Amps | Free Approx Amps | In pipes Approx Amps | Free Approx Amps |
| 16 | 1.91 | 2.45 | 76 | 62 | 76 | 68 | 53 | 69 |
| 25 | 1.20 | 1.54 | 99 | 81 | 99 | 92 | 70 | 93 |
| 35 | 0.868 | 1.113 | 121 | 96 | 122 | 110 | 83 | 115 |
| 50 | 0.641 | 0.822 | 145 | 116 | 146 | 136 | 100 | 141 |
| 70 | 0.443 | 0.569 | 178 | 142 | 178 | 171 | 125 | 178 |
| 95 | 0.320 | 0.411 | 214 | 171 | 213 | 211 | 152 | 218 |
| 120 | 0.253 | 0.325 | 243 | 195 | 242 | 246 | 176 | 252 |
| 150 | 0.206 | 0.265 | 272 | 220 | 270 | 282 | 200 | 288 |
| 185 | 0.164 | 0.212 | 309 | 250 | 305 | 326 | 230 | 331 |
| 240 | 0.125 | 0.163 | 359 | 282 | 352 | 388 | 271 | 390 |
| 300 | 0.100 | 0.131 | 406 | 331 | 395 | 449 | 310 | 445 |
| 400 | 0.0778 | 0.1034 | 466 | 381 | 447 | 530 | 362 | 516 |
| 500 | 0.0605 | 0.0822 | 529 | 434 | 497 | 614 | 416 | 586 |

## VOLTAGE DROP

According to BS 7671 IEE wiring regulation 17th edition, under normal service conditions the voltage at the terminals of any fixed current-using equipment shall be greater than the lower limit corresponding to the product standard relevant to the equipment and where fixed current-using equipment is not the subject of a product standard the voltage at the terminals shall be such as not to impair the safe functioning of the equipment.
This infers the importance of the voltage drop calculation for the low voltage cables which is covered by this catalogue.

Table 24 : Approximate voltage drop at 60 HZ for single core stranded plain copper/aluminum conductors, PVC insulated, PVC sheathed

| Nominal Area of Conductor | Copper Conductor mV/Amp/m | | Aluminum Conductor mV/Amp/m | |
|---|---|---|---|---|
| | PVC Rated 90°C | PVC Rated 90°C | PVC Rated 90°C | PVC Rated 90°C |
| $mm^2$ | Flat | Trefoil | Flat | Trefoil |
| 1.5 | 22.6 | 22.5 | - | - |
| 2.5 | 13.9 | 13.8 | - | - |
| 4 | 8.7 | 8.7 | - | - |
| 6 | 5.80 | 5.8 | - | - |
| 10 | 3.50 | 3.50 | - | - |
| 16 | 2.30 | 2.20 | 3.70 | 3.70 |
| 25 | 1.50 | 1.50 | 2.40 | 2.30 |
| 35 | 1.10 | 1.10 | 1.70 | 1.70 |
| 50 | 0.83 | 0.82 | 1.30 | 1.30 |
| 70 | 0.61 | 0.60 | 0.94 | 0.92 |
| 95 | 0.47 | 0.45 | 0.71 | 0.69 |
| 120 | 0.39 | 0.38 | 0.58 | 0.56 |
| 150 | 0.34 | 0.33 | 0.49 | 0.48 |
| 185 | 0.29 | 0.28 | 0.41 | 0.40 |
| 240 | 0.25 | 0.24 | 0.34 | 0.33 |
| 300 | 0.22 | 0.21 | 0.29 | 0.28 |
| 400 | 0.20 | 0.18 | 0.25 | 0.24 |
| 500 | 0.18 | 0.17 | 0.22 | 0.21 |
| 630 | 0.16 | 0.15 | 0.19 | 0.18 |

# TECHNICAL INFORMATION
## ELECTRICAL CHARACTERISTICS
## VOLTAGE DROP

Table 25 : Approximate voltage drop at 60 HZ for three and four core stranded plain copper/aluminum conductors, PVC insulated, PVC sheathed

| Nominal Area of Conductor<br><br>$mm^2$ | Copper Conductor mV/Amp/m<br><br>PVC Rated 90°C | Aluminum Conductor mV/Amp/m<br><br>PVC Rated 90°C |
|---|---|---|
| 1.5 | 22.6 | - |
| 2.5 | 13.8 | - |
| 4 | 8.6 | - |
| 6 | 5.80 | - |
| 10 | 3.50 | - |
| 16 | 2.20 | 3.60 |
| 25 | 1.40 | 2.30 |
| 35 | 1.10 | 1.70 |
| 50 | 0.80 | 1.30 |
| 70 | 0.58 | 0.91 |
| 95 | 0.44 | 0.68 |
| 120 | 0.37 | 0.55 |
| 150 | 0.32 | 0.47 |
| 185 | 0.27 | 0.39 |
| 240 | 0.23 | 0.32 |
| 300 | 0.20 | 0.27 |
| 400 | 0.18 | 0.23 |
| 500 | 0.15 | 0.20 |

Table 26 : Approximate voltage drop at 60 HZ for single core stranded plain copper/aluminum conductors, XLPE insulated, PVC sheathed

| Nominal Area of Conductor | Copper Conductor mV/Amp/m | | Aluminum Conductor mV/Amp/m | |
|---|---|---|---|---|
| | XLPE Rated 90°C | XLPE Rated 90°C | XLPE Rated 90°C | XLPE Rated 90°C |
| $mm^2$ | Flat | Trefoil | Flat | Trefoil |
| 1.5 | 22.9 | 22.8 | - | - |
| 2.5 | 14.1 | 14.1 | - | - |
| 4 | 8.8 | 8.7 | - | - |
| 6 | 5.90 | 5.90 | - | - |
| 10 | 3.60 | 3.60 | - | - |
| 16 | 2.30 | 2.30 | 3.70 | 3.70 |
| 25 | 1.50 | 1.50 | 2.40 | 2.40 |
| 35 | 1.10 | 1.10 | 1.80 | 1.70 |
| 50 | 0.84 | 0.83 | 1.30 | 1.30 |
| 70 | 0.61 | 0.60 | 0.95 | 0.93 |
| 95 | 0.47 | 0.46 | 0.71 | 0.70 |
| 120 | 0.39 | 0.38 | 0.58 | 0.57 |
| 150 | 0.34 | 0.33 | 0.50 | 0.48 |
| 185 | 0.29 | 0.28 | 0.42 | 0.40 |
| 240 | 0.25 | 0.24 | 0.34 | 0.33 |
| 300 | 0.22 | 0.21 | 0.29 | 0.28 |
| 400 | 0.19 | 0.18 | 0.25 | 0.24 |
| 500 | 0.17 | 0.16 | 0.22 | 0.21 |
| 630 | 0.16 | 0.15 | 0.19 | 0.18 |

# TECHNICAL INFORMATION
## ELECTRICAL CHARACTERISTICS
## VOLTAGE DROP

Table 27 : Approximate voltage drop at 60 HZ for three and four core stranded plain copper/aluminum conductors, XLPE insulated, PVC sheathed

| Nominal Area of Conductor<br>mm² | Copper Conductor mV/Amp/m<br>XLPE Rated 90°C | Aluminum Conductor mV/Amp/m<br>XLPE Rated 90°C |
|---|---|---|
| 1.5 | 22.8 | - |
| 2.5 | 14 | - |
| 4 | 8.7 | - |
| 6 | 5.90 | - |
| 10 | 3.50 | - |
| 16 | 2.20 | 3.70 |
| 25 | 1.50 | 2.40 |
| 35 | 1.10 | 1.70 |
| 50 | 0.81 | 1.30 |
| 70 | 0.58 | 0.92 |
| 95 | 0.44 | 0.68 |
| 120 | 0.37 | 0.56 |
| 150 | 0.31 | 0.47 |
| 185 | 0.27 | 0.39 |
| 240 | 0.23 | 0.32 |
| 300 | 0.20 | 0.27 |
| 400 | 0.18 | 0.23 |
| 500 | 0.15 | 0.20 |

## SHORT CIRCUIT RATING - CONDUCTORS

Short circuit characteristics is based on IEC 60724 , for an insulated conductor with operating temperature of 70 °C for PVC and 90 °C for XLPE cable , the maximum temperature during the fault is 140 °C or 160 °C for PVC insulated cables , small sizes and big sizes respectively , and up to 250 °C for XLPE insulated cables

Table 28 Max. Short Circuit temperature for cable components

| Material | Item | Temp. °C |
|---|---|---|
| Insulation | PVC insulation | 140 For C.S.A. <300 mm2 |
| | | 160 For C.S.A. ≥300 mm2 |
| | XLPE insulation | 250 |
| Sheathing | PVC sheathing | 200 |
| | LDPE sheathing | 150 |
| | HDPE sheathing | 180 |

Tables 29 and 30 represent the short circuit current rating at duration of fault time equal to 1 second. For any other values Graphs 1,2,3 and 4 will be used

Table 29 : PVC (based on 70 °C type TI-1 or 90 °C type TI-3) cables copper and aluminum conductor

| Conductor Size | Short Circuit Ratings for 1 second in k Amp | |
|---|---|---|
| | Copper Conductor | Aluminum Conductor |
| 10 | 1.20 | 0.86 |
| 16 | 1.80 | 1.10 |
| 25 | 2.85 | 1.80 |
| 35 | 3.55 | 2.55 |
| 50 | 5.00 | 3.40 |
| 70 | 6.90 | 4.90 |
| 95 | 10.9 | 6.80 |
| 120 | 11.80 | 8.50 |
| 150 | 15.30 | 11.00 |
| 185 | 18.70 | 13.00 |
| 240 | 23.60 | 16.50 |
| 300 | 30.10 | 22.50 |
| 400 | 41.20 | 29.50 |
| 500 | 51.50 | 36.00 |
| 630 | 64.90 | 45.50 |
| 800 | 82.40 | 62.00 |
| 1000 | 103.0 | 78.00 |

# TECHNICAL INFORMATION
## ELECTRICAL CHARACTERISTICS
## SHORT CIRCUIT RATING - CONDUCTORS

Table 30 : XLPE cables copper and aluminum conductor

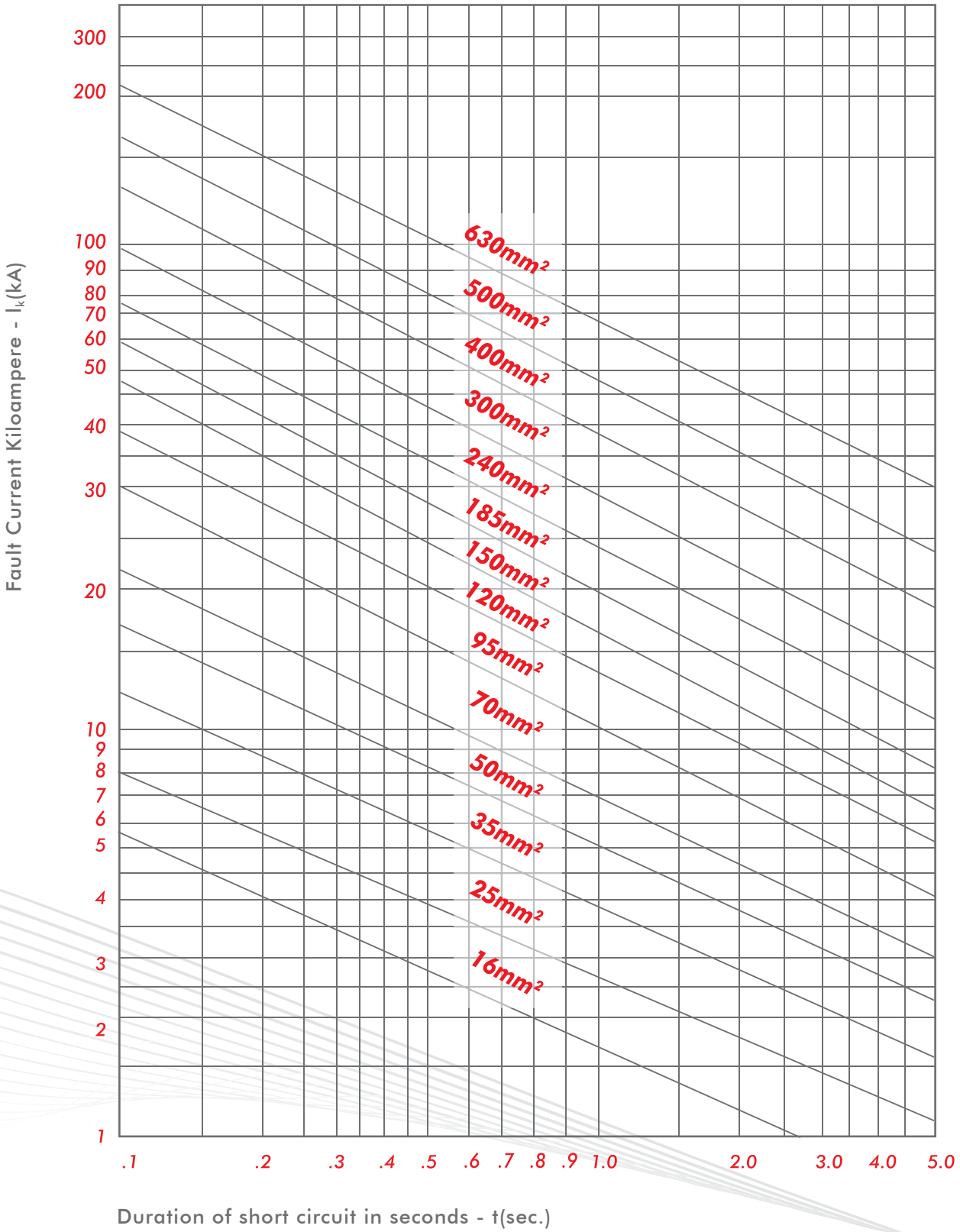
| Conductor Size | Short Circuit Ratings for 1 second in k Amp | |
|---|---|---|
| | Copper Conductor | Aluminum Conductor |
| 10 | 1.43 | 0.94 |
| 16 | 2.29 | 1.50 |
| 25 | 3.58 | 2.35 |
| 35 | 5.00 | 3.29 |
| 50 | 7.15 | 4.70 |
| 70 | 10.01 | 6.58 |
| 95 | 13.59 | 8.93 |
| 120 | 17.16 | 11.28 |
| 150 | 21.45 | 14.10 |
| 185 | 26.46 | 17.39 |
| 240 | 34.32 | 22.56 |
| 300 | 42.90 | 28.20 |
| 400 | 57.20 | 37.60 |
| 500 | 71.5 | 46.09 |
| 630 | 90.09 | 59.22 |
| 800 | 114.40 | 75.20 |
| 1000 | 143.00 | 94.00 |

# TECHNICAL INFORMATION

## ELECTRICAL CHARACTERISTICS

## SHORT CIRCUIT RATING - CONDUCTORS

Graph 1 : PVC (90 °C type) insulated cables short circuit (Copper Conductor)

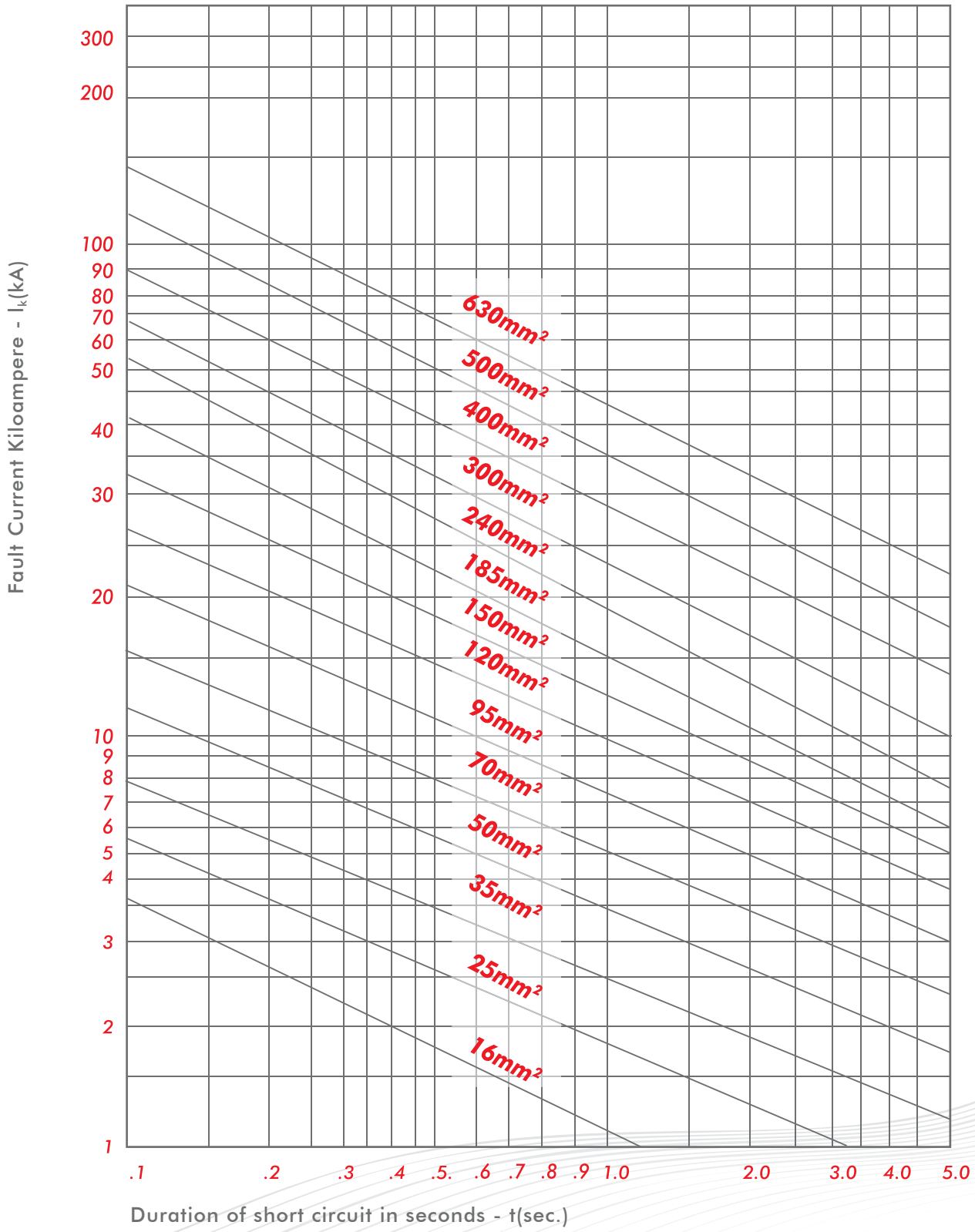


# TECHNICAL INFORMATION

## ELECTRICAL CHARACTERISTICS

## SHORT CIRCUIT RATING - CONDUCTORS

Graph 2 : PVC (90 °C type) insulated cables short circuit (Aluminum Conductor)

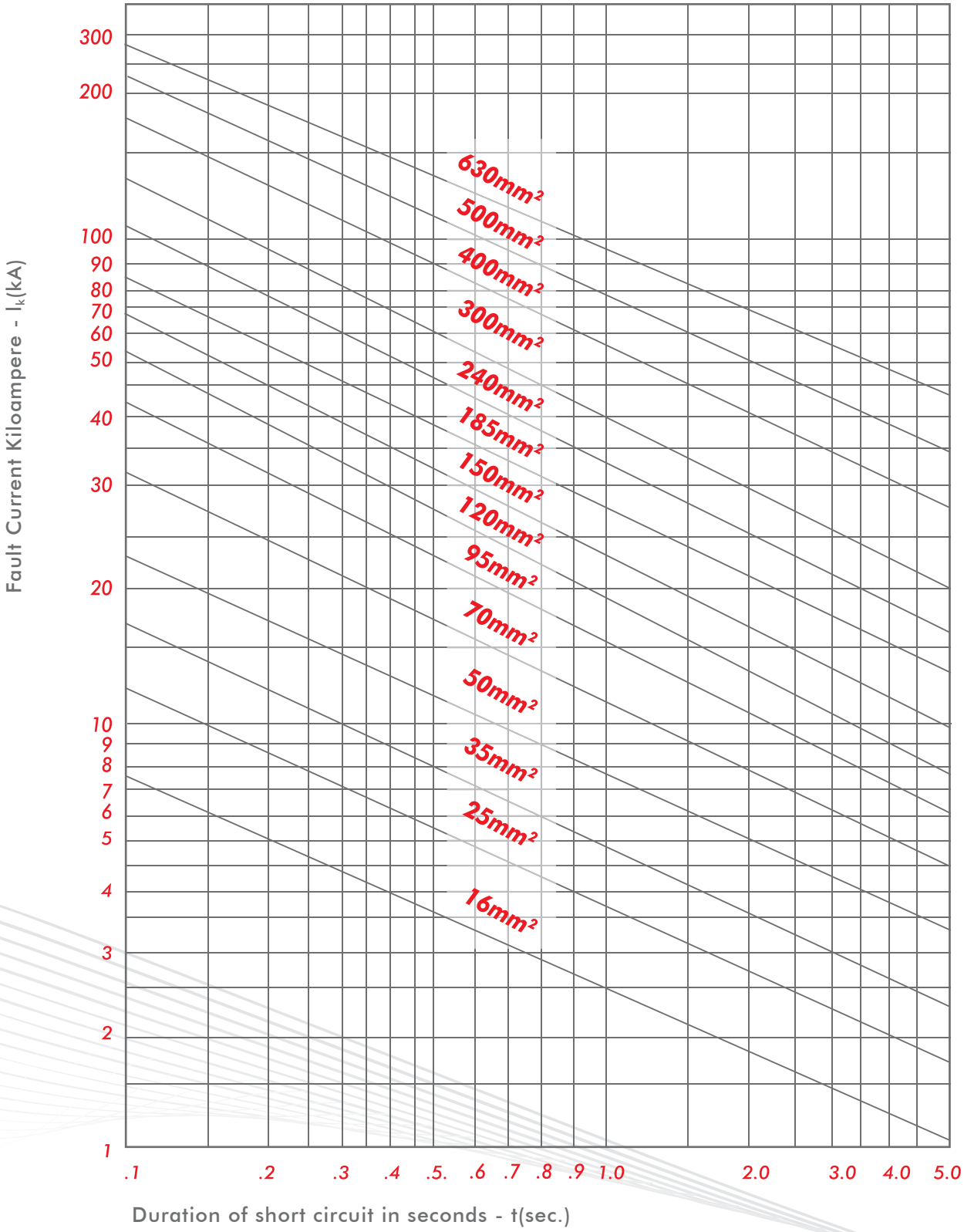


# TECHNICAL INFORMATION

## ELECTRICAL CHARACTERISTICS

## SHORT CIRCUIT RATING - CONDUCTORS

Graph 3 : XLPE Insulated cables short cicuit (Copper Conductor)

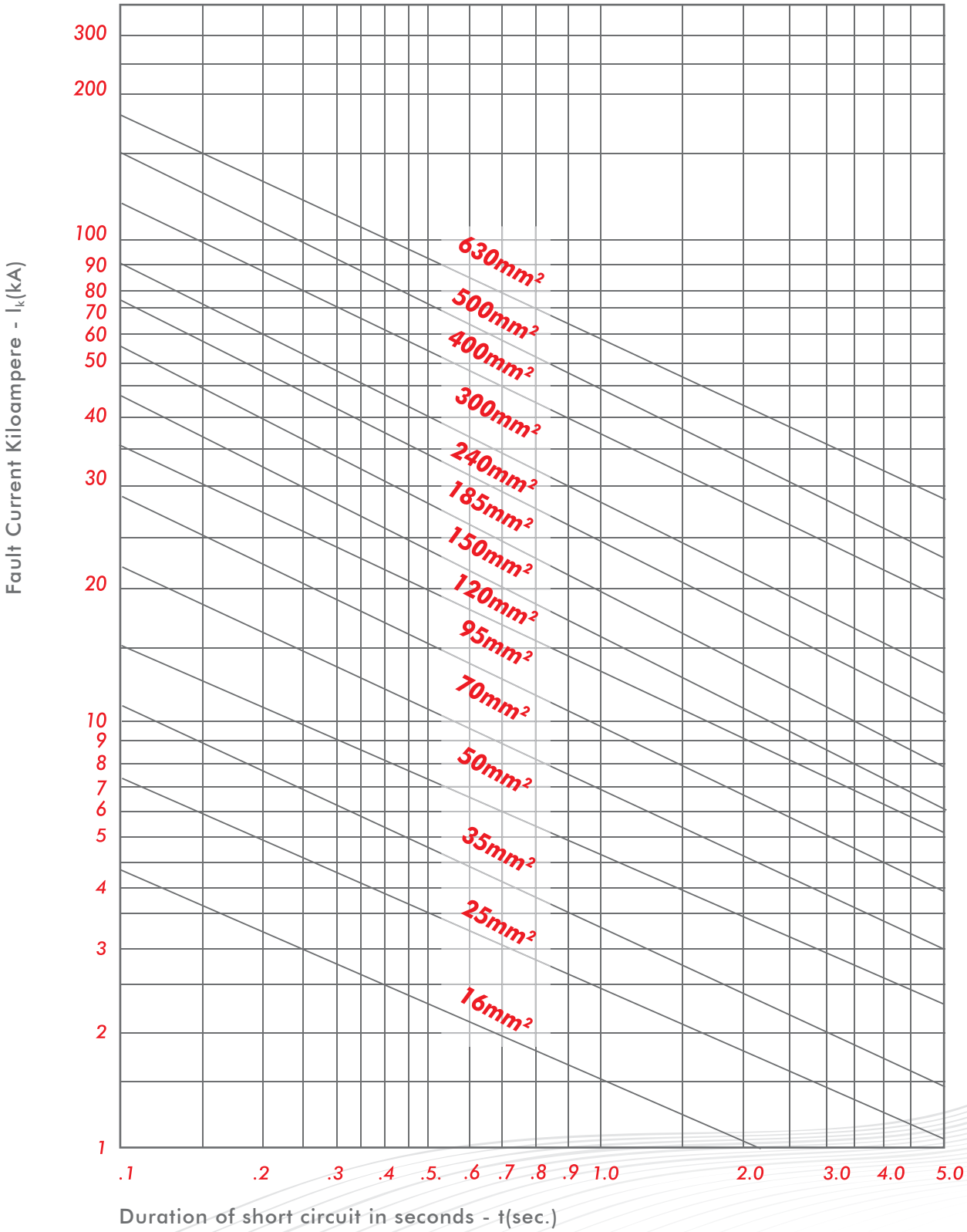


# TECHNICAL INFORMATION

## ELECTRICAL CHARACTERISTICS

## SHORT CIRCUIT RATING - CONDUCTORS

Graph 4 : XLPE Insulated cables short cicuit (Aluminum Conductor)

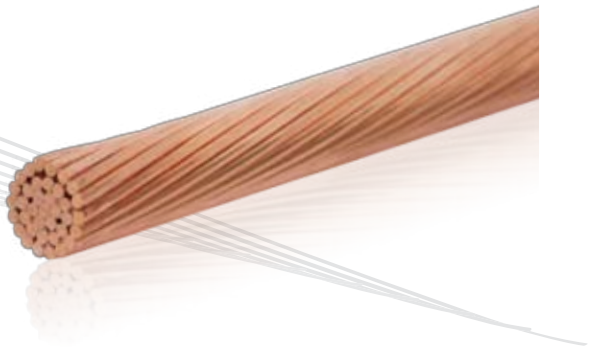


# BARE SOFT DRAWN STRANDED CONDUCTOR

## COPPER CONDUCTOR

## CU


| | Conductor | | | | Packaging | |
|---|---|---|---|---|---|---|
| Item Numbers | Cross Sectional Area Nominal $mm^2$ | Number and Nominal Diameter of Wires mm | Overall Diameter Approx mm | Max. DC Resistance at 20°C ohm/km | Net Weight Approx kg/km | Standard Package m+/-5% |
| 14110020 | 2.5 rm | 7x0.66 | 2.0 | 7.4100 | 21 | 2000 |
| 14110030 | 4 rm | 7x0.84 | 2.5 | 4.6100 | 34 | 2000 |
| 14110040 | 6 rm | 7x1.02 | 3.1 | 3.0800 | 51 | 2000 |
| 14110050 | 10 rm | 7x1.33 | 4.0 | 1.8300 | 86 | 2000 |
| 14110060 | 16 rm | 7x1.68 | 5.1 | 1.1500 | 137 | 2000 |
| 14110070 | 25 rm | 7x2.11 | 6.4 | 0.7270 | 217 | 2000 |
| 14110080 | 35 rm | 7x2.48 | 7.5 | 0.5240 | 312 | 2000 |
| 14110090 | 50 rm | 19x1.75 | 8.8 | 0.3870 | 408 | 1000 |
| 14110100 | 70 rm | 19x2.11 | 10.6 | 0.2680 | 589 | 1000 |
| 14110110 | 95 rm | 19x2.48 | 12.4 | 0.1930 | 818 | 1000 |
| 14110120 | 120 rm | 37x2.00 | 14.0 | 0.1530 | 1032 | 1000 |
| 14110130 | 150 rm | 37x2.22 | 15.5 | 0.1240 | 1273 | 1000 |
| 14110140 | 185 rm | 37x2.48 | 17.4 | 0.0991 | 1593 | 1000 |
| 14110150 | 240 rm | 61x2.22 | 20.3 | 0.0754 | 2094 | 1000 |
| 14110160 | 300 rm | 61x2.48 | 22.9 | 0.0601 | 2650 | 1000 |
| 14110170 | 400 rm | 61x2.81 | 25.7 | 0.0470 | 3400 | 500 |
| 14110180 | 500 rm | 61x3.18 | 28.8 | 0.0366 | 4314 | 500 |
| 14110190 | 630 rmc | 61x3.75 | 30.5 | 0.0283 | 5650 | 500 |



# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

## CU/PVC/PVC


## Single core

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14010002 | 1.5 rm | 7 | 0.8 | 1.4 | 5.9 | 53 | 1000/2000 |
| 14010004 | 2.5 rm | 7 | 0.8 | 1.4 | 6.3 | 66 | 1000/2000 |
| 14010006 | 4 rm | 7 | 1.0 | 1.4 | 7.3 | 91 | 1000/2000 |
| 14010008 | 6 rm | 7 | 1.0 | 1.4 | 7.8 | 115 | 1000/2000 |
| 14010010 | 10 rm | 7 | 1.0 | 1.4 | 8.8 | 165 | 1000/2000 |
| 14010011 | 16 rm | 7 | 1.0 | 1.4 | 9.9 | 226 | 1000/2000 |
| 14010012 | 25 rm | 7 | 1.2 | 1.4 | 11.6 | 334 | 500/1000 |
| 14010013 | 35 rm | 7 | 1.2 | 1.4 | 12.7 | 443 | 500/1000 |
| 14010114 | 50 rm | 19 | 1.4 | 1.4 | 14.5 | 573 | 500/1000 |
| 14010015 | 70 rm | 19 | 1.4 | 1.4 | 16.2 | 776 | 500/1000 |
| 14010016 | 95 rm | 19 | 1.6 | 1.5 | 18.6 | 1051 | 1000 |
| 14010017 | 120 rm | 37 | 1.6 | 1.5 | 20.3 | 1298 | 1000 |
| 14010018 | 150 rm | 37 | 1.8 | 1.6 | 22.3 | 1582 | 1000 |
| 14010019 | 185 rm | 37 | 2.0 | 1.7 | 24.8 | 1993 | 1000 |
| 14010020 | 240 rm | 61 | 2.2 | 1.8 | 28.2 | 2580 | 1000 |
| 14010021 | 300 rm | 61 | 2.4 | 1.9 | 31.4 | 3240 | 1000 |
| 14010022 | 400 rm | 61 | 2.6 | 2.0 | 34.6 | 4097 | 500 |
| 14010023 | 500 rm | 61 | 2.8 | 2.1 | 38.3 | 5155 | 500 |
| 14010024 | 630 rmc | 61 | 2.8 | 2.2 | 40.5 | 6535 | 500 |

# PVC INSULATED PVC SHEATHED CABLES

COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

CU/PVC/PVC

## Two cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14010101 | 1.5rm | 7 | 0.8 | 1.8 | 11.1 | 181 | 1000 |
| 14010103 | 2.5rm | 7 | 0.8 | 1.8 | 11.9 | 219 | 1000 |
| 14010105 | 4rm | 7 | 1.0 | 1.8 | 13.9 | 306 | 1000 |
| 14010107 | 6rm | 7 | 1.0 | 1.8 | 14.9 | 374 | 1000 |
| 14010109 | 10rm | 7 | 1.0 | 1.8 | 16.9 | 521 | 1000 |
| 14010110 | 16rm | 7 | 1.0 | 1.8 | 19.1 | 703 | 1000 |
| 14010111 | 25rm | 7 | 1.2 | 1.8 | 22.5 | 1023 | 1000 |
| 14010112 | 35rm | 7 | 1.2 | 1.8 | 23.9 | 977 | 1000 |

# PVC INSULATED PVC SHEATHED CABLES

COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

CU/PVC/PVC

## Three cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14010201 | 1.5rm | 7 | 0.8 | 1.8 | 1.1 | 225 | 1000 |
| 14010203 | 2.5rm | 7 | 0.8 | 1.8 | 12.6 | 256 | 1000 |
| 14010205 | 4rm | 7 | 1.0 | 1.8 | 14.6 | 356 | 1000 |
| 14010207 | 6rm | 7 | 1.0 | 1.8 | 15.7 | 442 | 1000 |
| 14010209 | 10rm | 7 | 1.0 | 1.8 | 17.9 | 628 | 1000 |
| 14010210 | 16rm | 7 | 1.0 | 1.8 | 20.2 | 852 | 1000 |
| 14010211 | 25rm | 7 | 1.2 | 1.8 | 23.9 | 1256 | 1000 |
| 14010212 | 35rm | 7 | 1.2 | 1.8 | 25.5 | 1356 | 1000 |
| 14010213 | 50rm | 19 | 1.4 | 1.8 | 29.4 | 1768 | 1000 |
| 14010214 | 70rm | 19 | 1.4 | 1.9 | 33.2 | 2425 | 1000 |
| 14010215 | 95rm | 19 | 1.6 | 2.1 | 38.4 | 3293 | 1000 |
| 14010216 | 120rm | 37 | 1.6 | 2.2 | 42.3 | 4061 | 500 |
| 14010217 | 150rm | 37 | 1.8 | 2.3 | 46.4 | 4942 | 500 |
| 14010218 | 185rm | 37 | 2.0 | 2.5 | 51.8 | 6197 | 250/500 |
| 14010219 | 240rm | 61 | 2.2 | 2.7 | 59.1 | 8020 | 250/500 |
| 14010220 | 300rm | 61 | 2.4 | 2.9 | 65.8 | 10011 | 250 |
| 14010221 | 400rm | 61 | 2.6 | 3.1 | 72.8 | 12650 | 250 |
| 14010222 | 500rm | 61 | 2.8 | 3.4 | 80.5 | 16250 | 250 |

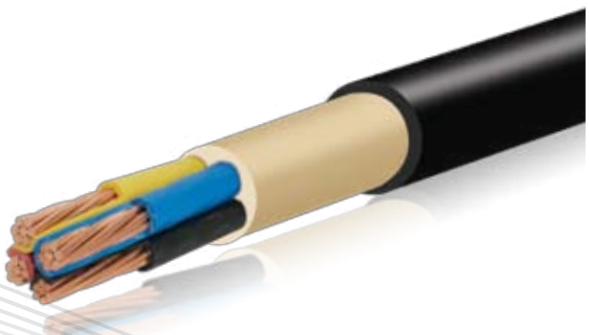
# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

## CU/PVC/PVC


### Four cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal mm² | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14010305 | 4rm | 7 | 1.0 | 1.8 | 15.8 | 422 | 1000 |
| 14010307 | 6rm | 7 | 1.0 | 1.8 | 17.0 | 529 | 1000 |
| 14010309 | 10rm | 7 | 1.0 | 1.8 | 19.4 | 758 | 1000 |
| 14010310 | 16rm | 7 | 1.0 | 1.8 | 22.0 | 1039 | 1000 |
| 14010311 | 25rm | 7 | 1.2 | 1.8 | 26.1 | 1541 | 1000 |
| 14010312 | 35sm | 7 | 1.2 | 1.8 | 24.3 | 1687 | 1000 |
| 14010313 | 50sm | 19 | 1.4 | 1.9 | 27.9 | 2175 | 1000 |
| 14010314 | 70sm | 19 | 1.4 | 2.0 | 31.4 | 3022 | 1000 |
| 14010315 | 95sm | 19 | 1.6 | 2.2 | 36.4 | 4155 | 500 |
| 14010316 | 120sm | 37 | 1.6 | 2.3 | 39.6 | 5177 | 500 |
| 14010317 | 150sm | 37 | 1.8 | 2.5 | 43.9 | 6391 | 250 |
| 14010318 | 185sm | 37 | 2.0 | 2.6 | 40.6 | 7843 | 250 |
| 14010319 | 240sm | 61 | 2.2 | 2.9 | 55.1 | 10323 | 250 |
| 14010320 | 300sm | 61 | 2.4 | 3.1 | 62.3 | 12891 | 250 |
| 14010321 | 400sm | 61 | 2.6 | 3.4 | 68.8 | 16507 | 250 |
| 14010322 | 500sm | 61 | 2.8 | 3.6 | 76.2 | 20680 | 250 |



# PVC INSULATED PVC SHEATHED CABLES

COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

CU/PVC/PVC

## Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | |
| 14010350 | 10rm | 6rm | 7 | 7 | 1.0 | 1.0 | 1.8 | 18.8 | 700 | 500/1000 |
| 14010351 | 16rm | 10rm | 7 | 7 | 1.0 | 1.0 | 1.8 | 21.4 | 970 | 500/1000 |
| 14010352 | 25rm | 16rm | 7 | 7 | 1.2 | 1.0 | 1.8 | 25.1 | 1413 | 1000 |
| 14010353 | 35sm | 16rm | 7 | 7 | 1.2 | 1.0 | 1.8 | 24.3 | 1491 | 1000 |
| 14010354 | 50sm | 25rm | 19 | 7 | 1.4 | 1.2 | 1.9 | 27.9 | 1975 | 1000 |
| 14010355 | 70sm | 35rm | 19 | 7 | 1.4 | 1.2 | 2.0 | 31.4 | 2718 | 1000 |
| 14010356 | 95sm | 50rm | 19 | 19 | 1.6 | 1.4 | 2.2 | 36.2 | 3691 | 500 |
| 14010357 | 120sm | 70rm | 37 | 19 | 1.6 | 1.4 | 2.3 | 39.4 | 4676 | 500 |
| 14010358 | 150sm | 70rm | 37 | 19 | 1.8 | 1.4 | 2.4 | 43.7 | 5617 | 250 |
| 14010359 | 185sm | 95rm | 37 | 19 | 2.0 | 1.6 | 2.6 | 48.4 | 6983 | 250 |
| 14010360 | 240sm | 120rm | 61 | 37 | 2.2 | 1.6 | 2.8 | 54.7 | 9088 | 250 |
| 14010361 | 300sm | 150rm | 61 | 37 | 2.4 | 1.8 | 3.0 | 61.9 | 11298 | 250 |
| 14010362 | 400sm | 185rm | 61 | 37 | 2.6 | 2.0 | 3.2 | 68.4 | 14605 | 250 |
| 14010363 | 500sm | 240rm | 61 | 61 | 2.8 | 2.2 | 3.5 | 75.8 | 18012 | 250 |

# PVC INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

## AL/PVC/PVC


## Single core

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14210001 | 16rmc | 7 | 1.0 | 1.4 | 9.7 | 132 | 1000/2000 |
| 14210002 | 25rmc | 7 | 1.2 | 1.4 | 11.3 | 181 | 500/1000 |
| 14210003 | 35rmc | 7 | 1.2 | 1.4 | 12.3 | 219 | 500/1000 |
| 14210004 | 50rmc | 7 | 1.4 | 1.4 | 14.2 | 302 | 500/1000 |
| 14210005 | 70rmc | 7 | 1.4 | 1.4 | 15.9 | 364 | 500/1000 |
| 14210006 | 95rmc | 19 | 1.6 | 1.5 | 18.3 | 488 | 500/1000 |
| 14210007 | 120rmc | 19 | 1.6 | 1.5 | 19.5 | 574 | 500/1000 |
| 14210008 | 150rmc | 19 | 1.8 | 1.6 | 22.0 | 709 | 500/1000 |
| 14210009 | 185rmc | 37 | 2.0 | 1.7 | 24.6 | 874 | 1000 |
| 14210010 | 240rmc | 37 | 2.2 | 1.8 | 27.4 | 1101 | 1000 |
| 14210011 | 300rmc | 37 | 2.4 | 1.9 | 30.5 | 1354 | 1000 |
| 14210012 | 400rmc | 61 | 2.6 | 2.0 | 34.0 | 1696 | 1000 |
| 14210013 | 500rmc | 61 | 2.8 | 2.1 | 37.6 | 2124 | 1000 |
| 14210014 | 630rmc | 61 | 2.8 | 2.2 | 41.6 | 2587 | 1000 |

# PVC INSULATED PVC SHEATHED CABLES

ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

AL/PVC/PVC

## Two cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14210100 | 16rmc | 7 | 1.0 | 1.8 | 18.7 | 500 | 1000 |
| 14210101 | 25rmc | 7 | 1.2 | 1.8 | 21.9 | 691 | 1000 |
| 14210102 | 35rmc | 7 | 1.2 | 1.8 | 23.1 | 514 | 1000 |

## Three cores

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 14210200 | 16rmc | 7 | 1.0 | 1.8 | 19.8 | 560 | 1000 |
| 14210201 | 25rmc | 7 | 1.2 | 1.8 | 23.3 | 779 | 1000 |
| 14210202 | 35rmc | 7 | 1.2 | 1.8 | 24.6 | 683 | 1000 |
| 14210203 | 50rmc | 7 | 1.4 | 1.8 | 28.7 | 953 | 1000 |
| 14210204 | 70rmc | 19 | 1.4 | 1.9 | 32.6 | 1185 | 1000 |
| 14210205 | 95rmc | 19 | 1.6 | 2.1 | 37.7 | 1598 | 1000 |
| 14210206 | 120rmc | 19 | 1.6 | 2.2 | 40.5 | 1882 | 1000 |
| 14210207 | 150rmc | 19 | 1.8 | 2.3 | 45.6 | 2314 | 1000 |
| 14210208 | 185rmc | 37 | 2 | 2.5 | 51.2 | 2832 | 500 |
| 14210209 | 240rmc | 37 | 2.2 | 2.7 | 57.2 | 3566 | 500 |
| 14210210 | 300rmc | 37 | 2.4 | 2.9 | 63.9 | 4362 | 500 |
| 14210211 | 400rmc | 61 | 2.6 | 3.1 | 71.4 | 5423 | 300 |
| 14210212 | 500rmc | 61 | 2.8 | 3.4 | 77.3 | 7035 | 300 |

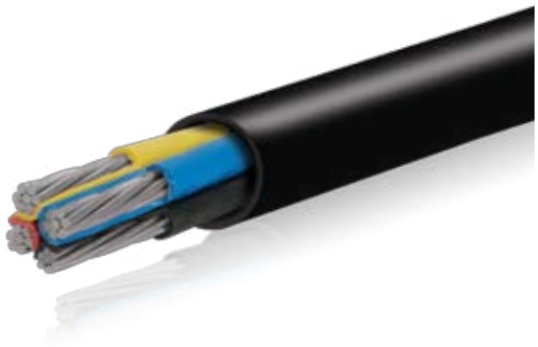
# PVC INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

## AL/PVC/PVC


### Four cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal mm² | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14210300 | 16rmc | 7 | 1.0 | 1.8 | 21.6 | 662 | 1000/2000 |
| 14210301 | 25rmc | 7 | 1.2 | 1.8 | 25.4 | 919 | 500/1000 |
| 14210302 | 35sm | 7 | 1.2 | 1.8 | 27.8 | 905 | 500/1000 |
| 14210303 | 50sm | 7 | 1.4 | 1.9 | 27.9 | 1063 | 1000 |
| 14210304 | 70sm | 19 | 1.4 | 2.0 | 31.4 | 1380 | 1000 |
| 14210305 | 95sm | 19 | 1.6 | 2.2 | 36.4 | 1869 | 1000 |
| 14210306 | 120sm | 19 | 1.6 | 2.3 | 39.6 | 2275 | 1000 |
| 14210307 | 150sm | 19 | 1.8 | 2.5 | 43.9 | 2745 | 1000 |
| 14210308 | 185sm | 37 | 2.0 | 2.7 | 48.8 | 3404 | 500 |
| 14210309 | 240sm | 37 | 2.2 | 2.9 | 55.1 | 4356 | 500 |
| 14210310 | 300sm | 37 | 2.4 | 3.1 | 62.3 | 4209 | 500 |
| 14210311 | 400sm | 61 | 2.6 | 3.4 | 68.8 | 6797 | 500 |
| 14210312 | 500sm | 61 | 2.8 | 3.6 | 76.2 | 8574 | 300 |



# PVC INSULATED PVC SHEATHED CABLES

ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

AL/PVC/PVC

## Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | |
| 14210350 | 25rmc | 16rmc | 7 | 7 | 1.2 | 1.0 | 1.8 | 25 | 897 | 1000/2000 |
| 14210351 | 35sm | 16rmc | 7 | 7 | 1.2 | 1.0 | 1.8 | 243 | 726 | 1000 |
| 14210352 | 50sm | 25rmc | 7 | 7 | 1.4 | 1.2 | 1.9 | 27.9 | 986 | 1000 |
| 14210353 | 70sm | 35rmc | 19 | 7 | 1.4 | 1.2 | 2.0 | 31.4 | 1258 | 1000 |
| 14210354 | 95sm | 50rmc | 19 | 7 | 1.6 | 1.4 | 2.1 | 36.2 | 1706 | 1000 |
| 14210355 | 120sm | 70rmc | 19 | 19 | 1.6 | 1.4 | 2.3 | 39.6 | 2103 | 1000 |
| 14210356 | 150sm | 70rmc | 19 | 19 | 1.8 | 1.4 | 2.4 | 43.7 | 2467 | 1000 |
| 14210357 | 185sm | 95rmc | 37 | 19 | 2.0 | 1.6 | 2.6 | 48.4 | 3067 | 500 |
| 14210358 | 240sm | 120rmc | 37 | 19 | 2.2 | 1.6 | 2.8 | 54.7 | 3889 | 500 |
| 14210359 | 300sm | 150rmc | 37 | 19 | 2.4 | 1.8 | 3.0 | 61.9 | 3911 | 500 |
| 14210360 | 400sm | 185rmc | 61 | 37 | 2.6 | 2.0 | 3.2 | 68.4 | 6197 | 500 |
| 14210361 | 500sm | 240rmc | 61 | 61 | 2.8 | 2.2 | 3.4 | 75.8 | 7460 | 300 |

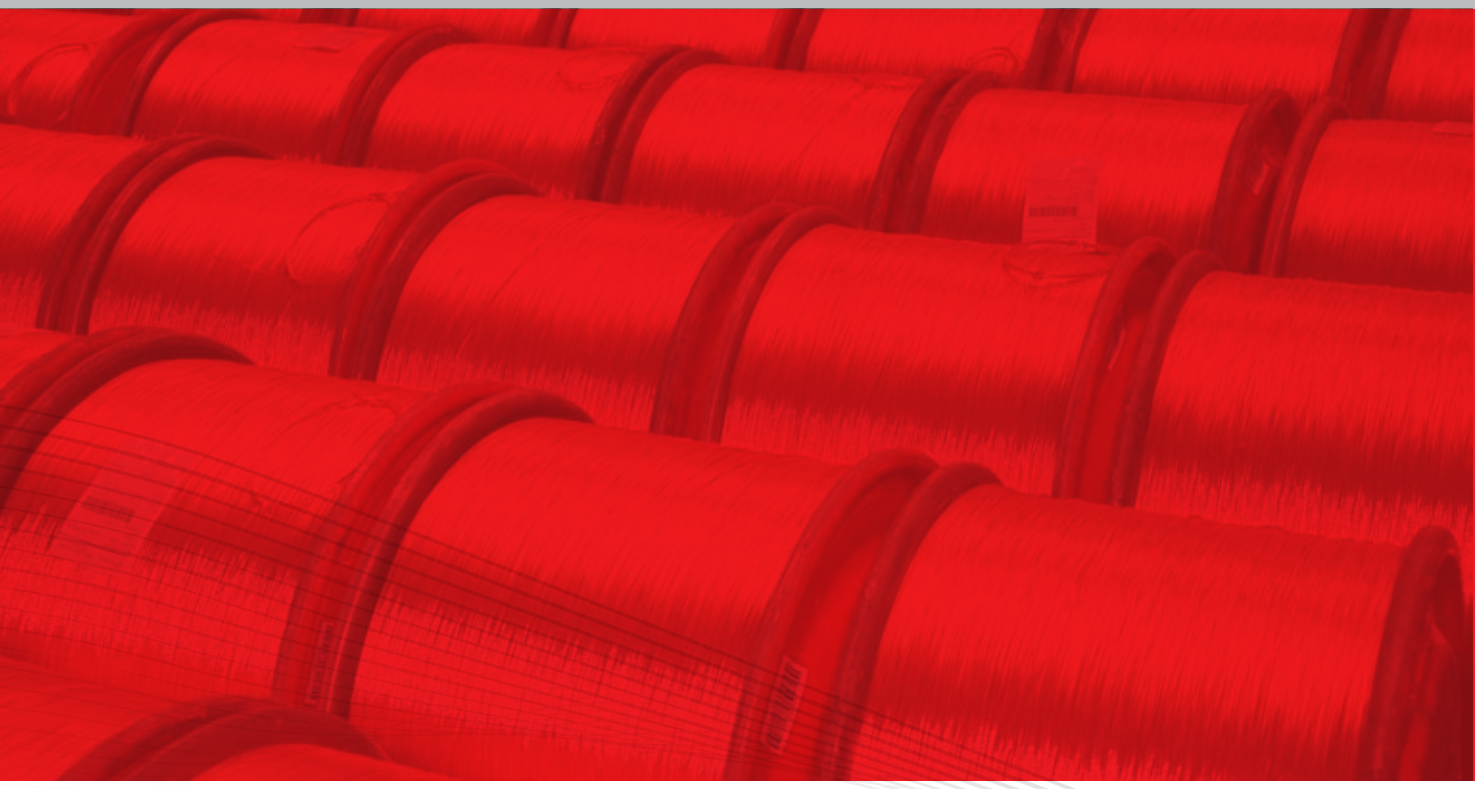
# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## CU/PVC/STA/PVC

### Two cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness of Insulation Nominal mm | Thickness of Steel Tape Nominal mm | Thickness of Sheath Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14020003 | 4rm | 7 | 1.0 | 0.2 | 1.8 | 15.4 | 400 | 1000 |
| 14020004 | 6rm | 7 | 1.0 | 0.2 | 1.8 | 16.4 | 473 | 1000 |
| 14020005 | 10rm | 7 | 1.0 | 0.2 | 1.8 | 18.4 | 630 | 1000 |
| 14020006 | 16rm | 7 | 1.0 | 0.2 | 1.8 | 20.6 | 823 | 1000 |
| 14020007 | 25rm | 7 | 1.2 | 0.2 | 1.8 | 24.0 | 1157 | 1000 |
| 14020008 | 35rm | 7 | 1.2 | 0.2 | 1.8 | 26.7 | 1267 | 1000 |



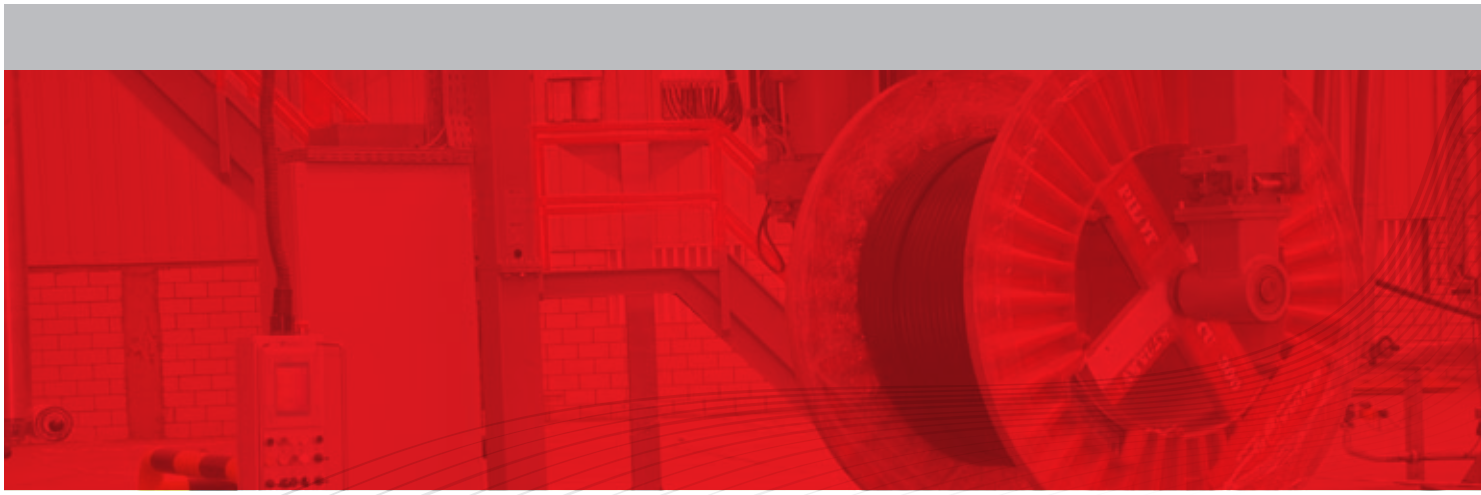
# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## CU/PVC/STA/PVC

### Three cores

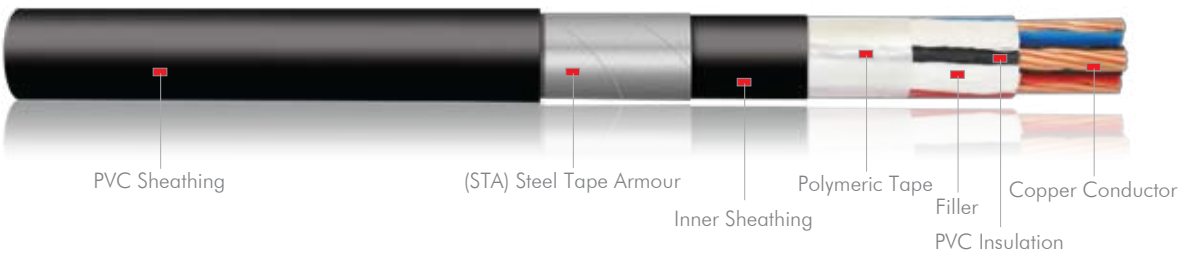
| Cable Code | Conductor | | Insulation | Outer Sheath | | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness of Insulation Nominal mm | Thickness of Steel Tape Nominal mm | Thickness of Sheath Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14020102 | 4rm | 7 | 1.0 | 0.2 | 1.8 | 16.2 | 458 | 1000 |
| 14020104 | 6rm | 7 | 1.0 | 0.2 | 1.8 | 17.2 | 550 | 1000 |
| 14020106 | 10rm | 7 | 1.0 | 0.2 | 1.8 | 19.4 | 749 | 1000 |
| 14020107 | 16rm | 7 | 1.0 | 0.2 | 1.8 | 21.8 | 987 | 1000 |
| 14020108 | 25rm | 7 | 1.2 | 0.2 | 1.8 | 25.5 | 1409 | 1000 |
| 14020109 | 35rm | 7 | 1.2 | 0.2 | 1.8 | 28.3 | 1666 | 1000 |
| 14020110 | 50rm | 19 | 1.4 | 0.2 | 1.9 | 32.4 | 2142 | 1000 |
| 14020111 | 70rm | 19 | 1.4 | 0.2 | 2.0 | 36.7 | 2830 | 1000 |
| 14020112 | 95rm | 19 | 1.6 | 0.5 | 2.2 | 43.0 | 4225 | 500 |
| 14020113 | 120rm | 37 | 1.6 | 0.5 | 2.3 | 46.9 | 5087 | 500 |
| 14020114 | 150rm | 37 | 1.8 | 0.5 | 2.5 | 51.4 | 6122 | 500 |
| 14020115 | 185rm | 37 | 2.0 | 0.5 | 2.6 | 56.8 | 7498 | 250 |
| 14020116 | 240rm | 61 | 2.2 | 0.5 | 2.8 | 64.5 | 9565 | 250 |
| 14020117 | 300rm | 61 | 2.4 | 0.5 | 3.0 | 71.2 | 11730 | 250 |
| 14020118 | 400rm | 61 | 2.6 | 0.5 | 3.3 | 78.6 | 14633 | 250 |
| 14020119 | 500rm | 61 | 2.8 | 0.8 | 3.5 | 91.0 | 18095 | 250 |



# PVC INSULATED PVC SHEATHED CABLES

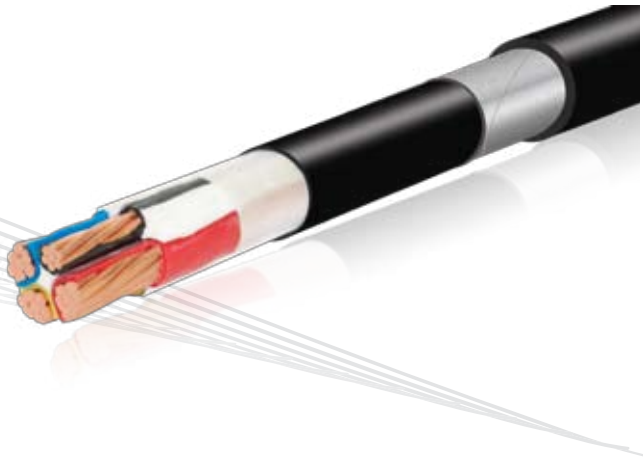
## COPPER CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## CU/PVC/STA/PVC




### Four cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness of Insulation Nominal mm | Thickness of Steel Tape Nominal mm | Thickness of Sheath Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14020202 | 4 rm | 7 | 1.0 | 0.2 | 1.8 | 17.3 | 532 | 1000 |
| 14020204 | 6 rm | 7 | 1.0 | 0.2 | 1.8 | 18.5 | 649 | 1000 |
| 14020206 | 10 rm | 7 | 1.0 | 0.2 | 1.8 | 20.9 | 898 | 1000 |
| 14020207 | 16 rm | 7 | 1.0 | 0.2 | 1.8 | 23.5 | 1203 | 1000 |
| 14020208 | 25 rm | 7 | 1.2 | 0.2 | 1.8 | 27.6 | 1729 | 1000 |
| 14020209 | 35 sm | 7 | 1.2 | 0.2 | 1.9 | 27.1 | 1981 | 1000 |
| 14020210 | 50 sm | 19 | 1.4 | 0.2 | 2.0 | 31.3 | 2560 | 1000 |
| 14020211 | 70 sm | 19 | 1.4 | 0.5 | 2.1 | 36.0 | 3788 | 500 |
| 14020212 | 95 sm | 19 | 1.6 | 0.5 | 2.3 | 41.0 | 5036 | 500 |
| 14020213 | 120 sm | 37 | 1.6 | 0.5 | 2.4 | 44.6 | 6183 | 300 |
| 14020214 | 150 sm | 37 | 1.8 | 0.5 | 2.6 | 48.9 | 7499 | 300 |
| 14020215 | 185 sm | 37 | 2.0 | 0.5 | 2.7 | 54.0 | 9125 | 250 |
| 14020216 | 240 sm | 61 | 2.2 | 0.5 | 3.0 | 60.5 | 11766 | 250 |
| 14020217 | 300 sm | 61 | 2.4 | 0.5 | 3.2 | 67.7 | 14516 | 250 |
| 14020218 | 400 sm | 61 | 2.6 | 0.5 | 3.5 | 74.6 | 18374 | 250 |
| 14020219 | 500 sm | 61 | 2.8 | 0.8 | 3.8 | 83.4 | 23583 | 250 |



# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## CU/PVC/STA/PVC

### Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness of Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14020250 | 10rm | 6 rm | 7 | 7 | 1.0 | 1.0 | 0.2 | 1.8 | 20.3 | 830 | 1000 |
| 14020251 | 16rm | 10 rm | 7 | 7 | 1.0 | 1.0 | 0.2 | 1.8 | 22.9 | 1116 | 1000 |
| 14020252 | 25rm | 16 rm | 7 | 7 | 1.2 | 1.0 | 0.2 | 1.8 | 26.6 | 1580 | 1000 |
| 14020253 | 35sm | 16 rm | 7 | 7 | 1.2 | 1.0 | 0.2 | 1.8 | 27.1 | 1785 | 1000 |
| 14020254 | 50sm | 25 rm | 19 | 7 | 1.4 | 1.2 | 0.2 | 1.9 | 30.7 | 2312 | 1000 |
| 14020255 | 70sm | 35 rm | 19 | 7 | 1.4 | 1.2 | 0.2 | 2.0 | 34.6 | 3132 | 500 |
| 14020256 | 95sm | 50 rm | 19 | 19 | 1.6 | 1.4 | 0.5 | 2.2 | 40.8 | 4571 | 500 |
| 14020257 | 120sm | 70 rm | 37 | 19 | 1.6 | 1.4 | 0.5 | 2.3 | 44.4 | 5679 | 500 |
| 14020258 | 150sm | 70 rm | 37 | 19 | 1.8 | 1.4 | 0.5 | 2.5 | 48.7 | 6723 | 500 |
| 14020259 | 185sm | 95 rm | 37 | 19 | 2.0 | 1.6 | 0.5 | 2.6 | 53.4 | 8204 | 300 |
| 14020260 | 240sm | 120rm | 61 | 37 | 2.2 | 1.6 | 0.5 | 2.8 | 60.1 | 10526 | 300 |
| 14020261 | 300sm | 150rm | 61 | 37 | 2.4 | 1.8 | 0.5 | 3.0 | 67.3 | 12918 | 250 |
| 14020262 | 400sm | 185rm | 61 | 37 | 2.6 | 2.0 | 0.5 | 3.3 | 74.2 | 16466 | 250 |
| 14020263 | 500sm | 240rm | 61 | 61 | 2.8 | 2.2 | 0.8 | 3.6 | 83.0 | 20909 | 250 |

# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 0.6/1 kV

## CU/PVC/AWA/PVC


## Single core

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Aluminum wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14100004 | 95rm | 19 | 1.6 | 1.6 | 1.7 | 24.1 | 1395 | 1000 |
| 14100005 | 120rm | 37 | 1.6 | 1.8 | 1.7 | 26.3 | 1672 | 1000 |
| 14100006 | 150rm | 37 | 1.8 | 1.8 | 1.8 | 28.3 | 1991 | 1000 |
| 14100007 | 185rm | 37 | 2.0 | 1.8 | 1.8 | 30.6 | 2433 | 1000 |
| 14100008 | 240rm | 61 | 2.2 | 1.8 | 1.9 | 34.0 | 3075 | 500 |
| 14100009 | 300rm | 61 | 2.4 | 2.0 | 2.0 | 37.6 | 3829 | 500 |
| 14100010 | 400rm | 61 | 2.6 | 2.0 | 2.1 | 41.2 | 4785 | 500 |
| 14100011 | 500rm | 61 | 2.8 | 2.0 | 2.2 | 44.9 | 5913 | 500 |
| 14100012 | 630rmc | 61 | 2.8 | 2.0 | 2.4 | 47.3 | 7358 | 500 |

# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## CU/PVC/SWA/PVC

### Two cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14030004 | 6rm | 7 | 1.0 | 1.25 | 1.8 | 18.1 | 683 | 1000 |
| 14030005 | 10rm | 7 | 1.0 | 1.25 | 1.8 | 20.1 | 867 | 1000 |
| 14030006 | 16rm | 7 | 1.0 | 1.25 | 1.8 | 22.3 | 1094 | 1000 |
| 14030007 | 25rm | 7 | 1.2 | 1.60 | 1.8 | 26.4 | 1632 | 1000 |
| 14030008 | 35rm | 7 | 1.2 | 1.60 | 1.8 | 29.1 | 1789 | 1000 |

### Three cores

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14030103 | 6rm | 7 | 1.0 | 1.25 | 1.8 | 18.9 | 766 | 1000 |
| 14030104 | 10rm | 7 | 1.0 | 1.25 | 1.8 | 21.1 | 999 | 1000 |
| 14030105 | 16rm | 7 | 1.0 | 1.25 | 1.8 | 23.5 | 1280 | 1000 |
| 14030106 | 25rm | 7 | 1.2 | 1.6 | 1.8 | 27.9 | 1906 | 1000 |
| 14030107 | 35rm | 7 | 1.2 | 1.6 | 1.8 | 30.7 | 2226 | 1000 |
| 14030108 | 50rm | 19 | 1.4 | 1.6 | 2.0 | 35.0 | 2808 | 1000 |
| 14030109 | 70rm | 19 | 1.4 | 2.0 | 2.1 | 40.1 | 3914 | 500 |
| 14030110 | 95rm | 19 | 1.6 | 2.0 | 2.2 | 45.0 | 4959 | 500 |
| 14030111 | 120rm | 37 | 1.6 | 2.0 | 2.3 | 48.9 | 5911 | 500 |
| 14030112 | 150rm | 37 | 1.8 | 2.5 | 2.5 | 54.6 | 7522 | 500 |
| 14030113 | 185rm | 37 | 2.0 | 2.5 | 2.7 | 60.0 | 9019 | 500 |
| 14030114 | 240rm | 61 | 2.2 | 2.5 | 2.9 | 67.7 | 11327 | 300 |
| 14030115 | 300rm | 61 | 2.4 | 2.5 | 3.1 | 74.6 | 13700 | 300 |
| 14030116 | 400rm | 61 | 2.6 | 3.15 | 3.4 | 83.3 | 17753 | 300 |
| 14030117 | 500rm | 61 | 2.8 | 3.15 | 3.6 | 91.3 | 21700 | 300 |

# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## CU/PVC/SWA/PVC


## Four cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14030202 | 4rm | 7 | 1.0 | 1.25 | 1.8 | 19.0 | 757 | 1000 |
| 14030203 | 6rm | 7 | 1.0 | 1.25 | 1.8 | 20.2 | 885 | 1000 |
| 14030204 | 10rm | 7 | 1.0 | 1.25 | 1.8 | 22.6 | 1177 | 1000 |
| 14030205 | 16rm | 7 | 1.0 | 1.6 | 1.8 | 25.9 | 1665 | 1000 |
| 14030206 | 25rm | 7 | 1.2 | 1.6 | 1.8 | 30.0 | 2277 | 1000 |
| 14030207 | 35sm | 7 | 1.2 | 1.6 | 1.9 | 29.7 | 2531 | 1000 |
| 14030208 | 50sm | 19 | 1.4 | 2.0 | 2.1 | 34.7 | 3424 | 500 |
| 14030209 | 70sm | 19 | 1.4 | 2.0 | 2.2 | 38.2 | 4426 | 500 |
| 14030210 | 95sm | 19 | 1.6 | 2.5 | 2.4 | 44.2 | 6125 | 500 |
| 14030211 | 120sm | 37 | 1.6 | 2.5 | 2.5 | 47.8 | 7377 | 500 |
| 14030212 | 150sm | 37 | 1.8 | 2.5 | 2.7 | 52.1 | 8790 | 250 |
| 14030213 | 185sm | 37 | 2.0 | 2.5 | 2.9 | 57.4 | 10603 | 300 |
| 14030214 | 240sm | 61 | 2.2 | 2.5 | 3.1 | 63.7 | 13403 | 300 |
| 14030215 | 300sm | 61 | 2.4 | 2.5 | 3.3 | 70.9 | 16363 | 250 |
| 14030216 | 400sm | 61 | 2.6 | 3.15 | 3.6 | 79.1 | 21284 | 250 |
| 14030217 | 500sm | 61 | 2.8 | 3.15 | 3.9 | 86.7 | 25961 | 250 |

# PVC INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## CU/PVC/SWA/PVC

### Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Dia. of Steel wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14030250 | 16rm | 10rm | 7 | 7 | 1.0 | 1.0 | 1.25 | 1.8 | 24.6 | 1422 | 1000 |
| 14030251 | 25rm | 16rm | 7 | 7 | 1.2 | 1.0 | 1.6 | 1.8 | 29.0 | 2103 | 1000 |
| 14030252 | 35sm | 16rm | 7 | 7 | 1.2 | 1.0 | 1.6 | 1.9 | 29.7 | 2335 | 1000 |
| 14030253 | 50sm | 25rm | 19 | 7 | 1.4 | 1.2 | 2.0 | 2.0 | 34.1 | 3152 | 500 |
| 14030254 | 70sm | 35rm | 19 | 7 | 1.4 | 1.2 | 2.0 | 2.1 | 38.0 | 4103 | 500 |
| 14030255 | 95sm | 50rm | 19 | 19 | 1.6 | 1.4 | 2.0 | 2.3 | 43.0 | 5286 | 500 |
| 14030256 | 120sm | 70rm | 37 | 19 | 1.6 | 1.4 | 2.5 | 2.4 | 47.8 | 6895 | 500 |
| 14030257 | 150sm | 70rm | 37 | 19 | 1.8 | 1.4 | 2.5 | 2.6 | 51.9 | 8013 | 500 |
| 14030258 | 185sm | 95rm | 37 | 19 | 2.0 | 1.6 | 2.5 | 2.7 | 56.6 | 9620 | 500 |
| 14030259 | 240sm | 120rm | 61 | 37 | 2.2 | 1.6 | 2.5 | 2.9 | 63.3 | 12160 | 300 |
| 14030260 | 300sm | 150rm | 61 | 37 | 2.4 | 1.8 | 2.5 | 3.1 | 70.5 | 14761 | 250 |
| 14030261 | 400sm | 185rm | 61 | 37 | 2.6 | 2.0 | 3.15 | 3.4 | 78.7 | 19372 | 250 |
| 14030262 | 500sm | 240rm | 61 | 61 | 2.8 | 2.2 | 3.15 | 3.7 | 86.3 | 23284 | 250 |

# PVC INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

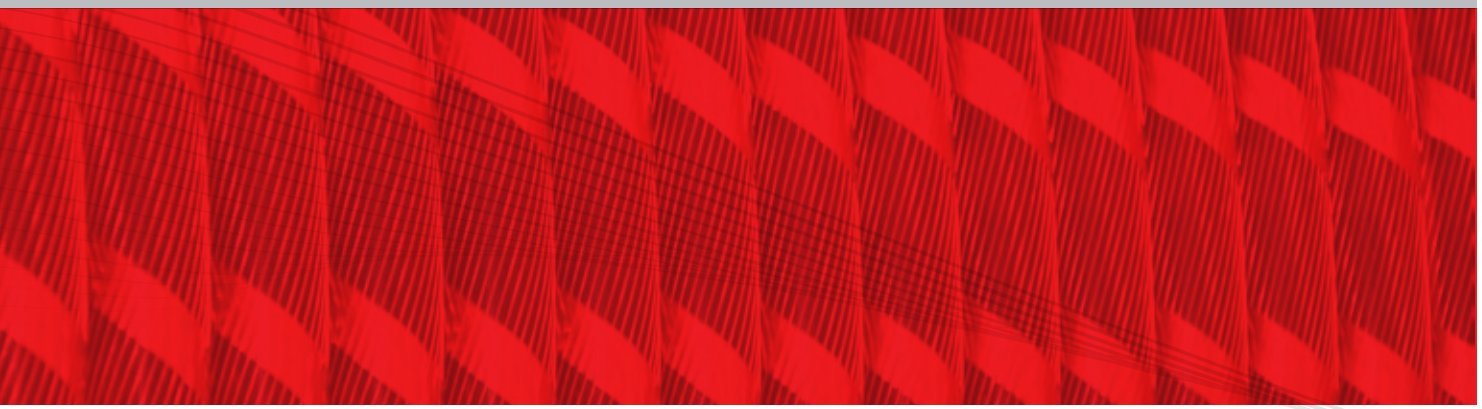
## AL/PVC/STA/PVC

### Two cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14220001 | 16rmc | 7 | 1 | 0.2 | 1.8 | 20.2 | 616 | 1000 |
| 14220002 | 25rmc | 7 | 1.2 | 0.2 | 1.8 | 23.4 | 822 | 1000 |
| 14220003 | 35rmc | 7 | 1.2 | 0.2 | 1.8 | 25.9 | 794 | 1000 |

### Three cores

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14220100 | 16rmc | 7 | 1.0 | 0.2 | 1.8 | 21.3 | 692 | 1000 |
| 14220101 | 25rmc | 7 | 1.2 | 0.2 | 1.8 | 24.7 | 928 | 1000 |
| 14220102 | 35rmc | 7 | 1.2 | 0.2 | 1.8 | 27.4 | 984 | 1000 |
| 14220103 | 50rmc | 7 | 1.4 | 0.2 | 1.9 | 31.7 | 1319 | 1000 |
| 14220104 | 70rmc | 19 | 1.4 | 0.2 | 2.0 | 35.9 | 1630 | 1000 |
| 14220105 | 95rmc | 19 | 1.6 | 0.5 | 2.2 | 42.3 | 2517 | 1000 |
| 14220106 | 120rmc | 19 | 1.6 | 0.5 | 2.3 | 45.1 | 2855 | 1000 |
| 14220107 | 150rmc | 19 | 1.8 | 0.5 | 2.5 | 50.6 | 3469 | 500 |
| 14220108 | 185rmc | 37 | 2.0 | 0.5 | 2.6 | 56.2 | 4122 | 500 |
| 14220109 | 240rmc | 37 | 2.2 | 0.5 | 2.8 | 62.6 | 5073 | 500 |
| 14220110 | 300rmc | 37 | 2.4 | 0.5 | 3.0 | 69.2 | 6027 | 500 |
| 14220111 | 400rmc | 61 | 2.6 | 0.5 | 3.3 | 77.1 | 7358 | 500 |
| 14220112 | 500rmc | 61 | 2.8 | 0.8 | 3.5 | 88.0 | 8810 | 500 |



# PVC INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## AL/PVC/STA/PVC


### Four cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14220200 | 16rmc | 7 | 1.0 | 0.2 | 1.8 | 23.1 | 809 | 1000 |
| 14220201 | 25rmc | 7 | 1.2 | 0.2 | 1.8 | 26.9 | 1087 | 1000 |
| 14220202 | 35sm | 7 | 1.2 | 0.2 | 1.8 | 27.1 | 1089 | 1000 |
| 14220203 | 50sm | 7 | 1.4 | 0.2 | 2.0 | 31.3 | 1452 | 1000 |
| 14220204 | 70sm | 19 | 1.4 | 0.5 | 2.1 | 36.0 | 2144 | 1000 |
| 14220205 | 95sm | 19 | 1.6 | 0.5 | 2.2 | 41.0 | 2753 | 500 |
| 14220206 | 120sm | 19 | 1.6 | 0.5 | 2.4 | 44.6 | 3279 | 500 |
| 14220207 | 150sm | 19 | 1.8 | 0.5 | 2.6 | 48.9 | 3856 | 500 |
| 14220208 | 185sm | 37 | 2.0 | 0.5 | 2.8 | 54.2 | 4691 | 500 |
| 14220209 | 240sm | 37 | 2.2 | 0.5 | 3.0 | 60.5 | 5803 | 500 |
| 14220210 | 300sm | 37 | 2.4 | 0.5 | 3.2 | 67.7 | 5827 | 500 |
| 14220211 | 400sm | 61 | 2.6 | 0.5 | 3.5 | 74.6 | 8666 | 500 |
| 14220212 | 500sm | 61 | 2.8 | 0.8 | 3.8 | 83.4 | 11469 | 300 |

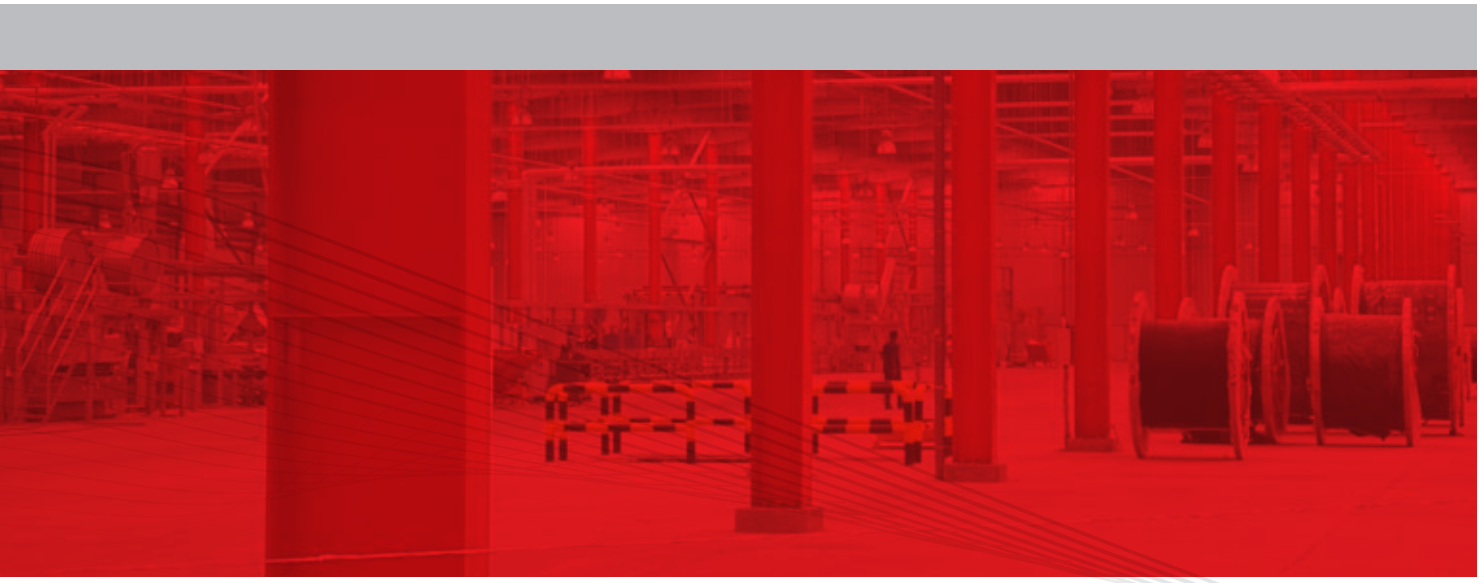
# PVC INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## AL/PVC/STA/PVC

### Four cores with reduced neutral

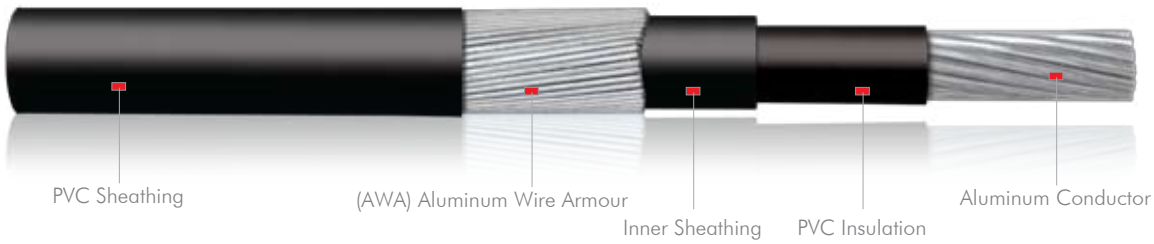
| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Dia. of Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14220250 | 25rmc | 16rmc | 7 | 7 | 1.2 | 1.0 | 0.2 | 1.8 | 26.5 | 1060 | 1060 |
| 14220251 | 35sm | 16rmc | 7 | 7 | 1.2 | 1.0 | 0.2 | 1.8 | 27.1 | 1021 | 1000 |
| 14220252 | 50sm | 25rmc | 7 | 7 | 1.4 | 1.2 | 0.2 | 1.9 | 30.7 | 1326 | 1000 |
| 14220253 | 70sm | 35rmc | 19 | 7 | 1.4 | 1.2 | 0.2 | 2.0 | 34.6 | 1672 | 1000 |
| 14220254 | 95sm | 50rmc | 19 | 7 | 1.6 | 1.4 | 0.5 | 2.2 | 40.8 | 2587 | 1000 |
| 14220255 | 120sm | 70rmc | 19 | 19 | 1.6 | 1.4 | 0.5 | 2.4 | 44.6 | 3108 | 500 |
| 14220256 | 150sm | 70rmc | 19 | 19 | 1.8 | 1.4 | 0.5 | 2.5 | 48.7 | 3574 | 500 |
| 14220257 | 185sm | 95rmc | 37 | 19 | 2.0 | 1.6 | 0.5 | 2.7 | 53.6 | 4315 | 500 |
| 14220258 | 240sm | 120rmc | 37 | 19 | 2.2 | 1.6 | 0.5 | 2.8 | 60.1 | 5330 | 500 |
| 14220259 | 300sm | 150rmc | 37 | 19 | 2.4 | 1.8 | 0.5 | 3.0 | 67.3 | 5526 | 500 |
| 14220260 | 400sm | 185rmc | 61 | 37 | 2.6 | 2.0 | 0.5 | 3.3 | 74.2 | 8060 | 500 |
| 14220261 | 500sm | 240rmc | 61 | 37 | 2.8 | 2.2 | 0.8 | 3.6 | 83.1 | 10328 | 300 |



# PVC INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 0.6/1 kV

## AL/PVC/AWA/PVC




## Single core

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Aluminum Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14300004 | 95 rmc | 19 | 1.6 | 1.6 | 1.8 | 24 | 825 | 1000 |
| 14300005 | 120 rmc | 19 | 1.6 | 1.6 | 1.8 | 26 | 1000 | 1000 |
| 14300006 | 150 rmc | 19 | 1.8 | 1.6 | 1.8 | 28 | 1150 | 1000 |
| 14300007 | 185 rmc | 37 | 2.0 | 1.6 | 1.8 | 31 | 1350 | 1000 |
| 14300008 | 240 rmc | 37 | 2.2 | 1.6 | 1.9 | 34 | 1625 | 500 |
| 14300009 | 300 rmc | 37 | 2.4 | 2.0 | 2.0 | 37 | 2050 | 500 |
| 14300010 | 400 rmc | 61 | 2.6 | 2.0 | 2.1 | 41 | 2500 | 500 |
| 14300011 | 500 rmc | 61 | 2.8 | 2.0 | 2.2 | 45 | 3050 | 500 |
| 14300012 | 630 rmc | 61 | 2.8 | 2.0 | 2.4 | 50 | 3650 | 500 |

# PVC INSULATED PVC SHEATHED CABLES

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

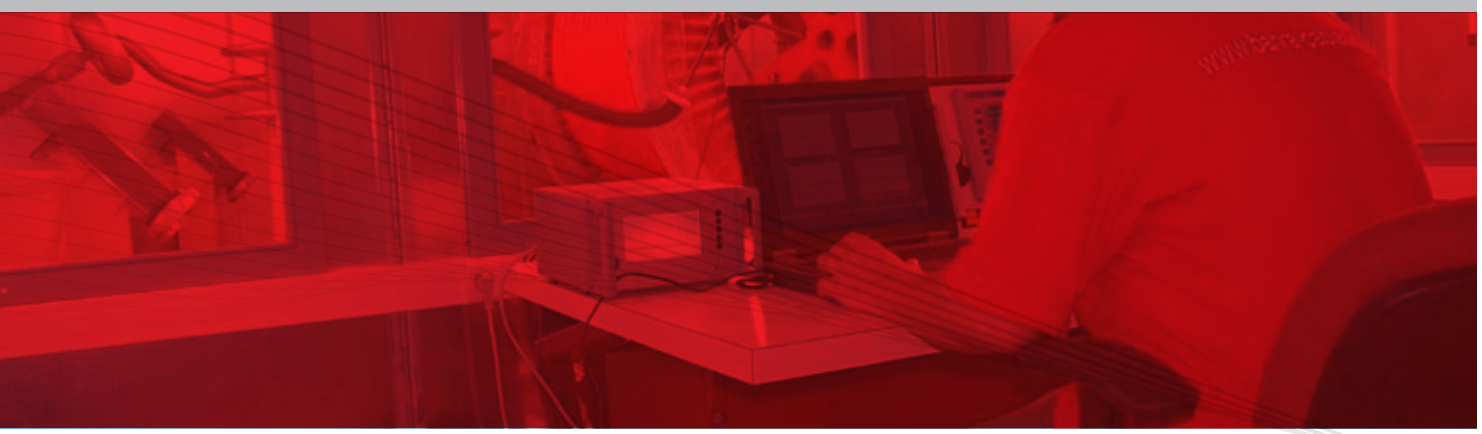
AL/PVC/SWA/PVC

## Two cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14230001 | 25 rm | 7 | 1.2 | 1.6 | 1.8 | 25.8 | 1268 | 1000 |
| 14230002 | 35 rm | 7 | 1.2 | 1.6 | 1.8 | 28.3 | 1305 | 1000 |

## Three cores

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14240100 | 25 rmc | 7 | 1.2 | 1.6 | 1.8 | 28 | 1525 | 1000 |
| 14240101 | 35 rmc | 7 | 1.2 | 1.6 | 1.8 | 31 | 1650 | 1000 |
| 14240102 | 50 rmc | 7 | 1.4 | 1.6 | 2.0 | 35 | 2025 | 1000 |
| 14240103 | 70 rmc | 19 | 1.4 | 2.0 | 2.1 | 40 | 2800 | 1000 |
| 14240104 | 95 rmc | 19 | 1.6 | 2.0 | 2.2 | 45 | 3450 | 1000 |
| 14240105 | 120 rmc | 19 | 1.6 | 2.0 | 2.3 | 49 | 3900 | 500 |
| 14240106 | 150 rmc | 19 | 1.8 | 2.5 | 2.5 | 55 | 5075 | 500 |
| 14240107 | 185 rmc | 37 | 2.0 | 2.5 | 2.7 | 60 | 5975 | 500 |
| 14240108 | 240 rmc | 37 | 2.2 | 2.5 | 2.9 | 67 | 7225 | 500 |
| 14240109 | 300 rmc | 37 | 2.4 | 2.5 | 3.1 | 74 | 8475 | 500 |
| 14240110 | 400 rmc | 61 | 2.6 | 3.15 | 3.4 | 83 | 11150 | 500 |
| 14240111 | 500 rmc | 61 | 2.8 | 3.15 | 3.6 | 92 | 13325 | 300 |



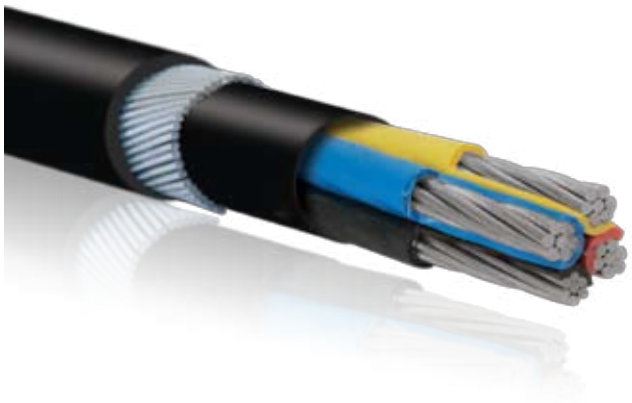
# PVC INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## AL/PVC/SWA/PVC


### Four cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14230205 | 16 rmc | 7 | 1.0 | 1.6 | 1.8 | 25.5 | 1257 | 500 |
| 14230206 | 25 rmc | 7 | 1.2 | 1.6 | 1.8 | 29.3 | 1624 | 500 |
| 14230207 | 35 sm | 7 | 1.2 | 1.6 | 1.9 | 29.7 | 1639 | 500 |
| 14230208 | 50 sm | 7 | 1.4 | 2.0 | 2.1 | 34.7 | 2315 | 500 |
| 14230209 | 70 sm | 19 | 1.4 | 2.0 | 2.2 | 38.2 | 2782 | 500 |
| 14230210 | 95 sm | 19 | 1.6 | 2.5 | 2.4 | 44.2 | 3842 | 500 |
| 14230211 | 120 sm | 19 | 1.6 | 2.5 | 2.5 | 47.8 | 4473 | 500 |
| 14230212 | 150 sm | 19 | 1.8 | 2.5 | 2.7 | 52.1 | 5147 | 250 |
| 14230213 | 185 sm | 37 | 2.0 | 2.5 | 2.9 | 57.4 | 6143 | 250 |
| 14230214 | 240 sm | 37 | 2.2 | 2.5 | 3.1 | 63.7 | 7440 | 250 |
| 14230215 | 300 sm | 37 | 2.4 | 3.15 | 3.3 | 72.2 | 8455 | 250 |
| 14230216 | 400 sm | 61 | 2.6 | 3.15 | 3.6 | 79.1 | 11575 | 250 |
| 14230217 | 500 sm | 61 | 2.8 | 3.15 | 3.9 | 86.7 | 13847 | 250 |



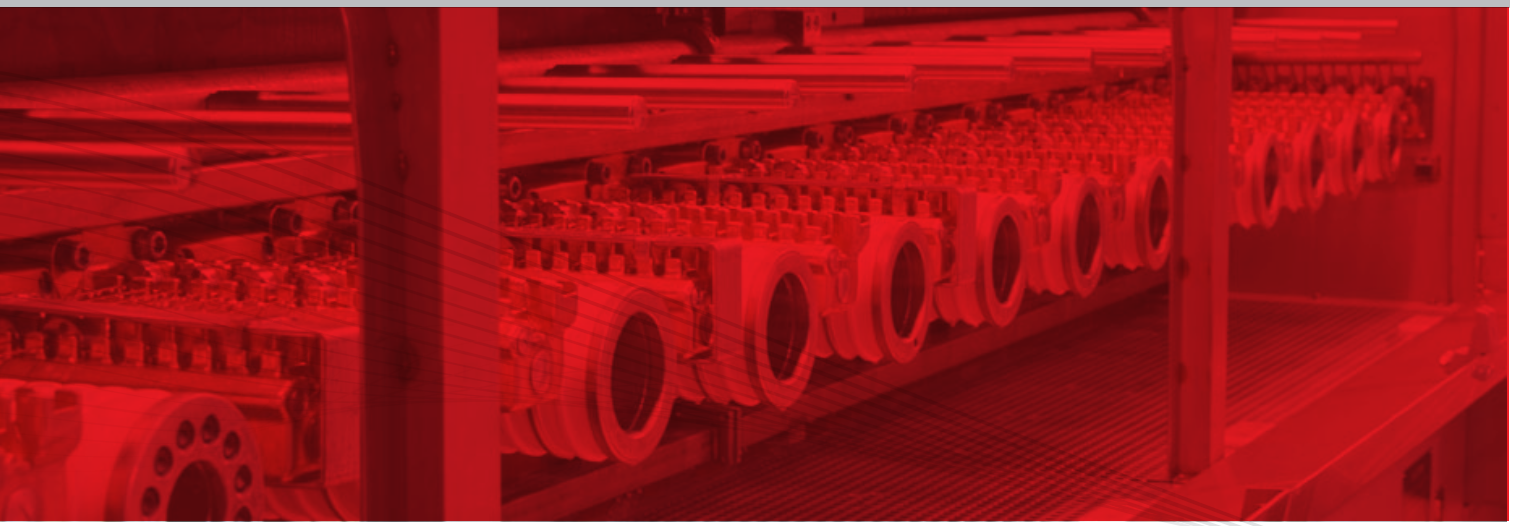
# PVC INSULATED PVC SHEATHED CABLES

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

AL/PVC/SWA/PVC

## Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Dia. of Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14230250 | 25rmc | 16rmc | 7 | 7 | 1.2 | 1.0 | 1.6 | 1.8 | 30 | 1675 | 1000 |
| 14230251 | 35sm | 16rmc | 7 | 7 | 1.2 | 1.0 | 1.6 | 1.9 | 30 | 1650 | 1000 |
| 14230252 | 50sm | 25rmc | 7 | 7 | 1.4 | 1.2 | 2.0 | 2.0 | 35 | 2250 | 1000 |
| 14230253 | 70sm | 35rmc | 19 | 7 | 1.4 | 1.2 | 2.0 | 2.1 | 39 | 2725 | 1000 |
| 14230254 | 95sm | 50rmc | 19 | 7 | 1.6 | 1.4 | 2.0 | 2.3 | 44 | 3400 | 500 |
| 14230255 | 120sm | 70rmc | 19 | 19 | 1.6 | 1.4 | 2.5 | 2.5 | 48 | 4375 | 500 |
| 14230256 | 150sm | 70rmc | 19 | 19 | 1.8 | 1.4 | 2.5 | 2.6 | 52 | 4975 | 500 |
| 14230257 | 185sm | 95rmc | 37 | 19 | 2.0 | 1.6 | 2.5 | 2.7 | 57 | 5800 | 500 |
| 14230258 | 240sm | 120rmc | 37 | 19 | 2.2 | 1.6 | 2.5 | 2.9 | 63 | 7075 | 500 |
| 14230259 | 300sm | 150rmc | 37 | 19 | 2.4 | 1.8 | 2.5 | 3.1 | 70 | 8275 | 500 |
| 14230260 | 400sm | 185rmc | 61 | 37 | 2.6 | 2.0 | 3.15 | 3.5 | 79 | 11000 | 300 |
| 14230261 | 500sm | 240rmc | 61 | 37 | 2.8 | 2.2 | 3.15 | 3.7 | 87 | 13050 | 300 |



# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

## CU/XLPE/PVC


## Single core

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14510006 | 4rm | 7 | 0.7 | 1.4 | 6.8 | 79 | 1000 |
| 14510008 | 6rm | 7 | 0.7 | 1.4 | 7.2 | 99 | 1000 |
| 14510009 | 10rm | 7 | 0.7 | 1.4 | 8.3 | 149 | 1000 |
| 14510010 | 16rm | 7 | 0.7 | 1.4 | 9.3 | 206 | 1000 |
| 14510011 | 25rm | 7 | 0.9 | 1.4 | 11.0 | 307 | 1000 |
| 14510012 | 35rm | 7 | 0.9 | 1.4 | 11.7 | 412 | 1000 |
| 14510013 | 50rm | 19 | 1 | 1.4 | 13.7 | 527 | 1000 |
| 14510014 | 70rm | 19 | 1.1 | 1.4 | 15.7 | 733 | 1000 |
| 14510015 | 95rm | 19 | 1.1 | 1.5 | 17.7 | 986 | 1000 |
| 14510016 | 120rm | 37 | 1.2 | 1.5 | 19.6 | 1228 | 1000 |
| 14510017 | 150rm | 37 | 1.4 | 1.6 | 21.6 | 1500 | 1000 |
| 14510018 | 185rm | 37 | 1.6 | 1.6 | 24.0 | 1886 | 1000 |
| 14510019 | 240rm | 61 | 1.7 | 1.7 | 27.2 | 2535 | 1000 |
| 14510020 | 300rm | 61 | 1.8 | 1.8 | 30.2 | 3059 | 500 |
| 14510021 | 400rm | 61 | 2.0 | 1.9 | 33.4 | 3887 | 500 |
| 14510022 | 500rm | 61 | 2.2 | 2.0 | 37.1 | 4912 | 500 |
| 14510023 | 630rmc | 61 | 2.4 | 2.2 | 39.9 | 6306 | 500 |

# XLPE INSULATED PVC SHEATHED CABLES

COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

CU/XLPE/PVC

## Two cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14510101 | 1.5rm | 7 | 0.7 | 1.8 | 10.7 | 165 | 1000 |
| 14510103 | 2.5rm | 7 | 0.7 | 1.8 | 11.7 | 207 | 1000 |
| 14510105 | 4rm | 7 | 0.7 | 1.8 | 12.9 | 264 | 1000 |
| 14510107 | 6rm | 7 | 0.7 | 1.8 | 13.7 | 321 | 1000 |
| 14510108 | 10rm | 7 | 0.7 | 1.8 | 15.9 | 467 | 1000 |
| 14510109 | 16rm | 7 | 0.7 | 1.8 | 17.9 | 631 | 1000 |
| 14510110 | 25rm | 7 | 0.9 | 1.8 | 21.3 | 932 | 1000 |
| 14510111 | 35rm | 7 | 0.9 | 1.8 | 21.9 | 896 | 500 |

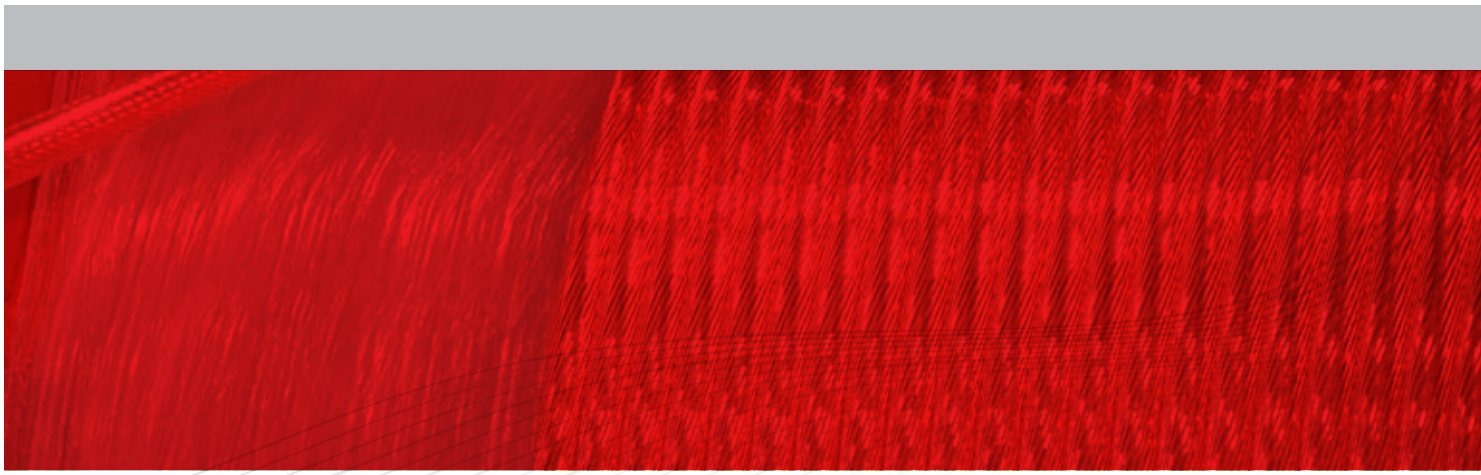
# XLPE INSULATED PVC SHEATHED CABLES

COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

CU/XLPE/PVC

## Three cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14510201 | 1.5rm | 7 | 0.7 | 1.8 | 11.2 | 185 | 1000 |
| 14510203 | 2.5rm | 7 | 0.7 | 1.8 | 12.3 | 234 | 1000 |
| 14510205 | 4rm | 7 | 0.7 | 1.8 | 13.6 | 303 | 1000 |
| 14510207 | 6rm | 7 | 0.7 | 1.8 | 14.4 | 378 | 1000 |
| 14510208 | 10rm | 7 | 0.7 | 1.8 | 16.8 | 563 | 1000 |
| 14510209 | 16rm | 7 | 0.7 | 1.8 | 19.0 | 770 | 1000 |
| 14510210 | 25rm | 7 | 0.9 | 1.8 | 22.7 | 1151 | 1000 |
| 14510211 | 35rm | 7 | 0.9 | 1.8 | 23.4 | 1262 | 1000 |
| 14510212 | 50rm | 19 | 1.0 | 1.8 | 27.7 | 1630 | 1000 |
| 14510213 | 70rm | 19 | 1.1 | 1.9 | 32.2 | 2296 | 1000 |
| 14510214 | 95rm | 19 | 1.1 | 2.0 | 36.3 | 3079 | 1000 |
| 14510215 | 120rm | 37 | 1.2 | 2.1 | 40.6 | 3830 | 500 |
| 14510216 | 150rm | 37 | 1.4 | 2.3 | 44.9 | 4694 | 500 |
| 14510217 | 185rm | 37 | 1.6 | 2.4 | 50.3 | 5885 | 500 |
| 14510218 | 240rm | 61 | 1.7 | 2.6 | 57.2 | 7592 | 500 |
| 14510219 | 300rm | 61 | 1.8 | 2.8 | 63.4 | 9475 | 500 |
| 14510220 | 400rm | 61 | 2.0 | 3.0 | 70.5 | 12028 | 300 |
| 14510221 | 500rm | 61 | 2.2 | 3.3 | 78.0 | 15500 | 300 |



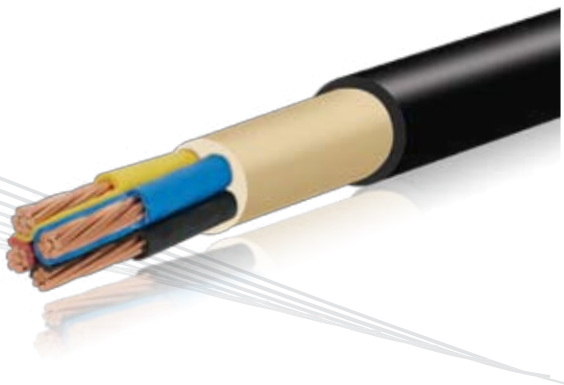
# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

## CU/XLPE/PVC


### Four cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14510301 | 1.5rm | 7 | 0.7 | 1.8 | 11.9 | 211 | 1000 |
| 14510303 | 2.5rm | 7 | 0.7 | 1.8 | 13.1 | 272 | 1000 |
| 14510305 | 4rm | 7 | 0.7 | 1.8 | 14.5 | 355 | 1000 |
| 14510307 | 6rm | 7 | 0.7 | 1.8 | 15.5 | 450 | 1000 |
| 14510308 | 10rm | 7 | 0.7 | 1.8 | 18.2 | 680 | 1000 |
| 14510309 | 16rm | 7 | 0.7 | 1.8 | 20.6 | 955 | 1000 |
| 14510310 | 25rm | 7 | 0.9 | 1.8 | 24.7 | 1416 | 1000 |
| 14510311 | 35sm | 7 | 0.9 | 1.8 | 22.9 | 1567 | 1000 |
| 14510312 | 50sm | 19 | 1.0 | 1.9 | 25.7 | 2000 | 1000 |
| 14510313 | 70sm | 19 | 1.1 | 2.0 | 30.0 | 2855 | 1000 |
| 14510314 | 95sm | 19 | 1.1 | 2.1 | 33.7 | 3860 | 500 |
| 14510315 | 120sm | 37 | 1.2 | 2.3 | 37.7 | 4900 | 500 |
| 14510316 | 150sm | 37 | 1.4 | 2.4 | 41.7 | 6035 | 500 |
| 14510317 | 185sm | 37 | 1.6 | 2.6 | 46.6 | 7441 | 500 |
| 14510318 | 240sm | 61 | 1.7 | 2.8 | 52.4 | 9773 | 500 |
| 14510319 | 300sm | 61 | 1.8 | 3 | 59.2 | 12209 | 300 |
| 14510320 | 400sm | 61 | 2.0 | 3.3 | 65.7 | 15693 | 300 |
| 14510321 | 500sm | 61 | 2.2 | 3.5 | 73.1 | 19716 | 300 |



# XLPE INSULATED PVC SHEATHED CABLES

COPPER CONDUCTOR | UNARMOURED | 0.6/1 kV

CU/XLPE/PVC

## Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | |
| 14510358 | 10rm | 6rm | 7 | 7 | 0.7 | 0.7 | 1.8 | 17.5 | 619 | 500/1000 |
| 14510359 | 16rm | 10rm | 7 | 7 | 0.7 | 0.7 | 1.8 | 200 | 895 | 500/1000 |
| 14510360 | 25rm | 16rm | 7 | 7 | 0.9 | 0.7 | 1.8 | 237 | 1295 | 500 |
| 14510361 | 35sm | 16rm | 7 | 7 | 0.9 | 0.7 | 1.8 | 22.9 | 1478 | 500 |
| 14510362 | 50sm | 25rm | 19 | 7 | 1.0 | 0.9 | 1.8 | 25.7 | 1810 | 500 |
| 14510363 | 70sm | 35rm | 19 | 7 | 1.1 | 0.9 | 1.9 | 29.8 | 2545 | 500 |
| 14510364 | 95sm | 50rm | 19 | 19 | 1.1 | 1.0 | 2.1 | 33.7 | 3434 | 500 |
| 14510365 | 120sm | 70rm | 37 | 19 | 1.2 | 1.1 | 2.2 | 37.5 | 4425 | 500 |
| 14510366 | 150sm | 70rm | 37 | 19 | 1.4 | 1.1 | 2.3 | 41.5 | 5295 | 500 |
| 14510367 | 185sm | 95rm | 37 | 19 | 1.6 | 1.1 | 2.5 | 46.4 | 6610 | 500 |
| 14510368 | 240sm | 120rm | 61 | 37 | 1.7 | 1.2 | 2.7 | 52.0 | 8594 | 250 |
| 14510369 | 300sm | 150rm | 61 | 37 | 1.8 | 1.4 | 2.9 | 58.8 | 10692 | 250 |
| 14510370 | 400sm | 185rm | 61 | 37 | 2.0 | 1.6 | 3.1 | 65.3 | 13883 | 250 |
| 14510371 | 500sm | 240rm | 61 | 61 | 2.2 | 1.7 | 3.4 | 72.7 | 17148 | 250 |

# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

## AL/XLPE/PVC


## Single core

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14710001 | 16rmc | 7 | 0.7 | 1.4 | 9.1 | 115 | 1000 |
| 14710002 | 25rmc | 7 | 0.9 | 1.4 | 10.7 | 153 | 1000 |
| 14710003 | 35rmc | 7 | 0.9 | 1.4 | 11.7 | 187 | 1000 |
| 14710004 | 50rmc | 7 | 1.0 | 1.4 | 13.4 | 260 | 1000 |
| 14710005 | 70rmc | 19 | 1.1 | 1.4 | 15.4 | 340 | 1000 |
| 14710006 | 95rmc | 19 | 1.1 | 1.5 | 17.3 | 417 | 1000 |
| 14710007 | 120rmc | 19 | 1.2 | 1.5 | 18.7 | 504 | 1000 |
| 14710008 | 150rmc | 19 | 1.4 | 1.6 | 21.2 | 621 | 1000 |
| 14710009 | 185rmc | 37 | 1.6 | 1.6 | 23.6 | 758 | 1000 |
| 14710010 | 240rmc | 37 | 1.7 | 1.7 | 26.2 | 955 | 1000 |
| 14710011 | 300rmc | 37 | 1.8 | 1.8 | 29.1 | 1185 | 1000 |
| 14710012 | 400rmc | 61 | 2.0 | 1.9 | 32.6 | 1484 | 1000 |
| 14710013 | 500rmc | 61 | 2.2 | 2.0 | 36.2 | 1875 | 1000 |
| 14710014 | 630rmc | 61 | 2.4 | 2.2 | 40.8 | 2353 | 1000 |

# XLPE INSULATED PVC SHEATHED CABLES

ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

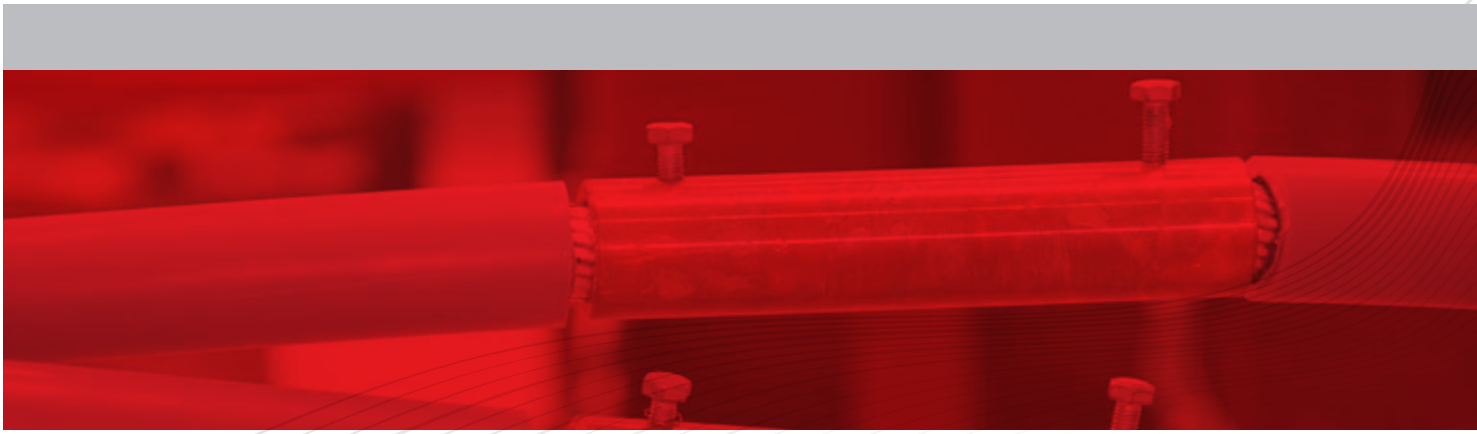
AL/XLPE/PVC

## Two cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14710100 | 16rmc | 7 | 0.7 | 1.8 | 17.5 | 428 | 1000 |
| 14710101 | 25rmc | 7 | 0.9 | 1.8 | 20.7 | 604 | 1000 |
| 14710102 | 35rmc | 7 | 0.9 | 1.8 | 21.9 | 447 | 1000 |

## Three cores

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 14710200 | 16rmc | 7 | 0.7 | 1.8 | 18.5 | 476 | 1000 |
| 14710201 | 25rmc | 7 | 0.9 | 1.8 | 22.0 | 670 | 1000 |
| 14710202 | 35rmc | 7 | 0.9 | 1.8 | 23.3 | 585 | 1000 |
| 14710203 | 50rmc | 7 | 1.0 | 1.8 | 27.0 | 813 | 1000 |
| 14710204 | 70rmc | 19 | 1.1 | 1.9 | 31.5 | 1053 | 1000 |
| 14710205 | 95rmc | 19 | 1.1 | 2.0 | 35.4 | 1366 | 1000 |
| 14710206 | 120rmc | 19 | 1.2 | 2.1 | 38.6 | 1655 | 1000 |
| 14710207 | 150rmc | 19 | 1.4 | 2.3 | 43.9 | 2049 | 1000 |
| 14710208 | 185rmc | 37 | 1.6 | 2.4 | 49.3 | 2487 | 1000 |
| 14710209 | 240rmc | 37 | 1.7 | 2.6 | 54.9 | 3135 | 500 |
| 14710210 | 300rmc | 37 | 1.8 | 2.8 | 60.9 | 3834 | 500 |
| 14710211 | 400rmc | 61 | 2.0 | 3.0 | 68.6 | 4792 | 500 |
| 14710212 | 500rmc | 61 | 2.2 | 3.3 | 76.5 | 6290 | 500 |



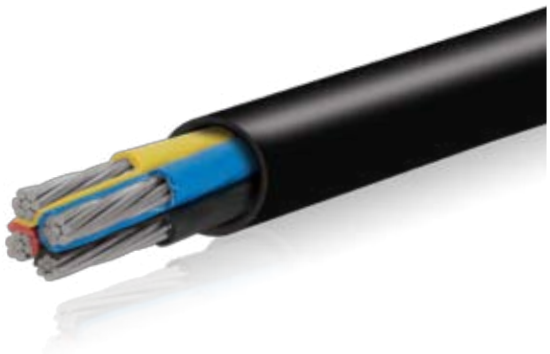
# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

## AL/XLPE/PVC


### Four cores

| Cable Code | Conductor | | Insulation | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14710300 | 16rmc | 7 | 0.7 | 1.8 | 20.1 | 570 | 1000 |
| 14710301 | 25rmc | 7 | 0.9 | 1.8 | 24.1 | 815 | 1000 |
| 14710302 | 35smc | 7 | 0.9 | 1.8 | 22.9 | 667 | 1000 |
| 14710303 | 50smc | 7 | 1.0 | 1.9 | 25.7 | 87.5 | 1000 |
| 14710304 | 70smc | 19 | 1.1 | 2.0 | 30.0 | 1195 | 1000 |
| 14710305 | 95smc | 19 | 1.1 | 2.1 | 33.7 | 1561 | 1000 |
| 14710306 | 120smc | 19 | 1.2 | 2.3 | 37.7 | 1963 | 1000 |
| 14710307 | 150smc | 19 | 1.4 | 2.4 | 41.7 | 2372 | 1000 |
| 14710308 | 185smc | 37 | 1.6 | 2.6 | 46.6 | 2955 | 500 |
| 14710309 | 240smc | 37 | 1.7 | 2.8 | 52.4 | 3773 | 500 |
| 14710310 | 300smc | 37 | 1.8 | 3.0 | 59.2 | 4691 | 500 |
| 14710311 | 400smc | 61 | 2.0 | 3.3 | 65.7 | 5951 | 500 |
| 14710312 | 500smc | 61 | 2.2 | 3.5 | 73.1 | 7573 | 500 |



# XLPE INSULATED PVC SHEATHED CABLES

ALUMINUM CONDUCTOR | UNARMOURED | 0.6/1 kV

AL/XLPE/PVC

## Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | |
| 14710350 | 25rmc | 16rmc | 7 | 7 | 0.9 | 0.7 | 1.8 | 23.6 | 775 | 1000 |
| 14710351 | 35sm | 16rmc | 7 | 7 | 0.9 | 0.7 | 1.8 | 22.9 | 610 | 1000 |
| 14710352 | 50sm | 25rmc | 7 | 7 | 1.0 | 0.9 | 1.8 | 25.7 | 813 | 1000 |
| 14710353 | 70sm | 35rmc | 19 | 7 | 1.1 | 0.9 | 1.9 | 29.8 | 1075 | 1000 |
| 14710354 | 95sm | 50rmc | 19 | 7 | 1.1 | 1.0 | 2.1 | 33.7 | 1440 | 1000 |
| 14710355 | 120sm | 70rmc | 19 | 19 | 1.2 | 1.1 | 2.2 | 37.7 | 1805 | 1000 |
| 14710356 | 150sm | 70rmc | 19 | 19 | 1.4 | 1.1 | 2.3 | 41.5 | 2137 | 1000 |
| 14710357 | 185sm | 95rmc | 37 | 19 | 1.6 | 1.1 | 2.5 | 46.4 | 2678 | 1000 |
| 14710358 | 240sm | 120rmc | 37 | 19 | 1.7 | 1.2 | 2.6 | 52.0 | 3375 | 500 |
| 14710359 | 300sm | 150rmc | 37 | 19 | 1.8 | 1.4 | 2.8 | 58.8 | 4176 | 500 |
| 14710360 | 400sm | 185rmc | 61 | 37 | 2.0 | 1.6 | 3.1 | 65.3 | 5447 | 500 |
| 14710361 | 500sm | 240rmc | 61 | 37 | 2.2 | 1.7 | 3.4 | 72.7 | 6565 | 500 |

# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## CU/XLPE/STA/PVC

### Two cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Stape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14520003 | 4rm | 7 | 0.7 | 0.2 | 1.8 | 14.4 | 350 | 1000 |
| 14520004 | 6rm | 7 | 0.7 | 0.2 | 1.8 | 15.2 | 410 | 1000 |
| 14520005 | 10rm | 7 | 0.7 | 0.2 | 1.8 | 17.4 | 568 | 1000 |
| 14520006 | 16rm | 7 | 0.7 | 0.2 | 1.8 | 19.4 | 765 | 1000 |
| 14520007 | 25rm | 7 | 0.9 | 0.2 | 1.8 | 22.8 | 1075 | 1000 |
| 14520008 | 35rm | 7 | 0.9 | 0.2 | 1.8 | 24.7 | 1162 | 1000 |

### Three cores

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14520103 | 4rm | 7 | 0.7 | 0.2 | 1.8 | 15.1 | 396 | 1000 |
| 14520104 | 6rm | 7 | 0.7 | 0.2 | 1.8 | 15.9 | 476 | 1000 |
| 14520105 | 10rm | 7 | 0.7 | 0.2 | 1.8 | 18.3 | 674 | 1000 |
| 14520106 | 16rm | 7 | 0.7 | 0.2 | 1.8 | 20.5 | 893 | 1000 |
| 14520107 | 25rm | 7 | 0.9 | 0.2 | 1.8 | 24.2 | 1291 | 1000 |
| 14520108 | 35rm | 7 | 0.9 | 0.2 | 1.8 | 26.2 | 1544 | 1000 |
| 14520109 | 50rm | 19 | 1.0 | 0.2 | 1.9 | 30.5 | 1963 | 1000 |
| 14520110 | 70rm | 19 | 1.1 | 0.2 | 2.0 | 35.6 | 2705 | 1000 |
| 14520111 | 95rm | 19 | 1.1 | 0.5 | 2.2 | 41.1 | 3985 | 500 |
| 14520112 | 120rm | 37 | 1.2 | 0.5 | 2.3 | 45.2 | 4819 | 500 |
| 14520113 | 150rm | 37 | 1.4 | 0.5 | 2.4 | 49.9 | 5826 | 500 |
| 14520114 | 185rm | 37 | 1.6 | 0.5 | 2.6 | 55.3 | 7149 | 500 |
| 14520115 | 240rm | 61 | 1.7 | 0.5 | 2.8 | 62.5 | 9094 | 500 |
| 14520116 | 300rm | 61 | 1.8 | 0.5 | 2.9 | 69.0 | 11177 | 300 |
| 14520117 | 400rm | 61 | 2.0 | 0.5 | 3.2 | 75.9 | 13860 | 300 |
| 14520118 | 500rm | 61 | 2.2 | 0.5 | 3.4 | 82.0 | 17505 | 250 |

# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## CU/XLPE/STA/PVC


### Four cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Stape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14520202 | 4rm | 7 | 0.7 | 0.2 | 1.8 | 16.1 | 461 | 1000 |
| 14520203 | 6rm | 7 | 0.7 | 0.2 | 1.8 | 17.0 | 558 | 1000 |
| 14520204 | 10rm | 7 | 0.7 | 0.2 | 1.8 | 19.7 | 806 | 1000 |
| 14520205 | 16rm | 7 | 0.7 | 0.2 | 1.8 | 22.1 | 1086 | 1000 |
| 14520206 | 25rm | 7 | 0.9 | 0.2 | 1.8 | 26.2 | 1577 | 1000 |
| 14520207 | 35sm | 7 | 0.9 | 0.2 | 1.8 | 25.7 | 1844 | 1000 |
| 14520208 | 50sm | 19 | 1.0 | 0.2 | 1.9 | 28.7 | 2326 | 1000 |
| 14520209 | 70sm | 19 | 1.1 | 0.2 | 2.1 | 33.2 | 3251 | 500 |
| 14520210 | 95sm | 19 | 1.1 | 0.5 | 2.3 | 38.3 | 4679 | 500 |
| 14520211 | 120sm | 37 | 1.2 | 0.5 | 2.4 | 42.7 | 5863 | 500 |
| 14520212 | 150sm | 37 | 1.4 | 0.5 | 2.6 | 46.7 | 7090 | 500 |
| 14520213 | 185sm | 37 | 1.6 | 0.5 | 2.7 | 51.6 | 8613 | 500 |
| 14520214 | 240sm | 61 | 1.7 | 0.5 | 2.9 | 57.8 | 11188 | 300 |
| 14520215 | 300sm | 61 | 1.8 | 0.5 | 3.1 | 64.6 | 13756 | 300 |
| 14520216 | 400sm | 61 | 2.0 | 0.5 | 3.4 | 71.5 | 17479 | 250 |
| 14520217 | 500sm | 61 | 2.2 | 0.8 | 3.7 | 80.3 | 22506 | 250 |

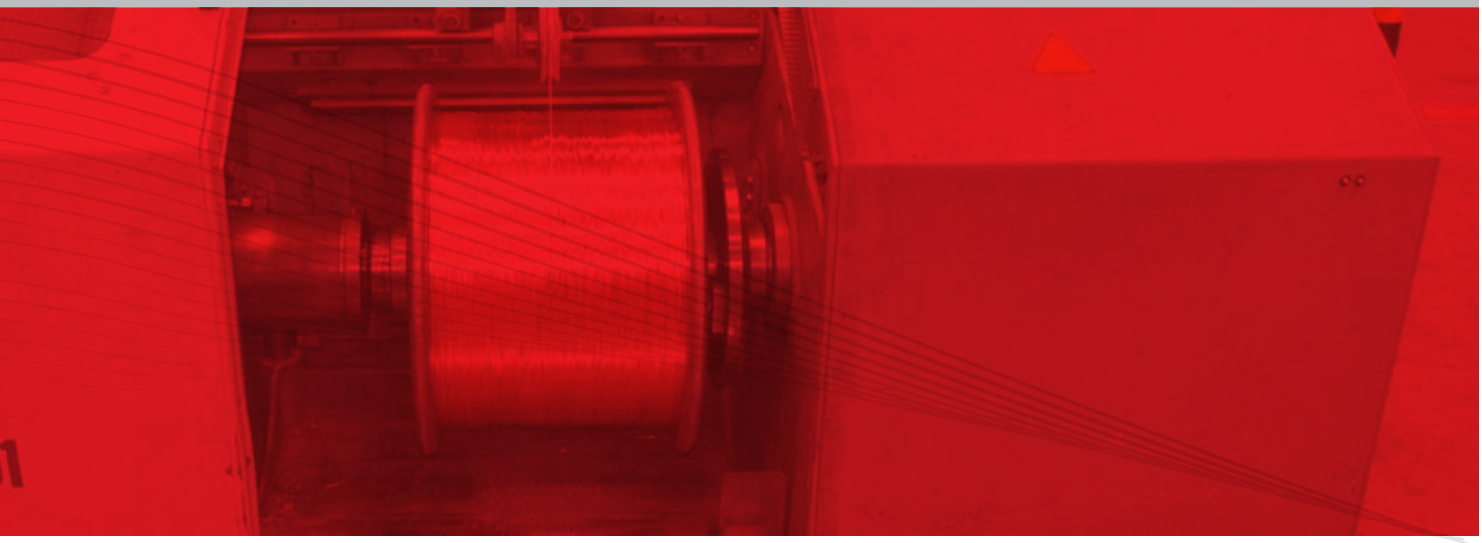
# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## CU/XLPE/STA/PVC

### Four cores with reduced neutral

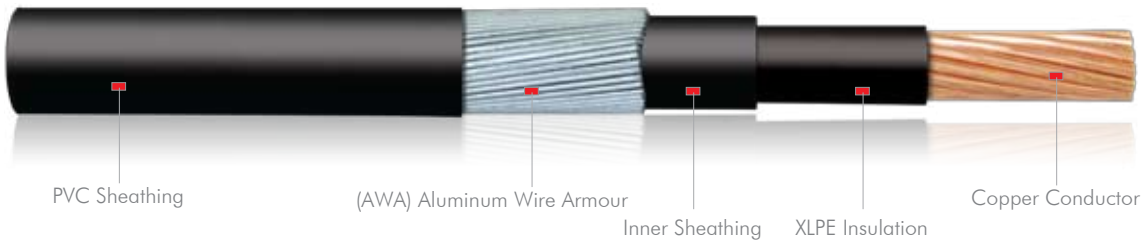
| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14520250 | 10 rm | 6 rm | 7 | 7 | 0.7 | 0.7 | 0.2 | 1.8 | 19.0 | 739 | 1000 |
| 14520251 | 16 rm | 10 rm | 7 | 7 | 0.7 | 0.7 | 0.2 | 1.8 | 21.5 | 1008 | 1000 |
| 14520252 | 25 rm | 16 rm | 7 | 7 | 0.9 | 0.7 | 0.2 | 1.8 | 25.2 | 1448 | 1000 |
| 14520253 | 35 sm | 16 rm | 7 | 7 | 0.9 | 0.7 | 0.2 | 1.8 | 25.7 | 1658 | 1000 |
| 14520254 | 50 sm | 25 rm | 19 | 7 | 1.0 | 0.9 | 0.2 | 1.9 | 28.5 | 2122 | 1000 |
| 14520255 | 70 sm | 35 rm | 19 | 7 | 1.1 | 0.9 | 0.2 | 2.0 | 33.2 | 2955 | 500 |
| 14520256 | 95 sm | 50 rm | 19 | 19 | 1.1 | 1.0 | 0.5 | 2.1 | 38.1 | 4235 | 500 |
| 14520257 | 120sm | 70 rm | 37 | 19 | 1.2 | 1.1 | 0.5 | 2.3 | 42.1 | 5333 | 500 |
| 14520258 | 150sm | 70 rm | 37 | 19 | 1.4 | 1.1 | 0.5 | 2.4 | 46.5 | 6348 | 500 |
| 14520259 | 185sm | 95 rm | 37 | 19 | 1.6 | 1.1 | 0.5 | 2.6 | 51.4 | 7780 | 500 |
| 14520260 | 240sm | 120rm | 61 | 37 | 1.7 | 1.2 | 0.5 | 2.8 | 57.6 | 9992 | 300 |
| 14520261 | 300sm | 150rm | 61 | 37 | 1.8 | 1.4 | 0.5 | 2.9 | 64.2 | 12234 | 300 |
| 14520262 | 400sm | 185rm | 61 | 37 | 2.0 | 1.6 | 0.5 | 3.2 | 70.7 | 15587 | 300 |
| 14520263 | 500sm | 240rm | 61 | 61 | 2.2 | 1.7 | 0.8 | 3.4 | 78.5 | 19123 | 250 |



# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 0.6/1 kV

## CU/XLPE/AWA/PVC




## Single core

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Aluminum wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14600004 | 95rm | 19 | 1.1 | 1.8 | 1.8 | 23.5 | 1300 | 1000 |
| 14600005 | 120rm | 37 | 1.2 | 1.8 | 1.8 | 25.6 | 1565 | 1000 |
| 14600006 | 150rm | 37 | 1.4 | 1.8 | 1.8 | 27.4 | 1870 | 1000 |
| 14600007 | 185rm | 37 | 1.6 | 1.8 | 1.8 | 30.0 | 2327 | 1000 |
| 14600008 | 240rm | 61 | 1.7 | 1.8 | 1.9 | 33.2 | 2930 | 1000 |
| 14600009 | 300rm | 61 | 1.8 | 1.8 | 2.0 | 36.2 | 3603 | 500 |
| 14600010 | 400rm | 61 | 2.0 | 2.0 | 2.1 | 40.2 | 4575 | 500 |
| 14600011 | 500rm | 61 | 2.2 | 2.0 | 2.2 | 43.9 | 5660 | 500 |
| 14600012 | 630rmc | 61 | 2.4 | 2.0 | 2.3 | 46.5 | 7106 | 500 |

# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## CU/XLPE/SWA/PVC

### Two cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14530004 | 6rm | 7 | 0.7 | 0.9 | 1.8 | 16.2 | 514 | 1000 |
| 14530005 | 10rm | 7 | 0.7 | 1.25 | 1.8 | 19.1 | 790 | 1000 |
| 14530006 | 16rm | 7 | 0.7 | 1.25 | 1.8 | 21.1 | 990 | 1000 |
| 14530007 | 25rm | 7 | 0.9 | 1.6 | 1.8 | 25.2 | 1487 | 1000 |
| 14530008 | 35rm | 7 | 0.9 | 1.6 | 1.8 | 27.1 | 1648 | 1000 |

### Three cores

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14530103 | 6rm | 7 | 0.7 | 1.25 | 1.8 | 16.9 | 590 | 1000 |
| 14530104 | 10rm | 7 | 0.7 | 1.25 | 1.8 | 20.0 | 911 | 1000 |
| 14530105 | 16rm | 7 | 0.7 | 1.25 | 1.8 | 22.2 | 1166 | 1000 |
| 14530106 | 25rm | 7 | 0.9 | 1.6 | 1.8 | 26.5 | 1765 | 1000 |
| 14530107 | 35rm | 7 | 0.9 | 1.6 | 1.8 | 28.6 | 2053 | 1000 |
| 14530108 | 50rm | 19 | 1.0 | 1.6 | 1.9 | 33.1 | 2590 | 1000 |
| 14530109 | 70rm | 19 | 1.1 | 2.0 | 2.0 | 38.7 | 3714 | 500 |
| 14530110 | 95rm | 19 | 1.1 | 2.0 | 2.2 | 43.1 | 4700 | 500 |
| 14530111 | 120rm | 37 | 1.2 | 2.0 | 2.3 | 47.4 | 5640 | 500 |
| 14530112 | 150rm | 37 | 1.4 | 2.5 | 2.5 | 53.1 | 7172 | 500 |
| 14530113 | 185rm | 37 | 1.6 | 2.5 | 2.6 | 58.5 | 8650 | 500 |
| 14530114 | 240rm | 61 | 1.7 | 2.5 | 2.8 | 65.7 | 10800 | 300 |
| 14530115 | 300rm | 61 | 1.8 | 2.5 | 3.0 | 72.2 | 13069 | 300 |
| 14530116 | 400rm | 61 | 2.0 | 2.5 | 3.2 | 79.1 | 15965 | 300 |
| 14530117 | 500rm | 61 | 2.2 | 3.15 | 3.5 | 88.5 | 20380 | 250 |

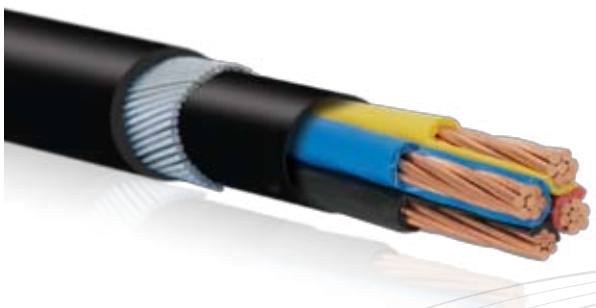
# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## CU/XLPE/SWA/PVC


## Four cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14530202 | 4rm | 7 | 0.7 | 1.25 | 1.8 | 17.1 | 574 | 1000 |
| 14530203 | 6rm | 7 | 0.7 | 1.25 | 1.8 | 18.7 | 774 | 1000 |
| 14530204 | 10rm | 7 | 0.7 | 1.25 | 1.8 | 21.4 | 1064 | 1000 |
| 14530205 | 16rm | 7 | 0.7 | 1.6 | 1.8 | 24.5 | 1508 | 1000 |
| 14530206 | 25rm | 7 | 0.9 | 1.6 | 1.8 | 28.6 | 2085 | 1000 |
| 14530207 | 35sm | 7 | 0.9 | 1.6 | 1.9 | 28.3 | 2370 | 1000 |
| 14530208 | 50sm | 19 | 1.0 | 1.6 | 2.0 | 31.3 | 2918 | 500 |
| 14530209 | 70sm | 19 | 1.1 | 2.0 | 2.2 | 36.8 | 4198 | 500 |
| 14530210 | 95sm | 19 | 1.1 | 2.0 | 2.3 | 40.5 | 5359 | 500 |
| 14530211 | 120sm | 37 | 1.2 | 2.5 | 2.5 | 45.9 | 6969 | 500 |
| 14530212 | 150sm | 37 | 1.4 | 2.5 | 2.6 | 49.9 | 8333 | 500 |
| 14530213 | 185sm | 37 | 1.6 | 2.5 | 2.8 | 54.8 | 9985 | 500 |
| 14530214 | 240sm | 61 | 1.7 | 2.5 | 3.0 | 57.8 | 12141 | 300 |
| 14530215 | 300sm | 61 | 1.8 | 2.5 | 3.2 | 67.8 | 15545 | 250 |
| 14530216 | 400sm | 61 | 2.0 | 3.15 | 3.5 | 76.0 | 20244 | 250 |
| 14530217 | 500sm | 61 | 2.2 | 3.15 | 3.8 | 83.6 | 24834 | 250 |



# XLPE INSULATED PVC SHEATHED CABLES

## COPPER CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## CU/XLPE/SWA/PVC

### Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14530250 | 16rm | 10rm | 7 | 7 | 0.7 | 0.7 | 1.25 | 1.8 | 23.2 | 1275 | 1000 |
| 14530251 | 25rm | 16rm | 7 | 7 | 0.9 | 0.7 | 1.6 | 1.8 | 27.6 | 1947 | 1000 |
| 14530252 | 35sm | 16rm | 7 | 7 | 0.9 | 0.7 | 1.6 | 1.8 | 28.1 | 2170 | 1000 |
| 14530253 | 50sm | 25rm | 19 | 7 | 1.0 | 0.9 | 1.6 | 1.9 | 31.1 | 2712 | 500 |
| 14530254 | 70sm | 35rm | 19 | 7 | 1.1 | 0.9 | 2.0 | 2.1 | 36.6 | 3883 | 500 |
| 14530255 | 95sm | 50rm | 19 | 19 | 1.1 | 1.0 | 2.0 | 2.2 | 40.3 | 4914 | 500 |
| 14530256 | 120sm | 70rm | 37 | 19 | 1.2 | 1.1 | 2.0 | 2.3 | 44.3 | 6082 | 500 |
| 14530257 | 150sm | 70rm | 37 | 19 | 1.4 | 1.1 | 2.5 | 2.5 | 49.7 | 7590 | 500 |
| 14530258 | 185sm | 95rm | 37 | 19 | 1.6 | 1.1 | 2.5 | 2.7 | 54.6 | 9150 | 500 |
| 14530259 | 240sm | 120rm | 61 | 37 | 1.7 | 1.2 | 2.5 | 2.9 | 60.8 | 11547 | 300 |
| 14530260 | 300sm | 150rm | 61 | 37 | 1.8 | 1.4 | 2.5 | 3.0 | 67.4 | 13964 | 300 |
| 14530261 | 400sm | 185rm | 61 | 37 | 2.0 | 1.6 | 3.15 | 3.3 | 75.2 | 18354 | 250 |
| 14530262 | 500sm | 240rm | 61 | 61 | 2.2 | 1.7 | 3.15 | 3.6 | 83.2 | 22256 | 250 |

# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## AL/XLPE/STA/PVC

### Two cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14720001 | 16rmc | 7 | 0.7 | 0.2 | 1.8 | 19.0 | 536 | 1000 |
| 14720002 | 25rmc | 7 | 0.9 | 0.2 | 1.8 | 22.2 | 724 | 1000 |
| 14720003 | 35rmc | 7 | 0.9 | 0.2 | 1.8 | 24.7 | 712 | 1000 |

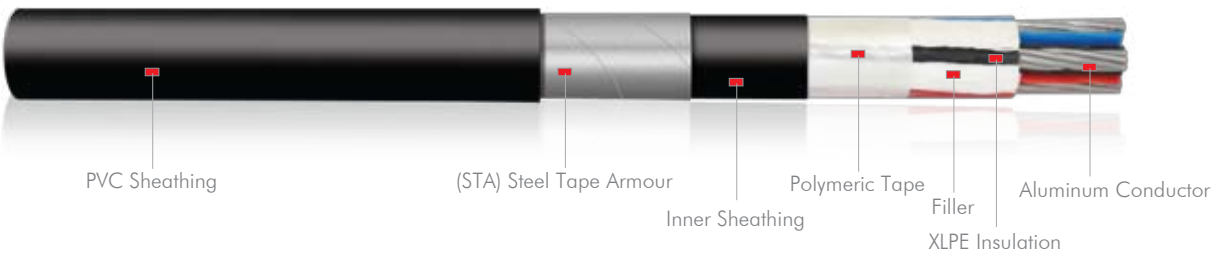
### Three cores

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14720100 | 16rmc | 7 | 0.7 | 0.2 | 1.8 | 20.0 | 597 | 1000 |
| 14720101 | 25rmc | 7 | 0.9 | 0.2 | 1.8 | 23.4 | 808 | 1000 |
| 14720102 | 35rmc | 7 | 0.9 | 0.2 | 1.8 | 26.1 | 870 | 1000 |
| 14720103 | 50rmc | 7 | 1.0 | 0.2 | 1.9 | 29.6 | 1140 | 1000 |
| 14720104 | 70rmc | 19 | 1.1 | 0.2 | 2.0 | 34.7 | 1473 | 1000 |
| 14720105 | 95rmc | 19 | 1.1 | 0.2 | 2.2 | 38.7 | 1849 | 1000 |
| 14720106 | 120rmc | 19 | 1.2 | 0.5 | 2.3 | 43.1 | 2581 | 1000 |
| 14720107 | 150rmc | 19 | 1.4 | 0.5 | 2.4 | 48.9 | 3163 | 500 |
| 14720108 | 185rmc | 37 | 1.6 | 0.5 | 2.6 | 54.3 | 3737 | 500 |
| 14720109 | 240rmc | 37 | 1.7 | 0.5 | 2.8 | 60.2 | 4575 | 500 |
| 14720110 | 300rmc | 37 | 1.8 | 0.5 | 2.9 | 66.4 | 5455 | 500 |
| 14720111 | 400rmc | 61 | 2.0 | 0.5 | 3.2 | 74.0 | 6592 | 500 |
| 14720112 | 500rmc | 61 | 2.2 | 0.8 | 3.4 | 81.0 | 8370 | 500 |

# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

## AL/XLPE/STA/PVC




### Four cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14720200 | 16rmc | 7 | 0.7 | 0.2 | 1.8 | 21.6 | 690 | 1000 |
| 14720201 | 25rmc | 7 | 0.9 | 0.2 | 1.8 | 25.4 | 936 | 1000 |
| 14720202 | 35sm | 7 | 0.9 | 0.2 | 1.8 | 25.7 | 947 | 1000 |
| 14720203 | 50sm | 7 | 1.0 | 0.2 | 1.9 | 28.7 | 1200 | 1000 |
| 14720204 | 70sm | 19 | 1.1 | 0.2 | 2.0 | 33.2 | 1593 | 1000 |
| 14720205 | 95sm | 19 | 1.1 | 0.5 | 2.2 | 38.3 | 2378 | 1000 |
| 14720206 | 120sm | 19 | 1.2 | 0.5 | 2.4 | 42.7 | 2923 | 500 |
| 14720207 | 150sm | 19 | 1.4 | 0.5 | 2.6 | 46.7 | 3425 | 500 |
| 14720208 | 185sm | 37 | 1.6 | 0.5 | 2.7 | 51.6 | 4124 | 500 |
| 14720209 | 240sm | 37 | 1.7 | 0.5 | 2.9 | 57.8 | 5145 | 500 |
| 14720210 | 300sm | 37 | 1.8 | 0.5 | 3.1 | 64.6 | 6246 | 500 |
| 14720211 | 400sm | 61 | 2.0 | 0.5 | 3.2 | 71.5 | 7742 | 500 |
| 14720212 | 500sm | 61 | 2.2 | 0.8 | 3.7 | 80.3 | 10359 | 500 |

# XLPE INSULATED PVC SHEATHED CABLES

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 0.6/1 kV

AL/XLPE/STA/PVC

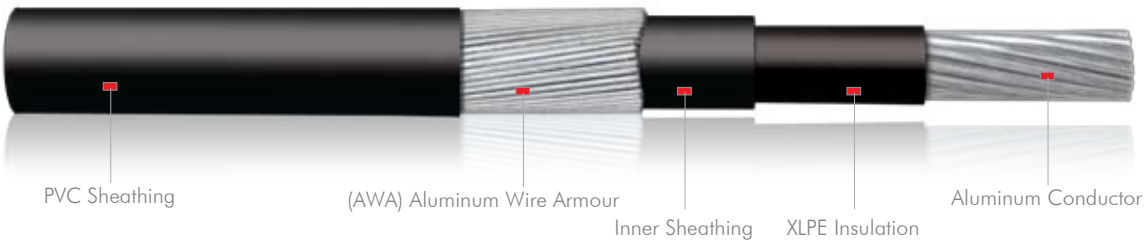
## Four cores with reduced neutral

| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Steel Tape Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14720250 | 25rmc | 16rmc | 7 | 7 | 0.9 | 0.7 | 0.2 | 1.8 | 25.1 | 921 | 1000 |
| 14720251 | 35sm | 16rmc | 7 | 7 | 0.7 | 0.7 | 0.2 | 1.8 | 25.7 | 890 | 1000 |
| 14720252 | 50sm | 25rmc | 7 | 7 | 1.0 | 0.9 | 0.2 | 1.8 | 28.5 | 1124 | 1000 |
| 14720253 | 70sm | 35rmc | 19 | 7 | 1.1 | 0.9 | 0.2 | 2.0 | 33.2 | 1487 | 1000 |
| 14720254 | 95sm | 50rmc | 19 | 7 | 1.1 | 1.0 | 0.5 | 2.1 | 38.1 | 2238 | 1000 |
| 14720255 | 120sm | 70rmc | 19 | 19 | 1.2 | 1.1 | 0.5 | 2.3 | 42.1 | 2716 | 500 |
| 14720256 | 150sm | 70rmc | 19 | 19 | 1.4 | 1.1 | 0.5 | 2.4 | 46.5 | 3187 | 500 |
| 14720257 | 185sm | 95rmc | 37 | 19 | 1.6 | 1.1 | 0.5 | 2.6 | 51.4 | 3844 | 500 |
| 14720258 | 240sm | 120rmc | 37 | 19 | 1.7 | 1.2 | 0.5 | 2.8 | 57.6 | 4769 | 500 |
| 14720259 | 300sm | 150rmc | 37 | 19 | 1.8 | 1.4 | 0.5 | 2.9 | 64.2 | 5716 | 500 |
| 14720260 | 400sm | 185rmc | 61 | 37 | 2.0 | 1.6 | 0.5 | 3.2 | 70.7 | 7156 | 500 |
| 14720261 | 500sm | 240rmc | 61 | 37 | 2.2 | 1.7 | 0.8 | 3.4 | 78.5 | 8537 | 500 |

# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 0.6/1 kV

## AL/XLPE/AWA/PVC




## Single core

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Aluminum wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14800004 | 95 rmc | 19 | 1.1 | 1.8 | 1.8 | 21.1 | 690 | 1000 |
| 14800005 | 120 rmc | 19 | 1.2 | 1.8 | 1.8 | 22.7 | 822 | 1000 |
| 14800006 | 150 rmc | 19 | 1.4 | 1.8 | 1.8 | 25.2 | 982 | 1000 |
| 14800007 | 185 rmc | 37 | 1.6 | 1.8 | 1.8 | 27.6 | 1162 | 1000 |
| 14800008 | 240 rmc | 37 | 1.7 | 1.8 | 1.9 | 30.2 | 1411 | 500 |
| 14800009 | 300 rmc | 37 | 1.8 | 2.0 | 1.9 | 33.5 | 1725 | 500 |
| 14800010 | 400 rmc | 61 | 2.0 | 2.0 | 2.1 | 37.2 | 2275 | 500 |
| 14800011 | 500 rmc | 61 | 2.2 | 2.0 | 2.2 | 40.8 | 2612 | 500 |
| 14800012 | 630 rmc | 61 | 2.4 | 2.5 | 2.3 | 46.2 | 3350 | 500 |

# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## AL/XLPE/SWA/PVC

### Two cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14730001 | 25rmc | 7 | 0.9 | 1.6 | 1.8 | 24.6 | 1145 | 1000 |
| 14730002 | 35rmc | 7 | 0.9 | 1.6 | 1.8 | 27.1 | 1199 | 1000 |

### Three cores

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14730100 | 25rmc | 7 | 0.9 | 1.6 | 1.8 | 25.9 | 1270 | 1000 |
| 14730101 | 35rmc | 7 | 0.9 | 1.6 | 1.8 | 28.5 | 1380 | 1000 |
| 14730102 | 50rmc | 7 | 1.0 | 1.6 | 1.9 | 32.4 | 1755 | 1000 |
| 14730103 | 70rmc | 19 | 1.1 | 2.0 | 2.0 | 38.1 | 2440 | 1000 |
| 14730104 | 95rmc | 19 | 1.1 | 2.0 | 2.2 | 42.2 | 2925 | 1000 |
| 14730105 | 120rmc | 19 | 1.2 | 2.0 | 2.3 | 45.4 | 3360 | 500 |
| 14730106 | 150rmc | 19 | 1.4 | 2.5 | 2.5 | 52.1 | 4485 | 500 |
| 14730107 | 185rmc | 37 | 1.6 | 2.5 | 2.6 | 57.5 | 5214 | 500 |
| 14730108 | 240rmc | 37 | 1.7 | 2.5 | 2.8 | 63.5 | 6202 | 500 |
| 14730109 | 300rmc | 37 | 1.8 | 2.5 | 3.0 | 69.7 | 7270 | 500 |
| 14730110 | 400rmc | 61 | 2.0 | 2.5 | 3.2 | 77.2 | 8606 | 500 |
| 14730111 | 500rmc | 61 | 2.2 | 3.15 | 3.5 | 83.7 | 11045 | 300 |

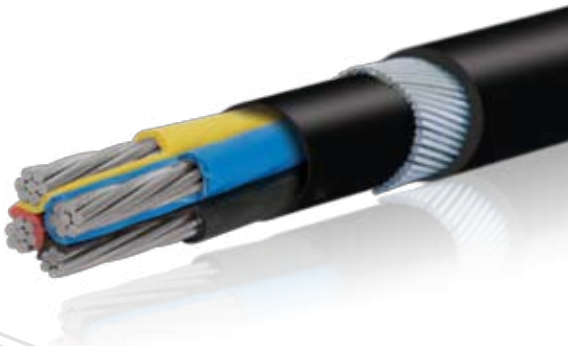
# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

## AL/XLPE/SWA/PVC


## Four cores

| Cable Code | Conductor | | Insulation | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | Number of Wires | Thickness Nominal mm | Dia. of Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| 14730200 | 16rmc | 7 | 0.7 | 1.6 | 1.8 | 24.0 | 1099 | 500 |
| 14730201 | 25rmc | 7 | 0.9 | 1.6 | 1.8 | 27.9 | 1439 | 500 |
| 14730202 | 35sm | 7 | 0.9 | 1.6 | 1.9 | 28.3 | 1473 | 500 |
| 14730203 | 50sm | 7 | 1.0 | 1.6 | 2.0 | 31.3 | 1792 | 500 |
| 14730204 | 70sm | 19 | 1.1 | 2.0 | 2.2 | 36.8 | 2540 | 500 |
| 14730205 | 95sm | 19 | 1.1 | 2.0 | 2.3 | 40.5 | 3057 | 500 |
| 14730206 | 120sm | 19 | 1.2 | 2.5 | 2.5 | 45.7 | 4029 | 500 |
| 14730207 | 150sm | 19 | 1.4 | 2.5 | 2.6 | 49.9 | 4669 | 250 |
| 14730208 | 185sm | 37 | 1.6 | 2.5 | 2.8 | 54.8 | 5495 | 250 |
| 14730209 | 240sm | 37 | 1.7 | 2.5 | 3.0 | 61.0 | 6702 | 250 |
| 14730210 | 300sm | 37 | 1.8 | 2.5 | 3.2 | 67.8 | 7969 | 250 |
| 14730211 | 400sm | 61 | 2.0 | 3.15 | 3.5 | 76.0 | 10507 | 250 |
| 14730212 | 500sm | 61 | 2.2 | 3.15 | 3.8 | 83.6 | 12687 | 250 |



# XLPE INSULATED PVC SHEATHED CABLES

## ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 0.6/1 kV

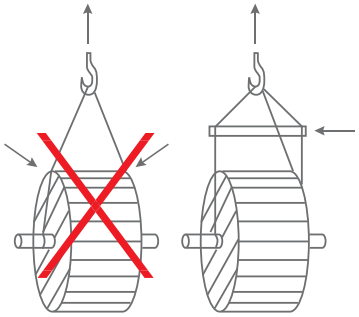
## AL/XLPE/SWA/PVC

### Four cores with reduced neutral

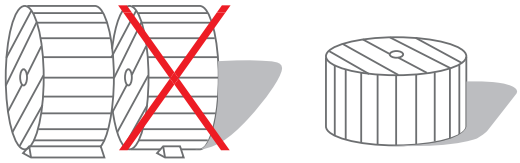
| Cable Code | Conductor | | | | Insulation | | Armouring | Outer Sheath | | Packaging | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cross Sectional Area Nominal $mm^2$ | | Number of Wires | | Thickness Nominal mm | | Thickness Steel Wire Nominal mm | Thickness Nominal mm | Overall Diameter Approx mm | Net Weight Approx kg/km | Standard Drum m+/-2% |
| | Ph | Ne | Ph | Ne | Ph | Ne | | | | | |
| 14730250 | 25rmc | 16rmc | 7 | 7 | 0.9 | 0.7 | 1.6 | 1.8 | 27.5 | 1404 | 1000 |
| 14730251 | 35sm | 16rmc | 7 | 7 | 0.9 | 0.7 | 1.6 | 1.8 | 28.1 | 1401 | 1000 |
| 14730252 | 50sm | 25rmc | 7 | 7 | 1.0 | 0.9 | 1.6 | 1.9 | 31.1 | 1714 | 1000 |
| 14730253 | 70sm | 35rmc | 19 | 7 | 1.1 | 0.9 | 2.0 | 2.1 | 36.6 | 2415 | 1000 |
| 14730254 | 95sm | 50rmc | 19 | 7 | 1.1 | 1.0 | 2.0 | 2.2 | 40.4 | 2917 | 500 |
| 14730255 | 120sm | 70rmc | 19 | 19 | 1.2 | 1.1 | 2.0 | 2.3 | 44.3 | 3465 | 500 |
| 14730256 | 150sm | 70rmc | 19 | 19 | 1.4 | 1.1 | 2.5 | 2.5 | 49.7 | 4429 | 500 |
| 14730257 | 185sm | 95rmc | 37 | 19 | 1.6 | 1.1 | 2.5 | 2.7 | 54.7 | 5214 | 500 |
| 14730258 | 240sm | 120rmc | 37 | 19 | 1.7 | 1.2 | 2.5 | 2.9 | 60.9 | 6325 | 500 |
| 14730259 | 300sm | 150rmc | 37 | 19 | 1.8 | 1.4 | 2.5 | 3.0 | 67.5 | 7445 | 500 |
| 14730260 | 400sm | 185rmc | 61 | 37 | 1.7 | 1.6 | 2.5 | 3.3 | 75.1 | 9922 | 300 |
| 14730261 | 500sm | 240rmc | 61 | 37 | 2.2 | 1.7 | 3.15 | 3.6 | 83.2 | 11670 | 300 |

# DRUM HANDLING INSTRUCTIONS

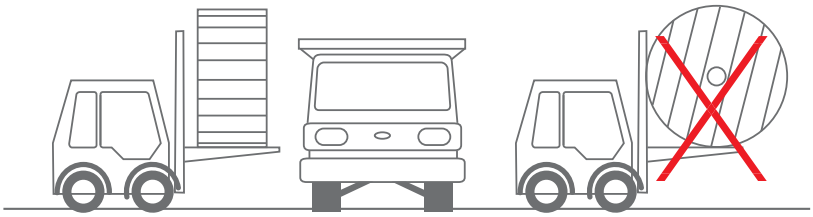
Cables and Conductors should be installed by trained personnel in accordance with good engineering practices, recognized codes of practise, statutory local requirements, IEE wiring regulations and where relevant, in accordance with any specific instructions issued by the company. Cables are often supplied in heavy cable reels and handling these reels can constitute a safety hazard. In particular, dangers may arise during the removal of steel binding straps and during the removal of retaining battens and timbers which may expose projecting nails.



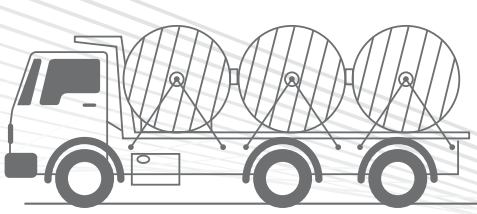
*Lifting cable drums using crane.*



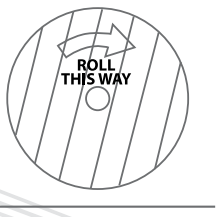
*Do not lay drums flat on their sides, use proper stops to prevent drums roling.*



*Lift drums on fork trucks correctly.*



*Secure drums adequately before transportation.*




*Roll in the direction shown by the arrow.*

# RECOMMENDATIONS FOR CABLES INSTALLATION

## PRODUCT LIFE DATA

Low Voltage cables is not subjected to high electric stress, the XLPE insulating material has a dielectric strength voltage of about 22 KV, with the best manufacturing and testing practice applied in Bahra Cables Company to ensure good quality insulation . As Insulation treeing is uncommon problem for LV cables, the chance of electric break down is very minor. The PVC or PE jacketing material is very stable against most of the Chemical traces could be existing at the soil, these material with Black colour Master batch up to 2.5 % have a strong resistance against UV and Environmental conditions.

The cables have to be selected and installed as per the recommendation mentioned below.

By keeping such standard of installation and operation, Low Voltage cables can survive in service for a time of 25 years or more without failure.

## RECOMMENDATIONS FOR THE SELECTION, INSTALLATIONS AND OPERATION OF CABLES

• The cables are intended to be installed in air, or for burial in free draining soil Conditions. Where the cables are to be laid in any other environment, reference should be made to the cable Bahra Cables Company.

• The rated voltage of the cable for a given application should be suitable for the operating conditions in the system in which the cable is used. To facilitate the selection of the cable, systems are divided into three categories as follows.

a) Category A

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

b) Category B

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

c) Category C

This category comprises all systems which do not fall into categories A and B.

The nominal system voltage U, (up to 1.0 KV) is the nominal voltage between phases,

The maximum sustained system voltage, Um ( 1.2 KV) is the highest voltage between phases that can be sustained under normal operating conditions at any time and at any point in the system. It excludes transient voltage variations, due, for example, to lightning impulses, fault conditions and rapid connection of loads.

Single-core cables are suitable for d.c. systems operating at up to 1 000 V to earth and two-core 600/1 000 V cables at up to 1 500 V between conductors.

## CABLES INSTALLED IN HAZARDOUS AREAS

Where cables are required to be installed in areas classified as hazardous, i.e. potentially explosive gas

atmospheres, reference should be made to IEC 60079-14.

CURRENT RATINGS

The current rates introduced previously in this catalogue have to be followed.

• Cables should be installed and used in association with other equipment in accordance with BS7671 and/or the Electricity Safety, Quality and Continuity Regulations, as appropriate.

In special environments, the appropriate regulations and codes of practice should be observed.

• Minimum temperature during installation

It is recommended that the cables be installed only when both the cable and ambient temperatures are above 0 °C and have been so for the previous 24 h, or where special precautions have been taken to maintain the cable above this temperature.

## MINIMUM INSTALLATION RADIUS

None of the cables specified in this catalogue should be bent during installation to a radius smaller than that given in BCC product Catalogues and the offered data sheets, wherever possible, larger installation radii should be used.

## PREVENTION OF MOISTURE INGRESS

Care should be exercised during installation to avoid any damage to cable coverings. This is important in wet or other aggressive environments. The protective cable end cap should not be removed from the ends of the cable until immediately prior to termination or jointing, especially for cables that do not have extruded bedding. When the end caps have been removed the unprotected ends of the cable should not be exposed to any kind of moisture.

## TEST AFTER INSTALLATION

A voltage test after installation should be performed with direct current of 3.5 KV DC between conductor phases and the same value between each conductor and armouring.

During the test, the voltage should be increased gradually to the full value and maintained continuously for 15 min. The test should be made between conductors and between each conductor and armour.

The requirement is : No breakdown should occur.

The test voltages given above are intended for cables immediately after installation and not for cables that have been in service. When testing is required after cables have been in service, regardless of service duration, Bahra Cables Company- Technology Department should be consulted for the appropriate test conditions, which depend on the individual circumstances.

## CABLES FAULTS PREVENTION

The Low Voltage Cables faults are possible due to different reasons:

1. Physical damage due to mishandling or misuse
2. Physical Damage during operations.
3. Over current.
4. Fire or excessive temperature at the cables location.
5. Manufacturing malfunction, which Bahra Cables Company guarantees its product against any defect or wrong workmanship, meanwhile in case of damage due to this reason, the action will be taken as per the submitted warranty letter, and the company will apply the required corrective and preventive actions.

Recommendation for failures:

Insulation failure, the defected section is recommended to be replaced , the replacement should be from joint to joint.

Serving/ jacketing failure, if the water did not ingress through the cable, the jacket will be repaired using proper repairing techniques carried out by skilled technician. If the water came inside the cables to insulation, for cables suitable for wet location, practically dry the defected portion before repair.

If the cable is not suitable for wet applications and the underground water engrossed inside it, replacing the defected section from joint to joint is the recommend solution.

# ORDERING INFORMATION

To serve our customer in minimum time and high efficiency, our valuable customers are requested to provide the following details along with their enquiries and orders:

1. Number of phases/cores.
2. Conductor required cross sectional area (conductor size along with size of neutral phase).
3. System Voltage Rate .
4. Applicable customer specification or International Standard / Norm.
5. Conductor material (Copper/Aluminum).
6. Insulation Material (PVC/XLPE/LSZH).
7. Bedding / Inner Sheathing (Inner Jacketing ( PVC/PE, .. ).
8. Armouring Type (SWA, AWA or STA).
9. Cable jacketing material (PVC/MDPE/LSZH).
10. Cable special features required, e.g. circular conductors, Flame Retardant Type to IEC 60332-3, Anti-termite
11. Required length of cables (drum schedules)

# LOCATION MAP