MEDIUM VOLTAGE POWER CABLES
CONTENTS

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 500,000 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 (CSA , 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 medium voltage cables up to 36 KV, with XLPE insulation to IEC 60502-2 and BS 6622.

AREA

Bahra Cables Company has a total land area of about 500,000 sqm at disposal.
The built-up area, including offices and manufacturing plants, is more than 97,500 sqm.
The factory extension currently under construction measures over 47,000 sqm.
The allocated area for material and products' storage is more than 89,000 sqm.

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: MV Cables to IEC 60502-2 up to 18/30 (36) kV and to BS 6622 up to 19/33 (36) kV, which is covered in the catalogue.

Additionally, other products described in seperate publications covers:

- MV Cables with Low Smoke and Fume Zero Halogen LSF-ZH to BS 7835.
- Flexible wires and cables up to 300 mm^2 to IEC 60227, BS 6004 & BS 6500.
- 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 mm^2.

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 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 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 covers all the company product range.

TECHNICAL INFORMATION
GENERAL

PRODUCT RANGE

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

This Catalogue is intended for Medium Voltage Power Cables, Aluminum and Copper conductors of voltage range up to and includes 36 kV

CABLE TYPES

1) Copper Conductor Cables
2) Aluminum Conductor Cables
3) Armoured / Non-armoured Cables
4) Voltage range U0/ U / (Umax) as :
   a. 3.6/6 (7.2) kV
   b. 6.0/10(12) kV or 6.35/11(12) kV
   c. 8.7/15(17.5) kV
   d. 12/20(24) kV
   e. 18/30(36) kV or 19/33(36) kV

Single core cables up to and including 800 mm^2

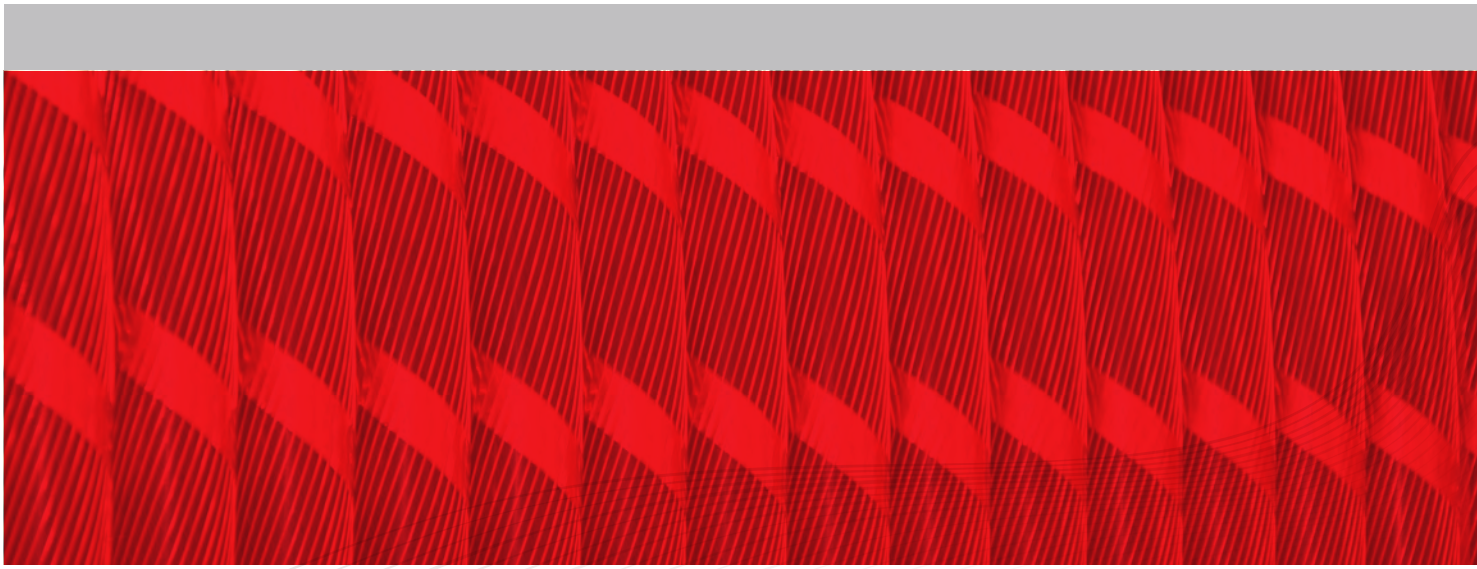
3 core cables up to and including 400 mm^2

APPLICABLE STANDARDS

IEC 60502 (Part 2) "XLPE insulated cables" Single Core / 3 core

BS 6622 for XLPE insulated armoured cables

Any other customer of International standards e.g. UL 1072, ANSI/ACEA, 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

α : 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
Єr : Relative permittivity of insulation material
Єr = 4.8 for PVC
Єr = 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 in construction tables

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:

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

2- for three phase circuit :

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

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

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 rmc, round compacted stranded

2.0 CONDUCTOR SEMI-CONDUCTIVE - INSULATION – INSULATION SEMI-CONDUCTIVE

The three layers are extruded in one step using the state-of-art Catenary Continuous Vulcanization (CCV) technology with advanced automatic concentricity control system which can guarantee the highest quality of the insulated conductor.

2.1 Conductor Semi-conductive (Stress control layer)

Over the metallic conductor, an extruded layer of cross linked semi-conducting compound is applied. This layer acts to smooth out any irregularities and thus reduces the probability of protrusions into the insulating layer. Such protrusions into the insulation or into the semi-conducting layer increase the localized stress that may exceed the long-term breakdown strength of the insulation, so the semi-conductive layer is acting as a stress control layer.

2.2 Insulation:

Each core conductor is insulated by extruded cross-linked low density polyethylene (GP 8) conforming to BS 7655: Section 1.3 and IEC 60502-2 , the insulating compound is a developed material suitable for application through CCV technology. Upon customer request, a tree resistant' XLPE (TR-XLPE) insulation is used.

The insulation thickness is selected based on the designated voltage rate complying with IEC 60502-2 & BS 6622, which as the following table:

2.3 Insulation Semi-conductive -Stress Relief Layer

Over the insulation, an extruded layer of cross linked semi-conducting compound is applied. This layer, which has a very smooth surface, is a transition form the insulating material where the electric field exists to a conductive metallic screen, where the electric field is zero, so it will reduce the stress enhancement at the insulation layer.
The insulation's shield layer could be bonded to the insulation or strippable type for easily removable to facilitate splicing and terminating. The volume resistivity of this external layer is limited to 500 meter-ohms.

3.0 Metallic Screening / Shielding

The metallic screening over insulation semi-conductive layer is necessary to cancel out the electric field outside the cable and to provide a low resistance path for charging current to flow to ground. When the screening bonded to earth it will also carry out the short circuit fault current.

4.0 CABLE ASSEMBLY

For 3 core cable, the screened cores will have identification tape (Red , Yellow & Blue) under the metallic screen, then the cores are laid up together to form the laid up cable cores. A non-hygroscopic polypropylene filler is applied 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 prevent 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.

5.0 BEDDING

Extruded bedding layer 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 or suitable PE type.

6.0 ARMOURING

The cable intended for tray application is protected enough and does not require armour in general, while it is recommended to have armour for the cable 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:

- 6.1 One layer of Galvanized Round Steel Wire to BS EN 10257 is applied helically over the bedding.
- 6.2 Double Galvanized Steel Tape applied over each other, with a suitable overlap, one layer covers the gap of the other layer.
- 6.3 Aluminum wire armouring for a single core cable acts as non magnetic armour

7.0 OUTERSHEATH (OUTERJACKET)

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

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

General purpose 90 °C PVC Type ST2 compound as specified in IEC 60502-2, or its equivalent PVC Type 9 to BS 7655-4.2.

Mediumor High density PolyethyleneMDPE / HDPE compound fulfill and exceed the requirements of Type ST7 IEC 60502-2 for cables that require to be abrasion resistant, protected against water ingress and strong Environmental Stress Crack Resistant (ESCR).

Halogen Free Flame Retardant (HFFR) compounds complying with 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 7835.

The standard sheath color is Black or Red which has a suitable UV proved additive is added to ensure resistance to sunlight.

When the cable is required to ant-termite / anti-vermin, a special additive is added to the sheathing compound.

A layer of graphite coated is applied upon customer request.

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.

1. 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: Recommended minimum bending radius

Type of cable	Minimum Bending Radius (mm)	
	During Installation	Adjacent to joints or terminals
Single Core Cables	15D	12D
Three Core Cables	12D	10D

1. CURRENT RATING ASSUMPTIONS

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 are verified with the tabulated value in IEC 60502-2.

The calculation is based on the standard dimensions of cables based on IEC 60502-2, which may have a slight difference from the applied cable dimension which are following the best common manufacturing practices.

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

The basis of the standard conditions is the climate conditions of the Kingdom of Saudi Arabia, which are :

Ambient Air Temperature	:	40 °C
Ambient Ground Temperature	:	35°C
Depth of laying in ground	:	0.80 m
Soil Thermal Resistivity	:	1.2 °K.m/W

For other installation conditions or any value of different air/ ground temperature, depth of laying, different soil thermal resistivity the customer is divided to multiply the tabulated current rating by the de-rating factor values as in tables 3 to 5 for direct buried cables in ground and tables 6 to 12 for cables installed in duct.

2. INSTALLATION CONDITIONS FOR CABLES IN AIR

Table 3 : Rating factors for ambient air temperatures variation

Air Temparatures	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
Rating Factors	1.18	1.14	1.1	1.05	1	0.95	0.90	0.83	0.78

3. 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 4 : 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
Rating Factors	1.17	1.12	1.08	1.04	1.00	0.96	0.90	0.85	0.80

Table 5 : Rating factors for depth of laying

Depth of Laying	Single Core Cables		Three Core Cables
	Nominal conductor size mm2		
	≤ 185 mm2	> 185 mm2	
0.50	1.04	1.06	1.04
0.60	1.02	1.04	1.03
0.80	1.00	1.00	1.00
1.00	0.98	0.97	0.98
1.25	0.96	0.95	0.96
1.50	0.95	0.93	0.95
2.0	0.93	0.90	0.93
2.5	0.91	0.88	0.91
3.0	0.90	0.86	0.90

Table 6 : Rating factors for variation in thermal resistivity of soil (average values)

Rating Factors	Soil Thermal Resistivity (°C m / W)							
	0.8	0.9	1.0	1.2	1.5	2.0	2.5	3.0
Single Core Cables								
≤ 50 mm²	1.19	1.16	1.11	1	0.91	0.83	0.77	0.69
> 50 mm² & ≤ 185 mm²	1.21	1.16	1.13	1	0.92	0.82	0.76	0.69
240 mm² and above	1.23	1.17	1.17	1	0.92	0.82	0.76	0.68
Three Core Cables								
≤ 50 mm²	1.15	1.12	1.09	1	0.89	0.85	0.80	0.72
> 50 mm² & ≤ 185 mm²	1.16	1.13	1.09	1	0.89	0.85	0.80	0.72
240 mm² and above	1.17	1.14	1.10	1	0.90	0.85	0.79	0.72

4. 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.

Table 7 : 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
All Cable Types	1.16	1.13	1.09	1.03	1	0.95	0.89	0.84	0.79

Table 8 : Rating factors for depth of laying (to center of cable or trefoil group of cables)

Depth of Laying	Single Core Cables		Three Core Cables
	Nominal conductor size mm2		
	≤ 185 mm2	>185 mm2	
0.50	1.04	1.06	1.03
0.60	1.02	1.03	1.02
0.80	1.00	1.00	1.00
1.00	0.98	0.97	0.99
1.25	0.96	0.95	0.97
1.50	0.95	0.93	0.96
2.0	0.93	0.91	0.94
2.5	0.91	0.89	0.93
3.0	0.90	0.88	0.92

Table 9: Rating factors for variation in thermal resistivity of soil (average values)

Rating Factors	Soil Thermal Resistivity (°C m / W)							
	0.8	0.9	1.0	1.2	1.5	2.0	2.5	3.0
Single Core Cables								
≤ 50 mm^2	1.13	1.10	1.07	1	0.96	0.87	0.8	0.76
> 50 mm^2 & ≤ 185 mm^2	1.14	1.10	1.07	1	0.95	0.87	0.79	0.74
240 mm^2 and above	1.15	1.11	1.08	1	0.95	0.85	0.79	0.73
Three Core Cables								
≤ 50 mm^2	1.16	1.12	1.08	1	0.97	0.87	0.80	0.76
> 50 mm^2 & ≤ 185 mm^2	1.17	1.13	1.08	1	0.96	0.87	0.79	0.73
240 mm^2 and above	1.18	1.13	1.09	1	0.96	0.85	0.79	0.72

Table 10 : Group rating factors for circuits of three single core cables in trefoil or laid flat touching, in horizontal formation

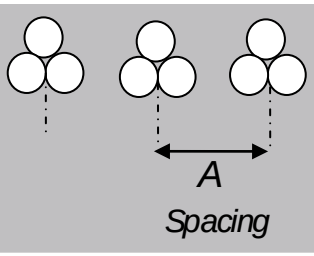
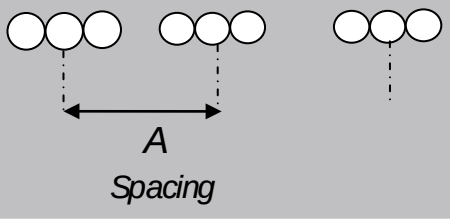
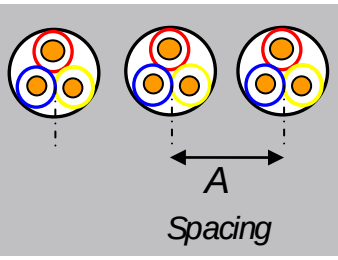
Number of Circuits						
	Nil (Cables Touching)		Cable to Cable Clearance A			
	Trefoil	Flat Laying	0.15m	0.30m	0.45m	0.60m
2	0.78	0.81	0.81	0.85	0.88	0.90
3	0.66	0.70	0.71	0.76	0.80	0.83
4	0.61	0.64	0.64	0.72	0.76	0.80
5	0.56	0.60	0.60	0.68	0.73	0.77
6	0.53	0.57	0.57	0.66	0.72	0.76

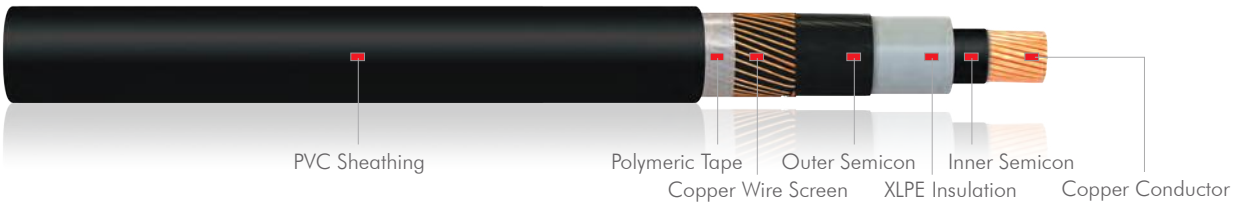
Table 11: Group rating factors for multi-core cables in horizontal formation

Number of Cables in Group					
	Cable to Cable Clearance A				
	Touching	0.15m	0.30m	0.45m	0.60m
2	0.81	0.84	0.87	0.89	0.91
3	0.70	0.73	0.78	0.82	0.85
4	0.63	0.68	0.74	0.78	0.82
5	0.59	0.63	0.70	0.75	0.79
6	0.55	0.60	0.68	0.74	0.77

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

CU/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21010002	35	7.0	2.5	16	1.8	21	810	1000
21010003	50	8.12	2.5	16	1.8	23	940	1000
21010004	70	9.7	2.5	16	1.8	24	1160	1000
21010005	95	11.4	2.5	16	1.8	26	1430	1000
21010006	120	12.86	2.5	16	1.8	27	1680	1000
21010007	150	14.25	2.5	25	1.8	29	2060	1000
21010008	185	15.91	2.5	25	1.9	31	2430	1000
21010009	240	18.4	2.6	25	1.9	33	3030	1000
21010010	300	20.68	2.8	25	2.0	36	3670	500
21010011	400	23.24	3.0	35	2.2	41	4690	500
21010012	500	26.35	3.2	35	2.3	44	5730	500
21010013	630	30.4	3.2	35	2.4	48	7165	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21020002	35	7.0	2.5	1.8	19	670	1000
21020003	50	8.12	2.5	1.8	20	800	1000
21020004	70	9.7	2.5	1.8	22	1030	1000
21020005	95	11.4	2.5	1.8	24	1300	1000
21020006	120	12.86	2.5	1.8	25	1570	1000
21020007	150	14.25	2.5	1.8	27	1850	1000
21020008	185	15.91	2.5	1.8	28	2200	1000
21020009	240	18.4	2.6	1.9	31	2810	1000
21020010	300	20.68	2.8	2.0	34	3460	500
21020011	400	23.24	3.0	2.1	38	4370	500
21020012	500	26.35	3.2	2.2	42	5420	500
21020013	630	30.4	3.2	2.3	46	6850	500

TECHNICAL INFORMATION

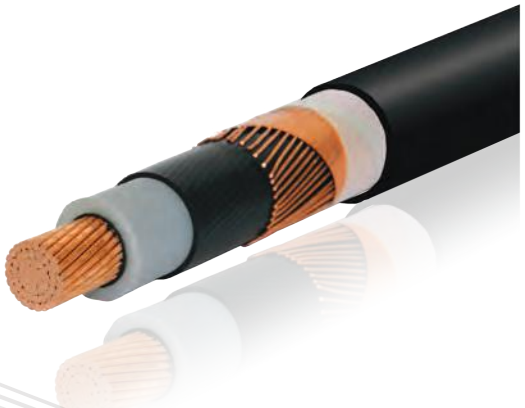
COPPER CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/ Km	0.409	0.393	0.369	0.350	0.337	0.327	0.318	0.307	0.302	0.299	0.292	0.282
Reactance at 60 Hz	Ω/km	0.16	0.15	0.14	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11
Capacitance	μF/Km	0.3	0.33	0.37	0.42	0.46	0.5	0.55	0.6	0.61	0.65	0.68	0.77
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.37	0.39	0.44	0.47	0.51	0.54	0.58	0.64	0.70	0.77	0.86	0.95
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	161	188	230	274	310	345	388	447	500	550	614	679
Flat Formation(Approx.)	A	161	188	230	274	310	342	384	441	495	531	585	641
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	167	200	246	300	345	390	446	527	607	689	787	895
Flat (Touching) Formation(Approx.)	A	182	215	267	325	375	421	480	564	645	717	811	913
Voltage Drop per phase	V/A/ km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	320	345	360	390	410	430	460	500	545	615	670	735

The above values are based on the following conditions:

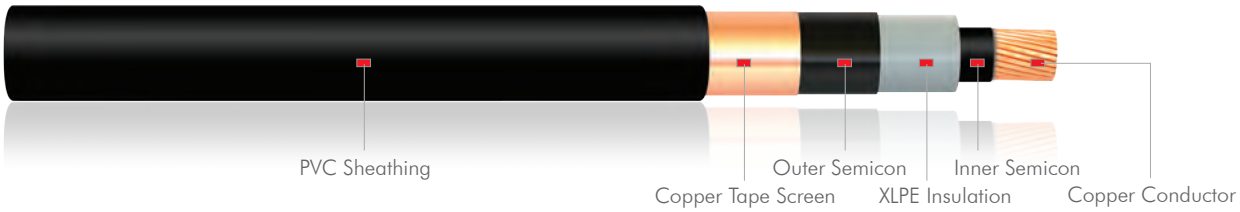
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV CU/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22010002	35	7.0	3.4	16	1.8	23	870	1000
22010003	50	8.12	3.4	16	1.8	24	1000	1000
22010004	70	9.7	3.4	16	1.8	26	1240	1000
22010005	95	11.4	3.4	16	1.8	28	1510	1000
22010006	120	12.86	3.4	16	1.8	29	1760	1000
22010007	150	14.25	3.4	25	1.9	31	2150	1000
22010008	185	15.91	3.4	25	1.9	32	2520	1000
22010009	240	18.4	3.4	25	2.0	35	3130	1000
22010010	300	20.68	3.4	25	2.1	38	3760	500
22010011	400	23.24	3.4	35	2.2	41	4750	500
22010012	500	26.35	3.4	35	2.3	45	5760	500
22010013	630	30.4	3.4	35	2.4	49	7200	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22020002	35	7.0	3.4	1.8	21	740	1000
22020003	50	8.12	3.4	1.8	22	870	1000
22020004	70	9.7	3.4	1.8	24	1100	1000
22020005	95	11.4	3.4	1.8	26	1390	1000
22020006	120	12.86	3.4	1.8	27	1640	1000
22020007	150	14.25	3.4	1.8	28	1930	1000
22020008	185	15.91	3.4	1.9	30	2310	1000
22020009	240	18.4	3.4	2.0	33	2920	1000
22020010	300	20.68	3.4	2.0	35	3530	500
22020011	400	23.24	3.4	2.1	39	4420	500
22020012	500	26.35	3.4	2.2	42	5450	500
22020013	630	30.4	3.4	2.3	46	6880	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/ Km	0.430	0.408	0.385	0.365	0.352	0.342	0.330	0.318	0.308	0.303	0.294	0.283
Reactance at 60 Hz	Ω/km	0.16	0.15	0.15	0.14	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11
Capacitance	μF/Km	0.23	0.26	0.29	0.33	0.36	0.38	0.42	0.47	0.52	0.58	0.65	0.73
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.41	0.44	0.48	0.52	0.55	0.58	0.62	0.68	0.73	0.80	0.88	0.96
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	161	188	230	274	310	345	388	447	500	550	614	679
Flat Formation(Approx.)	A	161	188	230	274	310	342	384	441	495	531	585	641
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	167	200	246	300	345	390	446	527	607	689	787	895
Flat (Touching) Formation(Approx.)	A	182	215	267	325	375	421	480	564	645	717	811	913
Voltage Drop per phase	V/A/ km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	350	375	390	420	450	470	495	540	570	630	680	740

The above values are based on the following conditions:

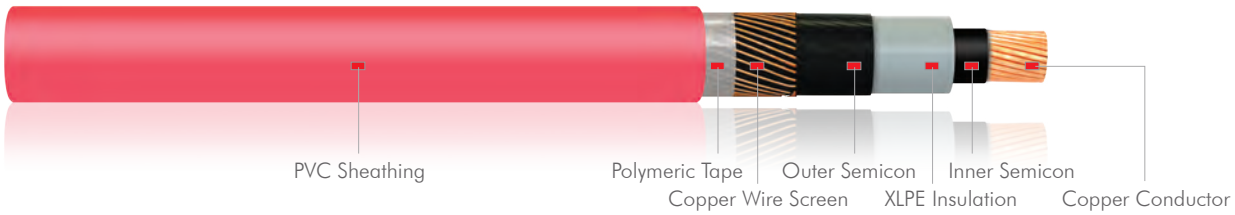
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

CU/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23010002	35	7.0	4.5	16	1.8	25	960	1000
23010003	50	8.12	4.5	16	1.8	27	1090	1000
23010004	70	9.7	4.5	16	1.8	28	1330	1000
23010005	95	11.4	4.5	16	1.8	30	1610	1000
23010006	120	12.86	4.5	16	1.9	32	1880	1000
23010007	150	14.25	4.5	25	1.9	33	2280	1000
23010008	185	15.91	4.5	25	2.0	35	2670	1000
23010009	240	18.4	4.5	25	2.1	38	3280	1000
23010010	300	20.68	4.5	25	2.1	40	3900	500
23010011	400	23.24	4.5	35	2.3	44	4910	500
23010012	500	26.35	4.5	35	2.4	47	5940	500
23010013	630	30.4	4.5	35	2.5	52	7470	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23020002	35	7.0	4.5	1.8	23	830	1000
23020003	50	8.12	4.5	1.8	24	970	1000
23020004	70	9.7	4.5	1.8	26	1200	1000
23020005	95	11.4	4.5	1.8	28	1500	1000
23020006	120	12.86	4.5	1.9	29	1760	1000
23020007	150	14.25	4.5	1.9	31	2060	1000
23020008	185	15.91	4.5	2.0	33	2450	1000
23020009	240	18.4	4.5	2.0	35	3050	1000
23020010	300	20.68	4.5	2.1	38	3690	500
23020011	400	23.24	4.5	2.2	41	4590	500
23020012	500	26.35	4.5	2.3	44	5630	500
23020013	630	30.4	4.5	2.4	49	7080	500

TECHNICAL INFORMATION

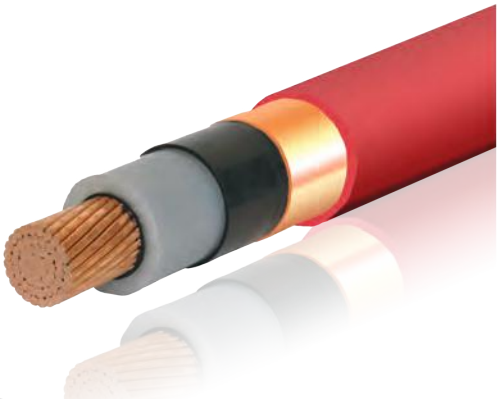
COPPER CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/ Km	0.447	0.425	0.401	0.381	0.367	0.357	0.346	0.331	0.320	0.315	0.304	0.296
Reactance at 60 Hz	Ω/km	0.17	0.16	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.11
Capacitance	µF/Km	0.19	0.21	0.23	0.26	0.28	0.31	0.33	0.37	0.41	0.46	0.51	0.57
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.46	0.49	0.53	0.56	0.60	0.63	0.67	0.73	0.78	0.85	0.93	1.01
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	161	188	230	274	310	345	388	447	500	550	614	679
Flat Formation(Approx.)	A	161	188	230	274	310	342	384	441	495	531	585	641
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	167	200	246	300	345	390	446	527	607	689	787	895
Flat (Touching) Formation(Approx.)	A	182	215	267	325	375	421	480	564	645	717	811	913
Voltage Drop per phase	V/A/ km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	385	400	425	450	475	500	525	570	600	660	705	785

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

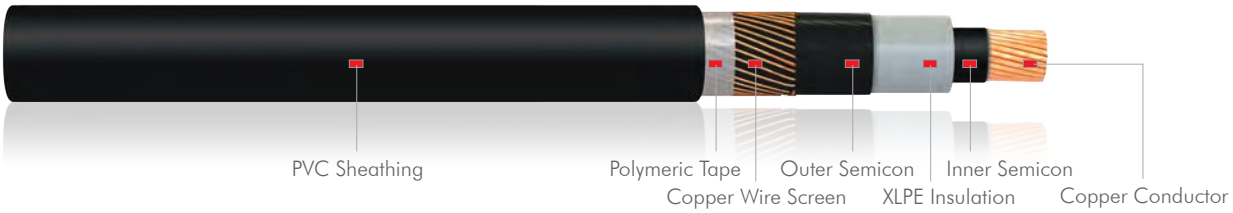
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 12/20 (24)kV

CU/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24010001	35	7.0	5.5	16	1.8	27	1040	1000
24010002	50	8.12	5.5	16	1.8	29	1180	1000
24010003	70	9.7	5.5	16	1.9	30	1430	1000
24010004	95	11.4	5.5	16	1.9	32	1720	1000
24010005	120	12.86	5.5	16	2.0	34	2010	1000
24010006	150	14.25	5.5	25	2.0	35	2400	1000
24010007	185	15.91	5.5	25	2.1	37	2800	1000
24010008	240	18.4	5.5	25	2.1	40	3400	1000
24010009	300	20.68	5.5	25	2.2	42	4040	500
24010010	400	23.24	5.5	35	2.3	46	5050	500
24010011	500	26.35	5.5	35	2.4	50	6170	500
24010012	630	30.4	5.5	35	2.5	54	7640	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24020001	35	7.0	5.5	1.8	25	910	1000
24020002	50	8.12	5.5	1.8	26	1060	1000
24020003	70	9.7	5.5	1.8	28	1300	1000
24020004	95	11.4	5.5	1.9	30	1600	1000
24020005	120	12.86	5.5	1.9	31	1870	1000
24020006	150	14.25	5.5	2.0	33	2190	1000
24020007	185	15.91	5.5	2.0	35	2570	1000
24020008	240	18.4	5.5	2.1	37	3190	1000
24020009	300	20.68	5.5	2.2	40	3840	500
24020010	400	23.24	5.5	2.3	43	4760	500
24020011	500	26.35	5.5	2.4	47	5800	500
24020012	630	30.4	5.5	2.5	51	7270	500

TECHNICAL INFORMATION

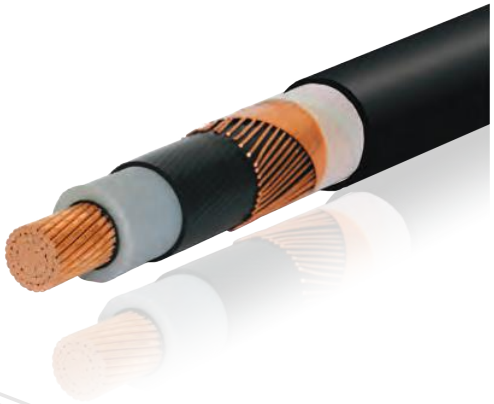
COPPER CONDUCTOR | UNARMOURED | 12/20 (24)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/Km	0.462	0.440	0.416	0.395	0.382	0.370	0.358	0.342	0.330	0.323	0.316	0.303
Reactance at 60 Hz	Ω/km	0.17	0.17	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.12	0.12	0.12
Capacitance	μF/Km	0.17	0.18	0.20	0.22	0.24	0.26	0.28	0.31	0.34	0.39	0.42	0.48
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.50	0.53	0.57	0.61	0.64	0.68	0.72	0.77	0.82	0.90	0.97	1.08
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	161	188	230	274	310	345	388	447	500	550	614	679
Flat Formation(Approx.)	A	161	188	230	274	310	342	384	441	495	531	585	641
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	167	200	246	300	345	390	446	527	607	689	787	895
Flat (Touching) Formation(Approx.)	A	182	215	267	325	375	421	480	564	645	717	811	913
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	415	430	460	480	510	530	560	600	635	690	750	815

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV CU/XLPE/PVC

SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25010001	50	8.12	8.0	16	2.0	34	1470	1000
25010002	70	9.7	8.0	16	2.0	35	1720	1000
25010003	95	11.4	8.0	16	2.1	37	2040	1000
25010004	120	12.86	8.0	16	2.1	39	2320	1000
25010005	150	14.25	8.0	25	2.2	41	2740	1000
25010006	185	15.91	8.0	25	2.2	42	3130	500
25010007	240	18.4	8.0	25	2.3	45	3780	500
25010008	300	20.68	8.0	25	2.4	48	4510	500
25010009	400	23.24	8.0	35	2.5	52	5550	500
25010010	500	26.35	8.0	35	2.6	55	6630	500
25010011	630	30.4	8.0	35	2.7	59	8140	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25020001	50	8.12	8.0	1.9	32	1320	1000
25020002	70	9.7	8.0	2.0	33	1590	1000
25020003	95	11.4	8.0	2.1	35	1930	1000
25020004	120	12.86	8.0	2.1	37	2200	1000
25020005	150	14.25	8.0	2.1	38	2510	1000
25020006	185	15.91	8.0	2.2	40	2920	500
25020007	240	18.4	8.0	2.3	43	3570	500
25020008	300	20.68	8.0	2.3	45	4220	500
25020009	400	23.24	8.0	2.5	49	5190	500
25020010	500	26.35	8.0	2.5	52	6240	500
25020011	630	30.4	8.0	2.7	56	7770	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/Km	0.473	0.446	0.425	0.408	0.398	0.384	0.367	0.357	0.349	0.336	0.322
Reactance at 60 Hz	Ω/km	0.18	0.17	0.16	0.15	0.15	0.15	0.14	0.14	0.13	0.13	0.12
Capacitance	μF/Km	0.14	0.16	0.17	0.18	0.20	0.21	0.23	0.25	0.28	0.31	0.35
Short Circuit Current For 1 second												
1- Conductor	KA	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.65	0.69	0.73	0.76	0.81	0.85	0.91	0.96	1.03	1.11	1.21
Current Rating Capacity												
1- Laid direct in ground (both end bonded)												
Trefoil Formation (Approx.)	A	188	230	274	310	345	388	447	500	550	614	679
Flat Formation(Approx.)	A	188	230	274	310	342	384	441	495	531	585	641
2- Laid in free air (both end bonded)												
Trefoil Formation (Approx.)	A	200	246	300	345	390	446	527	607	689	787	895
Flat (Touching) Formation(Approx.)	A	215	267	325	375	421	480	564	645	717	811	913
Voltage Drop per phase	V/A/km	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	510	530	560	580	615	640	680	730	780	830	895

The above values are based on the following conditions:

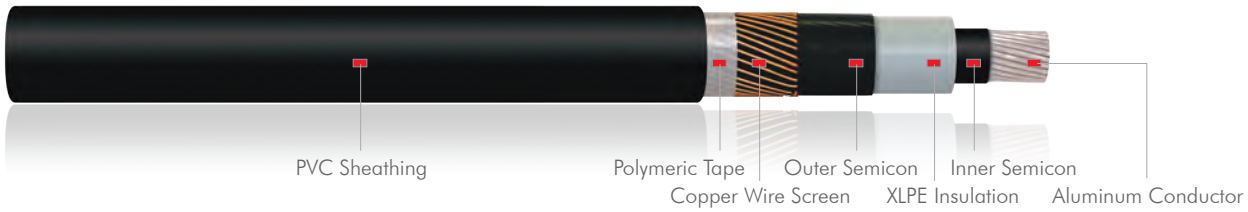
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

AL/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21130003	50	8.3	2.5	16	1.8	23	660	1000
21130004	70	9.7	2.5	16	1.8	24	750	1000
21130005	95	11.55	2.5	16	1.8	26	860	1000
21130006	120	12.95	2.5	16	1.8	27	960	1000
21130007	150	14.3	2.5	25	1.8	29	1160	1000
21130008	185	15.9	2.5	25	1.9	31	1300	1000
21130009	240	18.4	2.6	25	1.9	33	1540	1000
21130010	300	20.5	2.8	25	2.0	36	1800	500
21130011	400	24.0	3.0	35	2.2	41	2290	500
21130012	500	27.0	3.2	35	2.3	45	2730	500
21130013	630	30.4	3.2	35	2.4	48	3200	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21140003	50	8.3	2.5	1.8	21	520	1000
21140004	70	9.7	2.5	1.8	22	610	1000
21140005	95	11.55	2.5	1.8	24	730	1000
21140006	120	12.95	2.5	1.8	25	830	1000
21140007	150	14.3	2.5	1.8	27	950	1000
21140008	185	15.9	2.5	1.8	28	1081	1000
21140009	240	18.4	2.6	1.9	31	1330	1000
21140010	300	20.5	2.8	2.0	34	1590	500
21140011	400	24.0	3.0	2.1	39	1980	500
21140012	500	27.0	3.2	2.2	42	2410	500
21140013	630	30.4	3.2	2.3	46	2880	500

TECHNICAL INFORMATION

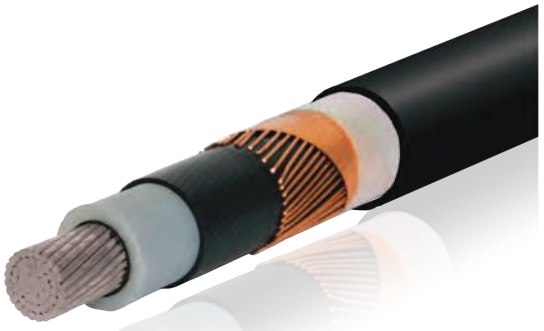
ALUMINUM CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

Size	mm2	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.822	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/Km	0.390	0.371	0.350	0.338	0.328	0.319	0.308	0.302	0.297	0.290	0.281
Reactance at 60 Hz	Ω/km	0.15	0.14	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11
Capacitance	μF/Km	0.33	0.37	0.43	0.46	0.50	0.55	0.60	0.61	0.67	0.70	0.77
Short Circuit Current For 1 second												
1- Conductor	KA	4.69	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.39	0.44	0.47	0.51	0.54	0.58	0.64	0.70	0.80	0.88	0.95
Current Rating Capacity												
1- Laid direct in ground (both end bonded)												
Trefoil Formation (Approx.)	A	145	177	211	240	266	301	348	391	444	501	563
Flat Formation(Approx.)	A	145	177	211	239	265	299	345	387	435	490	547
2- Laid in free air (both end bonded)												
Trefoil Formation (Approx.)	A	154	191	233	269	304	349	415	476	557	644	741
Flat (Touching) Formation(Approx.)	A	168	208	253	293	330	378	448	512	591	678	773
Voltage Drop per phase	V/A/km	1.424	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0.141	0.113
Minimum Bending radius	mm	345	365	390	415	435	460	505	545	620	675	730

The above values are based on the following conditions:

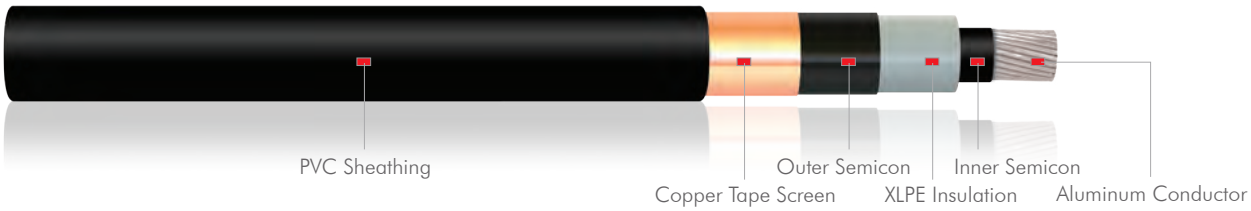
Ambient Air Temperature:	40 °C
Ambient Ground Temperature:	35 °C
Depth of laying in ground:	0.80 m
Soil Thermal Resistivity:	1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV AL/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22130004	70	9.7	3.4	16	1.8	26	820	1000
22130005	95	11.55	3.4	16	1.8	28	940	1000
22130006	120	12.95	3.4	16	1.8	29	1040	1000
22130007	150	14.3	3.4	25	1.9	31	1260	1000
22130008	185	15.9	3.4	25	1.9	32	1390	1000
22130009	240	18.4	3.4	25	2.0	35	1650	1000
22130010	300	20.5	3.4	25	2.1	38	1890	500
22130011	400	24.0	3.4	35	2.2	42	2340	500
22130012	500	27.0	3.4	35	2.3	45	2750	500
22130013	630	30.4	3.4	35	2.4	49	3230	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22140004	70	9.7	3.4	1.8	24	690	1000
22140005	95	11.55	3.4	1.8	26	810	1000
22140006	120	12.95	3.4	1.8	27	920	1000
22140007	150	14.3	3.4	1.8	28	1040	1000
22140008	185	15.9	3.4	1.9	30	1190	1000
22140009	240	18.4	3.4	2.0	33	1430	1000
22140010	300	20.5	3.4	2.0	35	1660	500
22140011	400	24.0	3.4	2.1	39	2030	500
22140012	500	27.0	3.4	2.2	43	2440	500
22140013	630	30.4	3.4	2.3	46	2920	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/Km	0.385	0.364	0.351	0.341	0.330	0.318	0.309	0.300	0.292	0.283
Reactance at 60 Hz	Ω/km	0.15	0.14	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11
Capacitance	μF/Km	0.29	0.33	0.36	0.39	0.42	0.47	0.51	0.60	0.66	0.73
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.48	0.52	0.55	0.58	0.62	0.68	0.72	0.79	0.87	0.96
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	177	211	240	266	301	348	391	444	501	563
Flat Formation(Approx.)	A	177	211	239	265	299	345	387	435	490	547
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	191	233	269	304	349	415	476	557	644	741
Flat (Touching) Formation(Approx.)	A	208	253	293	330	378	448	512	591	678	773
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0.141	0.113
Minimum Bending radius	mm	390	420	440	465	485	530	565	635	680	735

The above values are based on the following conditions:

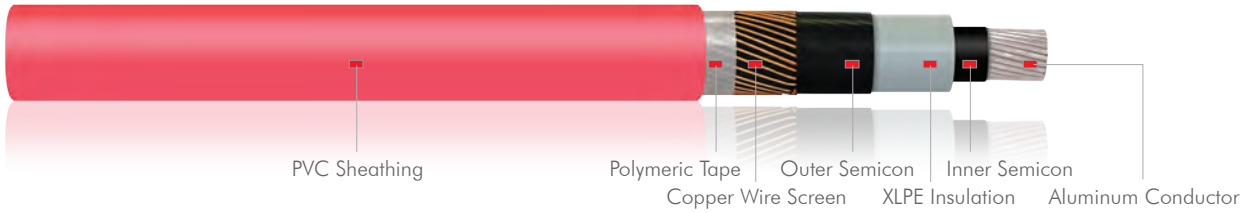
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

AL/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23130004	70	9.7	4.5	16	1.8	28	910	1000
23130005	95	11.55	4.5	16	1.8	30	1040	1000
23130006	120	12.95	4.5	16	1.9	32	1160	1000
23130007	150	14.3	4.5	25	1.9	33	1380	1000
23130008	185	15.9	4.5	25	2.0	35	1540	1000
23130009	240	18.4	4.5	25	2.1	38	1790	1000
23130010	300	20.5	4.5	25	2.1	40	2020	500
23130011	400	24.0	4.5	35	2.3	44	2510	500
23130012	500	27.0	4.5	35	2.4	48	2940	500
23130013	630	30.4	4.5	35	2.5	52	3500	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23140004	70	9.7	4.5	1.8	26	780	1000
23140005	95	11.55	4.5	1.8	28	920	1000
23140006	120	12.95	4.5	1.9	29	1040	1000
23140007	150	14.3	4.5	1.9	31	1160	1000
23140008	185	15.9	4.5	2.0	33	1320	1000
23140009	240	18.4	4.5	2.0	35	1560	1000
23140010	300	20.5	4.5	2.1	37	1810	500
23140011	400	24.0	4.5	2.2	42	2200	500
23140012	500	27.0	4.5	2.3	45	2620	500
23140013	630	30.4	4.5	2.4	49	3120	500

TECHNICAL INFORMATION

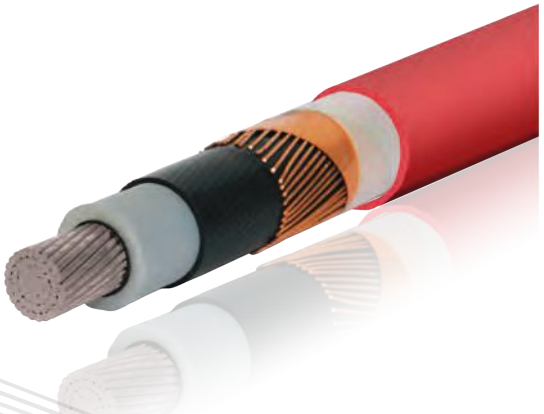
ALUMINUM CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/Km	0.401	0.379	0.367	0.356	0.346	0.331	0.321	0.312	0.302	0.296
Reactance at 60 Hz	Ω/km	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.11	0.11
Capacitance	μF/Km	0.23	0.26	0.29	0.31	0.33	0.37	0.40	0.47	0.52	0.57
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.53	0.56	0.60	0.63	0.67	0.73	0.77	0.86	0.94	1.01
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	177	211	240	266	301	348	391	444	501	563
Flat Formation(Approx.)	A	177	211	239	265	299	345	387	435	490	547
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	191	233	269	304	349	415	476	557	644	741
Flat (Touching) Formation(Approx.)	A	208	253	293	330	378	448	512	591	678	773
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0.141	0.113
Minimum Bending radius	mm	425	450	475	500	525	565	600	670	715	780

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

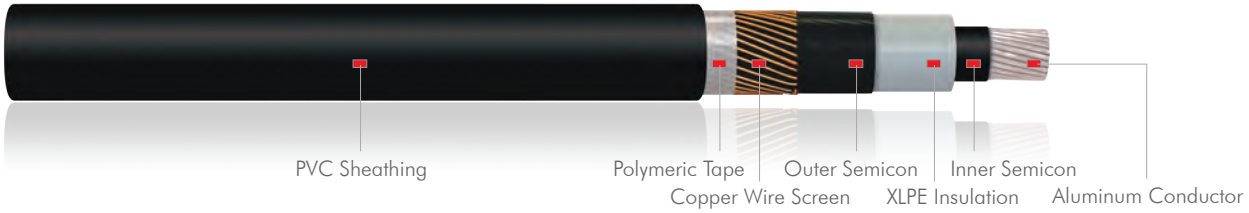
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 12/20 (24)kV

AL/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24130003	70	9.7	5.5	16	1.9	30	1010	1000
24130004	95	11.55	5.5	16	1.9	32	1150	1000
24130005	120	12.95	5.5	16	2.0	34	1290	1000
24130006	150	14.3	5.5	25	2.0	35	1500	1000
24130007	185	15.9	5.5	25	2.1	37	1670	1000
24130008	240	18.4	5.5	25	2.1	40	1910	1000
24130009	300	20.5	5.5	25	2.2	42	2170	500
24130010	400	24.0	5.5	35	2.3	46	2660	500
24130011	500	27.0	5.5	35	2.4	50	3170	500
24130012	630	30.4	5.5	35	2.5	54	3670	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24140003	70	9.7	5.5	1.8	28	880	1000
24140004	95	11.55	5.5	1.9	30	1030	1000
24140005	120	12.95	5.5	1.9	31	1150	1000
24140006	150	14.3	5.5	2.0	33	1290	1000
24140007	185	15.9	5.5	2.0	35	1440	1000
24140008	240	18.4	5.5	2.1	37	1700	1000
24140009	300	20.5	5.5	2.2	40	1960	500
24140010	400	24.0	5.5	2.3	44	2360	500
24140011	500	27.0	5.5	2.4	47	2800	500
24140012	630	30.4	5.5	2.5	51	3310	500

TECHNICAL INFORMATION

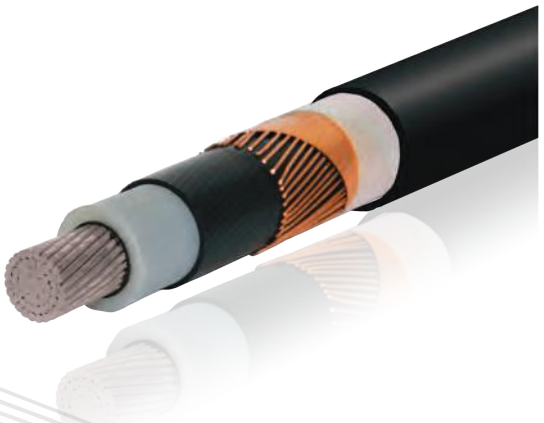
ALUMINUM CONDUCTOR | UNARMOURED | 12/20 (24)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/Km	0.416	0.393	0.381	0.369	0.358	0.342	0.331	0.320	0.313	0.303
Reactance at 60 Hz	Ω/km	0.16	0.15	0.14	0.14	0.13	0.13	0.12	0.12	0.12	0.11
Capacitance	μF/Km	0.20	0.23	0.24	0.26	0.28	0.31	0.34	0.40	0.43	0.48
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.57	0.61	0.64	0.68	0.72	0.77	0.82	0.91	0.99	1.08
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	177	211	240	266	301	348	391	444	501	563
Flat Formation(Approx.)	A	177	211	239	265	299	345	387	435	490	547
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	191	233	269	304	349	415	476	557	644	741
Flat (Touching) Formation(Approx.)	A	208	253	293	330	378	448	512	591	678	773
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0.141	0.113
Minimum Bending radius	mm	455	485	510	530	560	600	630	700	760	815

The above values are based on the following conditions:

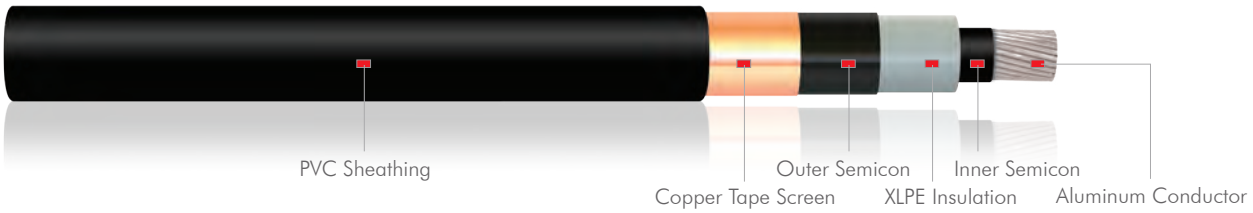
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV AL/XLPE/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25130002	70	9.7	8.0	16	2.0	35	1300	1000
25130003	95	11.55	8.0	16	2.1	37	1470	1000
25130004	120	12.95	8.0	16	2.1	39	1600	1000
25130005	150	14.3	8.0	25	2.2	41	1840	1000
25130006	185	15.9	8.0	25	2.2	42	2000	500
25130007	240	18.4	8.0	25	2.3	45	2290	500
25130008	300	20.5	8.0	25	2.4	48	2640	500
25130009	400	24.0	8.0	35	2.5	53	3170	500
25130010	500	27.0	8.0	35	2.6	56	3640	500
25130011	630	30.4	8.0	35	2.7	59	4170	500

SINGLE CORE | COPPER TAPE SCREENED

iCable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25140002	70	9.7	8.0	2.0	33	1180	1000
25140003	95	11.55	8.0	2.1	35	1350	1000
25140004	120	12.95	8.0	2.1	37	1470	1000
25140005	150	14.3	8.0	2.1	38	1610	1000
25140006	185	15.9	8.0	2.2	40	1800	500
25140007	240	18.4	8.0	2.3	43	2090	500
25140008	300	20.5	8.0	2.3	45	2350	500
25140009	400	24.0	8.0	2.5	49	2810	500
25140010	500	27.0	8.0	2.5	52	3250	500
25140011	630	30.4	8.0	2.7	56	3800	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/Km	0.446	0.423	0.407	0.398	0.384	0.367	0.359	0.345	0.334	0.322
Reactance at 60 Hz	Ω/km	0.17	0.16	0.15	0.15	0.14	0.14	0.14	0.13	0.13	0.12
Capacitance	μF/Km	0.16	0.17	0.19	0.20	0.21	0.23	0.25	0.29	0.32	0.35
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.69	0.74	0.77	0.81	0.85	0.91	0.95	1.05	1.13	1.21
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	177	211	240	266	301	348	391	444	501	563
Flat Formation(Approx.)	A	177	211	239	265	299	345	387	435	490	547
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	191	233	269	304	349	415	476	557	644	741
Flat (Touching) Formation(Approx.)	A	208	253	293	330	378	448	512	591	678	773
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0.141	0.113
Minimum Bending radius	mm	530	560	585	615	635	680	725	790	840	895

The above values are based on the following conditions:

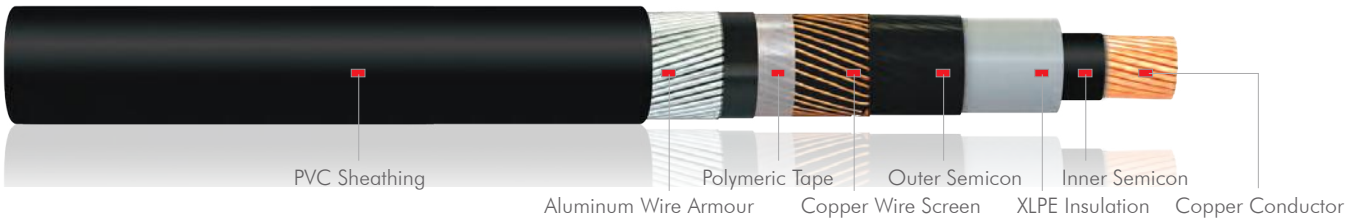
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 3.6/6 (7.2)kV

CU/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21050002	35	7.0	2.5	16	1.2	1.6	1.8	28	1230	1000
21050003	50	8.12	2.5	16	1.2	1.6	1.8	29	1380	1000
21050004	70	9.7	2.5	16	1.2	1.6	1.9	31	1650	1000
21050005	95	11.4	2.5	16	1.2	1.6	1.9	33	1940	1000
21050006	120	12.86	2.5	16	1.2	1.6	2.0	34	2240	1000
21050007	150	14.25	2.5	25	1.2	2.0	2.0	36	2680	1000
21050008	185	15.91	2.5	25	1.2	2.0	2.1	38	3090	1000
21050009	240	18.4	2.6	25	1.2	2.0	2.2	41	3770	500
21050010	300	20.68	2.8	25	1.2	2.0	2.2	44	4450	500
21050011	400	23.24	3.0	35	1.3	2.5	2.4	49	5720	500
21050012	500	26.35	3.2	35	1.3	2.5	2.5	53	6850	500
21050013	630	30.4	3.2	35	1.4	2.5	2.6	57	8410	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21060002	35	7.0	2.5	1.2	1.6	1.8	26	1050	1000
21060003	50	8.12	2.5	1.2	1.6	1.8	27	1210	1000
21060004	70	9.7	2.5	1.2	1.6	1.8	29	1460	1000
21060005	95	11.4	2.5	1.2	1.6	1.9	30	1780	1000
21060006	120	12.86	2.5	1.2	1.6	1.9	32	2060	1000
21060007	150	14.25	2.5	1.2	1.6	2.0	33	2390	1000
21060008	185	15.91	2.5	1.2	2.0	2.0	36	2830	1000
21060009	240	18.4	2.6	1.2	2.0	2.1	38	3490	500
21060010	300	20.68	2.8	1.2	2.0	2.2	41	4200	500
21060011	400	23.24	3.0	1.2	2.0	2.3	45	5180	500
21060012	500	26.35	3.2	1.3	2.5	2.5	50	6500	500
21060013	630	30.4	3.2	1.4	2.5	2.6	55	8070	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 3.6/6 (7.2)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/ Km	0.461	0.440	0.417	0.396	0.382	0.372	0.360	0.347	0.338	0.336	0.328	0.315
Reactance at 60 Hz	Ω/km	0.17	0.17	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.12
Capacitance	μF/Km	0.3	0.33	0.37	0.42	0.46	0.5	0.55	0.6	0.61	0.65	0.68	0.77
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.36	0.39	0.43	0.47	0.51	0.54	0.58	0.64	0.70	0.77	0.86	0.94
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	158	185	225	268	302	333	371	423	470	506	554	600
Flat Formation(Approx.)	A	158	185	234	266	297	324	357	400	435	455	488	518
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	173	206	254	307	351	395	447	520	587	654	732	813
Flat (Touching) Formation(Approx.)	A	185	220	271	326	370	411	460	528	587	637	700	764
Voltage Drop per phase	V/A/ km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	420	435	465	490	525	540	570	620	655	740	790	860

The above values are based on the following conditions:

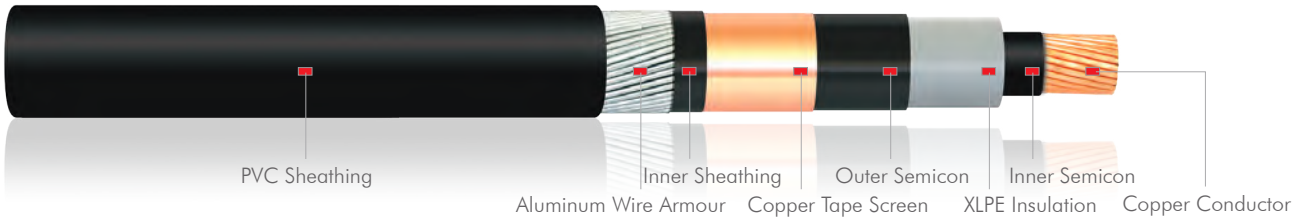
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

CU/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22050002	35	7.0	3.4	16	1.2	1.6	1.8	30	1320	1000
22050003	50	8.12	3.4	16	1.2	1.6	1.8	31	1490	1000
22050004	70	9.7	3.4	16	1.2	1.6	1.9	33	1740	1000
22050005	95	11.4	3.4	16	1.2	1.6	2.0	35	2071	1000
22050006	120	12.86	3.4	16	1.2	2.0	2.0	36	2400	1000
22050007	150	14.25	3.4	25	1.2	2.0	2.1	38	2820	1000
22050008	185	15.91	3.4	25	1.2	2.0	2.1	40	3210	1000
22050009	240	18.4	3.4	25	1.2	2.0	2.2	43	3890	500
22050010	300	20.68	3.4	25	1.2	2.0	2.3	45	4560	500
22050011	400	23.24	3.4	35	1.3	2.5	2.4	50	5790	500
22050012	500	26.35	3.4	35	1.3	2.5	2.5	53	6880	500
22050013	630	30.4	3.4	35	1.4	2.5	2.7	58	8480	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22060002	35	7.0	3.4	1.2	1.6	1.8	28	1150	1000
22060003	50	8.12	3.4	1.2	1.6	1.8	29	1310	1000
22060004	70	9.7	3.4	1.2	1.6	1.9	31	1580	1000
22060005	95	11.4	3.4	1.2	1.6	1.9	32	1900	1000
22060006	120	12.86	3.4	1.2	1.6	2.0	34	2190	1000
22060007	150	14.25	3.4	1.2	2.0	2.1	36	2570	1000
22060008	185	15.91	3.4	1.2	2.0	2.1	38	2980	1000
22060009	240	18.4	3.4	1.2	2.0	2.2	40	3630	500
22060010	300	20.68	3.4	1.2	2.0	2.2	42	4300	500
22060011	400	23.24	3.4	1.2	2.0	2.4	46	5280	500
22060012	500	26.35	3.4	1.3	2.5	2.5	51	6550	500
22060013	630	30.4	3.4	1.4	2.5	2.6	55	8120	500

TECHNICAL INFORMATION

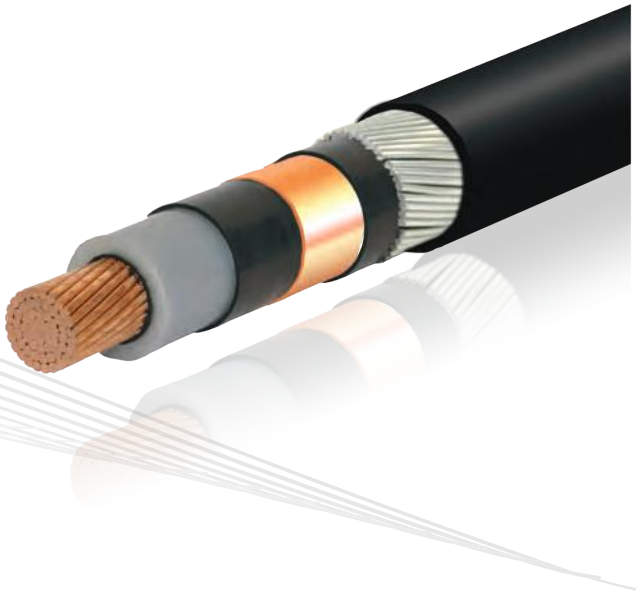
COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/ Km	0.477	0.455	0.429	0.408	0.395	0.383	0.370	0.355	0.342	0.338	0.328	0.317
Reactance at 60 Hz	Ω/km	0.18	0.17	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12
Capacitance	μF/Km	0.23	0.26	0.29	0.33	0.36	0.38	0.42	0.47	0.52	0.58	0.65	0.73
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	2.39	2.39	2.39	2.39	2.39	3.7	3.7	3.7	3.7	5.18	5.18	5.18
3- Copper Tape Screen	KA	0.41	0.44	0.48	0.52	0.55	0.58	0.62	0.68	0.73	0.80	0.88	0.96
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	158	185	225	268	302	333	371	423	470	506	554	600
Flat Formation(Approx.)	A	158	185	234	266	297	324	357	400	435	455	488	518
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	173	206	254	307	351	395	447	520	587	654	732	813
Flat (Touching) Formation(Approx.)	A	185	220	271	326	370	411	460	528	587	637	700	764
Voltage Drop per phase	V/A/ km	1.157	0.855	0.592	0.427	0.339	0.276	0.221	0.170	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	450	465	490	520	555	570	600	640	675	750	800	870

The above values are based on the following conditions:

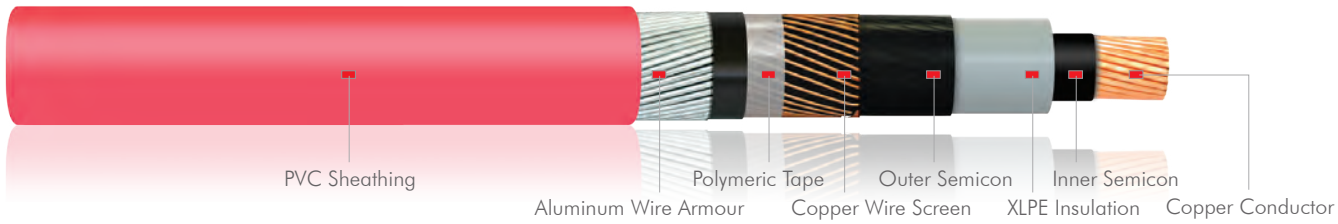
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 8.7/15 (17.5)kV CU/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23050002	35	7.0	4.5	16	1.2	1.6	1.9	32	1460	1000
23050003	50	8.12	4.5	16	1.2	1.6	1.9	33	1610	1000
23050004	70	9.7	4.5	16	1.2	1.6	2.0	35	1900	1000
23050005	95	11.4	4.5	16	1.2	2.0	2.1	37	2270	1000
23050006	120	12.86	4.5	16	1.2	2.0	2.1	39	2560	1000
23050007	150	14.25	4.5	25	1.2	2.0	2.2	41	3000	500
23050008	185	15.91	4.5	25	1.2	2.0	2.2	42	3410	500
23050009	240	18.4	4.5	25	1.2	2.0	2.3	45	4080	500
23050010	300	20.68	4.5	25	1.3	2.5	2.4	49	4930	500
23050011	400	23.24	4.5	35	1.3	2.5	2.5	52	6010	500
23050012	500	26.35	4.5	35	1.4	2.5	2.6	56	7150	500
23050013	630	30.4	4.5	35	1.4	2.5	2.7	61	8800	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23060002	35	7.0	4.5	1.2	1.6	1.9	30	1290	1000
23060003	50	8.12	4.5	1.2	1.6	1.9	31	1450	1000
23060004	70	9.7	4.5	1.2	1.6	2.0	33	1730	1000
23060005	95	11.4	4.5	1.2	2.0	2.0	35	2090	1000
23060006	120	12.86	4.5	1.2	2.0	2.1	37	2400	1000
23060007	150	14.25	4.5	1.2	2.0	2.1	38	2720	1000
23060008	185	15.91	4.5	1.2	2.0	2.2	40	3150	500
23060009	240	18.4	4.5	1.2	2.0	2.3	43	3820	500
23060010	300	20.68	4.5	1.2	2.0	2.3	45	4490	500
23060011	400	23.24	4.5	1.3	2.5	2.5	50	5650	500
23060012	500	26.35	4.5	1.3	2.5	2.6	53	6770	500
23060013	630	30.4	4.5	1.4	2.5	2.7	57	8360	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 8.7/15 (17.5)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/ Km	0.492	0.469	0.444	0.424	0.408	0.396	0.382	0.365	0.358	0.348	0.338	0.325
Reactance at 60 Hz	Ω/km	0.19	0.18	0.17	0.16	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.12
Capacitance	μF/Km	0.19	0.21	0.23	0.26	0.28	0.31	0.33	0.37	0.41	0.46	0.51	0.57
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.46	0.49	0.53	0.56	0.60	0.63	0.67	0.73	0.78	0.85	0.93	1.01
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	158	185	225	268	302	333	371	423	470	506	554	600
Flat Formation(Approx.)	A	158	185	234	266	297	324	357	400	435	455	488	518
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	173	206	254	307	351	395	447	520	587	654	732	813
Flat (Touching) Formation(Approx.)	A	185	220	271	326	370	411	460	528	587	637	700	764
Voltage Drop per phase	V/A/ km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	480	510	525	570	590	615	645	675	735	780	840	915

The above values are based on the following conditions:

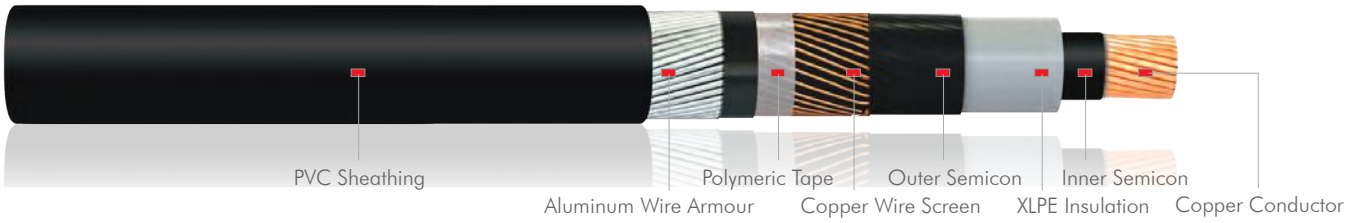
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 12/20 (24)kV

CU/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24050001	35	7.0	5.5	16	1.2	1.6	2.0	34	1600	1000
24050002	50	8.12	5.5	16	1.2	2.0	2.0	36	1800	1000
24050003	70	9.7	5.5	16	1.2	2.0	2.1	38	2080	1000
24050004	95	11.4	5.5	16	1.2	2.0	2.1	39	2410	1000
24050005	120	12.86	5.5	16	1.2	2.0	2.2	41	2740	500
24050006	150	14.25	5.5	25	1.2	2.0	2.2	43	3150	500
24050007	185	15.91	5.5	25	1.2	2.0	2.3	44	3590	500
24050008	240	18.4	5.5	25	1.3	2.5	2.4	48	4430	500
24050009	300	20.68	5.5	25	1.3	2.5	2.5	51	5140	500
24050010	400	23.24	5.5	35	1.4	2.5	2.6	54	6260	500
24050011	500	26.35	5.5	35	1.4	2.5	2.7	58	7470	500
24050012	630	30.4	5.5	35	1.5	2.5	2.8	63	9100	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24060001	35	7.0	5.5	1.2	1.6	1.9	32	1410	1000
24060002	50	8.12	5.5	1.2	1.6	2.0	33	1590	1000
24060003	70	9.7	5.5	1.2	2.0	2.0	35	1900	1000
24060004	95	11.4	5.5	1.2	2.0	2.1	37	2250	1000
24060005	120	12.86	5.5	1.2	2.0	2.1	39	2550	1000
24060006	150	14.25	5.5	1.2	2.0	2.2	40	2900	1000
24060007	185	15.91	5.5	1.2	2.0	2.2	42	3300	500
24060008	240	18.4	5.5	1.2	2.0	2.3	45	3980	500
24060009	300	20.68	5.5	1.3	2.5	2.4	48	4850	500
24060010	400	23.24	5.5	1.3	2.5	2.5	52	5850	500
24060011	500	26.35	5.5	1.4	2.5	2.6	55	7010	500
24060012	630	30.4	5.5	1.4	2.5	2.8	60	8600	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 12/20 (24)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/Km	0.505	0.484	0.458	0.434	0.419	0.405	0.392	0.380	0.367	0.356	0.346	0.334
Reactance at 60 Hz	Ω/km	0.19	0.18	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.14	0.13	0.13
Capacitance	μF/Km	0.17	0.18	0.20	0.22	0.24	0.26	0.28	0.31	0.34	0.39	0.42	0.48
Short Circuit Current For 1 second													
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.50	0.53	0.57	0.61	0.64	0.68	0.72	0.77	0.82	0.90	0.97	1.08
Current Rating Capacity													
1- Laid direct in ground (both end bonded)													
Trefoil Formation (Approx.)	A	158	185	225	268	302	333	371	423	470	506	554	600
Flat Formation(Approx.)	A	158	185	234	266	297	324	357	400	435	455	488	518
2- Laid in free air (both end bonded)													
Trefoil Formation (Approx.)	A	173	206	254	307	351	395	447	520	587	654	732	813
Flat (Touching) Formation(Approx.)	A	185	220	271	326	370	411	460	528	587	637	700	764
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111	0.089	0.075
Minimum Bending radius	mm	515	540	570	600	620	645	670	730	765	820	880	950

The above values are based on the following conditions:

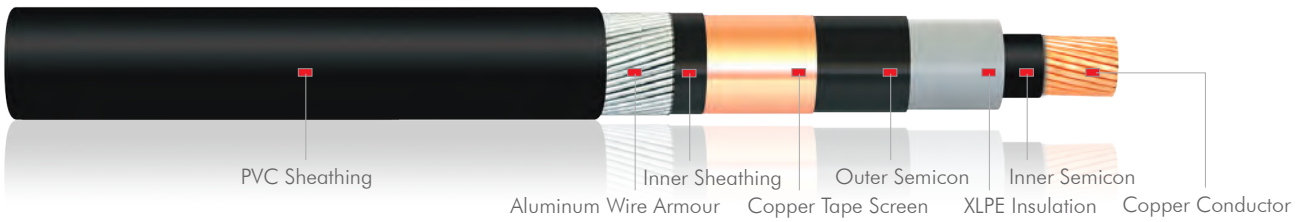
Ambient Air Temperature:	40 °C
Ambient Ground Temperature:	35 °C
Depth of laying in ground:	0.80 m
Soil Thermal Resistivity:	1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV

CU/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25050001	50	8.12	8.0	16	1.2	2.0	2.2	41	2200	1000
25050002	70	9.7	8.0	16	1.2	2.0	2.3	43	2490	500
25050003	95	11.4	8.0	16	1.2	2.0	2.3	44	2840	500
25050004	120	12.86	8.0	16	1.3	2.5	2.4	47	3330	500
25050005	150	14.25	8.0	25	1.3	2.5	2.5	49	3800	500
25050006	185	15.91	8.0	25	1.3	2.5	2.5	51	4230	500
25050007	240	18.4	8.0	25	1.4	2.5	2.6	54	4960	500
25050008	300	20.68	8.0	25	1.4	2.5	2.7	57	5790	500
25050009	400	23.24	8.0	35	1.5	2.5	2.8	61	6950	500
25050010	500	26.35	8.0	35	1.5	2.5	2.9	64	8110	500
25050011	630	30.4	8.0	35	1.6	2.5	3.0	69	9760	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25060001	50	8.12	8.0	1.2	2.0	2.2	39	2020	1000
25060002	70	9.7	8.0	1.2	2.0	2.2	41	2310	500
25060003	95	11.4	8.0	1.2	2.0	2.3	43	2670	500
25060004	120	12.86	8.0	1.2	2.0	2.3	44	2980	500
25060005	150	14.25	8.0	1.3	2.5	2.4	47	3500	500
25060006	185	15.91	8.0	1.3	2.5	2.5	49	3960	500
25060007	240	18.4	8.0	1.3	2.5	2.5	51	4650	500
25060008	300	20.68	8.0	1.4	2.5	2.6	54	5400	500
25060009	400	23.24	8.0	1.4	2.5	2.7	57	6440	500
25060010	500	26.35	8.0	1.5	2.5	2.8	61	7630	500
25060011	630	30.4	8.0	1.5	2.5	2.9	65	9250	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | ALUMINUM WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.494	0.342	0.247	0.196	0.160	0.129	0.099	0.0804	0.0647	0.0527	0.0434
Inductance at 60 Hz	mH/Km	0.511	0.481	0.460	0.450	0.438	0.420	0.402	0.390	0.378	0.368	0.350
Reactance at 60 Hz	Ω/km	0.19	0.18	0.17	0.17	0.17	0.16	0.15	0.15	0.14	0.14	0.13
Capacitance	μF/Km	0.14	0.16	0.17	0.18	0.20	0.21	0.23	0.25	0.28	0.31	0.35
Short Circuit Current For 1 second												
1- Conductor	KA	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09
2- Copper Wire Screen	KA	2.39	2.39	2.39	2.39	3.7	3.7	3.7	3.7	5.18	5.18	5.18
3- Copper Tape Screen	KA	0.65	0.69	0.73	0.76	0.81	0.85	0.91	0.96	1.03	1.11	1.21
Current Rating Capacity												
1- Laid direct in ground (both end bonded)												
Trefoil Formation (Approx.)	A	211	250	274	315	370	415	470	530	595	680	740
Flat Formation(Approx.)	A	218	258	282	323	378	420	473	525	550	640	685
2- Laid in free air (both end bonded)												
Trefoil Formation (Approx.)	A	245	269	329	379	430	494	583	669	769	860	1000
Flat (Touching) Formation(Approx.)	A	260	324	395	455	509	580	678	770	854	895	1035
Voltage Drop per phase	V/A/km	0.509	0.383	0.305	0.260	0.228	0.198	0.171	0.153	0.137	0.125	0.116
Minimum Bending radius	mm	615	645	670	720	750	770	810	860	920	970	1040

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 3.6/6 (7.2)kV

AL/XLPE/AWA/PVC

SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21170003	50	8.12	2.5	16	1.2	1.6	1.8	29	1100	1000
21170004	70	9.7	2.5	16	1.2	1.6	1.9	31	1220	1000
21170005	95	11.4	2.5	16	1.2	1.6	1.9	33	1370	1000
21170006	120	12.86	2.5	16	1.2	1.6	2.0	34	1520	1000
21170007	150	14.25	2.5	25	1.2	2.0	2.0	36	1780	1000
21170008	185	15.91	2.5	25	1.2	2.0	2.1	38	1960	1000
21170009	240	18.4	2.6	25	1.2	2.0	2.2	41	2280	500
21170010	300	20.68	2.8	25	1.2	2.0	2.2	43	2580	500
21170011	400	23.24	3.0	35	1.3	2.5	2.4	50	3340	500
21170012	500	26.35	3.2	35	1.3	2.5	2.5	53	3860	500
21170013	630	30.4	3.2	35	1.4	2.5	2.6	57	4450	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21180003	50	8.12	2.5	1.2	1.6	1.8	27	920	1000
21180004	70	9.7	2.5	1.2	1.6	1.8	29	1040	1000
21180005	95	11.4	2.5	1.2	1.6	1.9	31	1210	1000
21180006	120	12.86	2.5	1.2	1.6	1.9	32	1330	1000
21180007	150	14.25	2.5	1.2	1.6	2.0	34	1490	1000
21180008	185	15.91	2.5	1.2	2.0	2.0	36	1700	1000
21180009	240	18.4	2.6	1.2	2.0	2.1	38	2000	500
21180010	300	20.68	2.8	1.2	2.0	2.2	41	2310	500
21180011	400	23.24	3.0	1.2	2.0	2.3	46	2800	500
21180012	500	26.35	3.2	1.3	2.5	2.5	51	3510	500
21180013	630	30.4	3.2	1.4	2.5	2.6	55	4090	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 3.6/6 (7.2)kV

Size	mm2	50	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.822	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/ Km	0.440	0.417	0.396	0.383	0.373	0.362	0.348	0.338	0.3335	0.325	0.315
Reactance at 60 Hz	Ω/km	0.17	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.12
Capacitance	μF/Km	0.33	0.37	0.43	0.46	0.50	0.55	0.60	0.61	0.67	0.70	0.77
Short Circuit Current For 1 second												
1- Conductor	KA	4.69	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	2.39	2.39	2.39	2.39	3.7	3.7	3.7	3.7	5.18	5.18	5.18
3- Copper Tape Screen	KA	0.39	0.44	0.47	0.51	0.54	0.58	0.64	0.70	0.88	0.88	0.95
Current Rating Capacity												
1- Laid direct in ground (both end bonded)												
Trefoil Formation (Approx.)	A	145	176	209	237	263	295	338	378	420	467	515
Flat Formation(Approx.)	A	144	175	208	235	260	291	332	369	408	451	494
2- Laid in free air (both end bonded)												
Trefoil Formation (Approx.)	A	161	198	241	276	311	354	416	472	543	617	695
Flat (Touching) Formation(Approx.)	A	173	213	258	294	329	373	432	486	547	611	675
Voltage Drop per phase	V/A/ km	1.424	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0141	0.113
Minimum Bending radius	mm	440	465	495	520	545	570	615	655	750	800	860

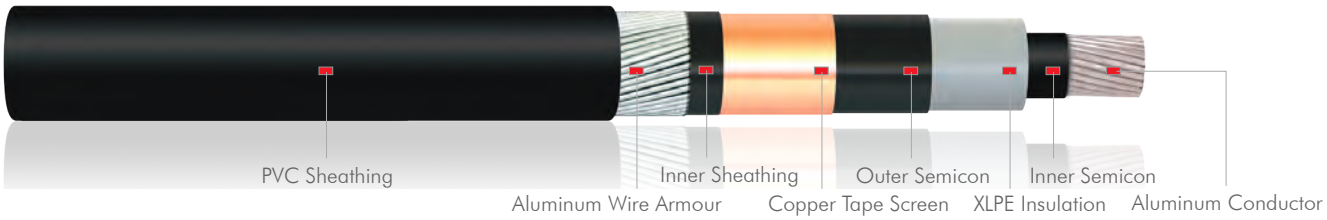
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV AL/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22170004	70	9.7	3.4	16	1.2	1.6	1.9	33	1330	1000
22170005	95	11.4	3.4	16	1.2	1.6	2.0	35	1500	1000
22170006	120	12.86	3.4	16	1.2	2.0	2.0	37	1670	1000
22170007	150	14.25	3.4	25	1.2	2.0	2.1	38	1920	1000
22170008	185	15.91	3.4	25	1.2	2.0	2.1	40	2090	1000
22170009	240	18.4	3.4	25	1.2	2.0	2.2	43	2400	500
22170010	300	20.68	3.4	25	1.2	2.0	2.3	45	2680	500
22170011	400	23.24	3.4	35	1.3	2.5	2.4	51	3400	500
22170012	500	26.35	3.4	35	1.3	2.5	2.5	54	3900	500
22170013	630	30.4	3.4	35	1.4	2.5	2.7	58	4510	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22180004	70	9.7	3.4	1.2	1.6	1.9	31	1160	1000
22180005	95	11.4	3.4	1.2	1.6	1.9	32	1320	1000
22180006	120	12.86	3.4	1.2	1.6	2.0	34	1470	1000
22180007	150	14.25	3.4	1.2	2.0	2.1	36	1670	1000
22180008	185	15.91	3.4	1.2	2.0	2.1	38	1840	1000
22180009	240	18.4	3.4	1.2	2.0	2.2	40	2140	500
22180010	300	20.68	3.4	1.2	2.0	2.2	42	2410	500
22180011	400	23.24	3.4	1.2	2.0	2.4	47	2890	500
22180012	500	26.35	3.4	1.3	2.5	2.5	51	3540	500
22180013	630	30.4	3.4	1.4	2.5	2.6	55	4130	500

TECHNICAL INFORMATION

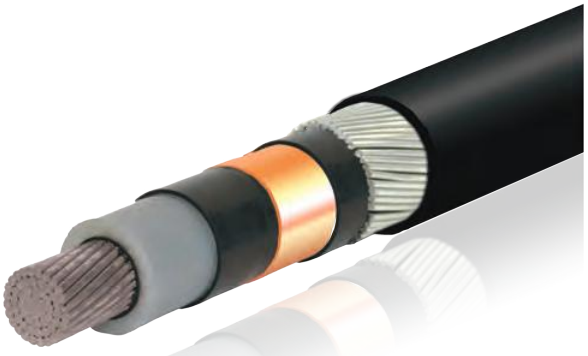
ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/ Km	0.429	0.408	0.395	0.384	0.371	0.356	0.345	0.338	0.328	0.317
Reactance at 60 Hz	Ω/km	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12
Capacitance	μF/Km	0.29	0.33	0.36	0.39	0.42	0.47	0.51	0.60	0.66	0.73
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.48	0.52	0.55	0.58	0.62	0.68	0.72	0.79	0.87	0.96
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	176	209	237	263	295	338	378	420	467	515
Flat Formation(Approx.)	A	175	208	235	260	291	332	369	408	451	494
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	198	241	276	311	354	416	472	543	617	695
Flat (Touching) Formation(Approx.)	A	213	258	294	329	373	432	486	547	611	675
Voltage Drop per phase	V/A/ km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0141	0.113
Minimum Bending radius	mm	490	525	550	570	595	640	675	760	810	870

The above values are based on the following conditions:

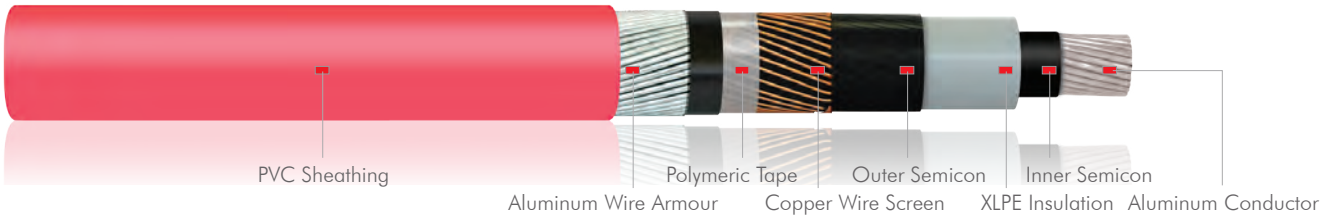
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 8.7/15 (17.5)kV AL/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23170004	70	9.7	4.5	16	1.2	1.6	2.0	35	1480	1000
23170005	95	11.4	4.5	16	1.2	2.0	2.1	38	1700	1000
23170006	120	12.86	4.5	16	1.2	2.0	2.1	39	1840	1000
23170007	150	14.25	4.5	25	1.2	2.0	2.2	41	2110	500
23170008	185	15.91	4.5	25	1.2	2.0	2.2	42	2290	500
23170009	240	18.4	4.5	25	1.2	2.0	2.3	45	2590	500
23170010	300	20.68	4.5	25	1.3	2.5	2.4	48	3060	500
23170011	400	23.24	4.5	35	1.3	2.5	2.5	53	3630	500
23170012	500	26.35	4.5	35	1.4	2.5	2.6	56	4170	500
23170013	630	30.4	4.5	35	1.4	2.5	2.7	61	4840	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23180004	70	9.7	4.5	1.2	1.6	2.0	33	1300	1000
23180005	95	11.4	4.5	1.2	2.0	2.0	35	1520	1000
23180006	120	12.86	4.5	1.2	2.0	2.1	37	1680	1000
23180007	150	14.25	4.5	1.2	2.0	2.1	38	1830	1000
23180008	185	15.91	4.5	1.2	2.0	2.2	40	2020	500
23180009	240	18.4	4.5	1.2	2.0	2.3	43	2330	500
23180010	300	20.68	4.5	1.2	2.0	2.3	45	2610	500
23180011	400	23.24	4.5	1.3	2.5	2.5	51	3280	500
23180012	500	26.35	4.5	1.3	2.5	2.6	54	3800	500
23180013	630	30.4	4.5	1.4	2.5	2.7	58	4390	500

TECHNICAL INFORMATION

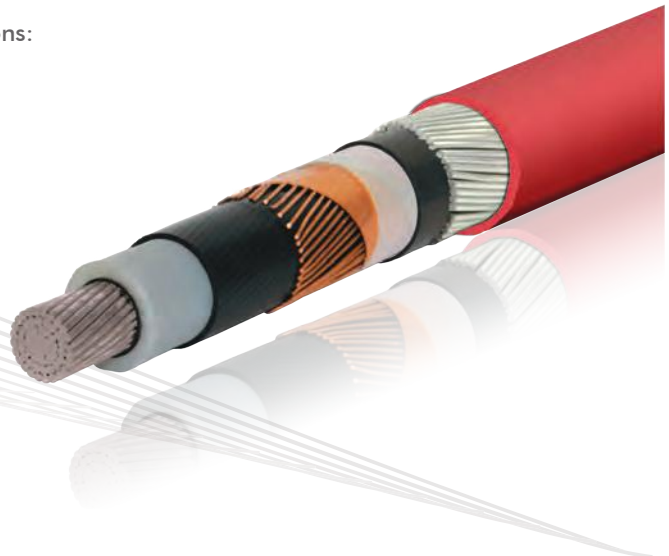
ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 8.7/15 (17.5)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/ Km	0.445	0.424	0.408	0.400	0.384	0.367	0.361	0.345	0.335	0.325
Reactance at 60 Hz	Ω/km	0.17	0.16	0.15	0.15	0.14	0.14	0.14	0.13	0.13	0.12
Capacitance	μF/Km	0.23	0.26	0.29	0.31	0.33	0.37	0.40	0.47	0.52	0.57
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.53	0.56	0.60	0.63	0.67	0.73	0.77	0.86	0.94	1.01
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	176	209	237	263	295	338	378	420	467	515
Flat Formation(Approx.)	A	175	208	235	260	291	332	369	408	451	494
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	198	241	276	311	354	416	472	543	617	695
Flat (Touching) Formation(Approx.)	A	213	258	294	329	373	432	486	547	611	675
Voltage Drop per phase	V/A/ km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0141	0.113
Minimum Bending radius	mm	530	565	585	610	635	675	730	795	850	915

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 12/20 (24)kV AL/XLPE/AWA/PVC

SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24170003	70	9.7	5.5	16	1.2	2.0	2.1	38	1670	1000
24170004	95	11.4	5.5	16	1.2	2.0	2.1	40	1840	1000
24170005	120	12.86	5.5	16	1.2	2.0	2.2	41	2020	500
24170006	150	14.25	5.5	25	1.2	2.0	2.2	43	2260	500
24170007	185	15.91	5.5	25	1.2	2.0	2.3	44	2460	500
24170008	240	18.4	5.5	25	1.3	2.5	2.4	48	2940	500
24170009	300	20.68	5.5	25	1.3	2.5	2.5	51	3250	500
24170010	400	23.24	5.5	35	1.4	2.5	2.6	55	3890	500
24170011	500	26.35	5.5	35	1.4	2.5	2.7	59	4500	500
24170012	630	30.4	5.5	35	1.5	2.5	2.8	63	5120	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24180003	70	9.7	5.5	1.2	2.0	2.0	35	1480	1000
24180004	95	11.4	5.5	1.2	2.0	2.1	37	1680	1000
24180005	120	12.86	5.5	1.2	2.0	2.1	39	1820	1000
24180006	150	14.25	5.5	1.2	2.0	2.2	40	2000	1000
24180007	185	15.91	5.5	1.2	2.0	2.2	42	2180	500
24180008	240	18.4	5.5	1.2	2.0	2.3	45	2500	500
24180009	300	20.68	5.5	1.3	2.5	2.4	48	2970	500
24180010	400	23.24	5.5	1.3	2.5	2.5	53	3480	500
24180011	500	26.35	5.5	1.4	2.5	2.6	56	4000	500
24180012	630	30.4	5.5	1.4	2.5	2.8	60	4630	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 12/20 (24)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/Km	0.459	0.434	0.420	0.407	0.394	0.381	0.370	0.356	0.346	0.334
Reactance at 60 Hz	Ω/km	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.13
Capacitance	μF/Km	0.20	0.23	0.24	0.26	0.28	0.31	0.34	0.40	0.43	0.48
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.57	0.61	0.64	0.68	0.72	0.77	0.82	0.91	0.99	1.08
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	176	209	237	263	295	338	378	420	467	515
Flat Formation(Approx.)	A	175	208	235	260	291	332	369	408	451	494
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	198	241	276	311	354	416	472	543	617	695
Flat (Touching) Formation(Approx.)	A	213	258	294	329	373	432	486	547	611	675
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0141	0.113
Minimum Bending radius	mm	565	595	620	640	670	725	760	835	895	950

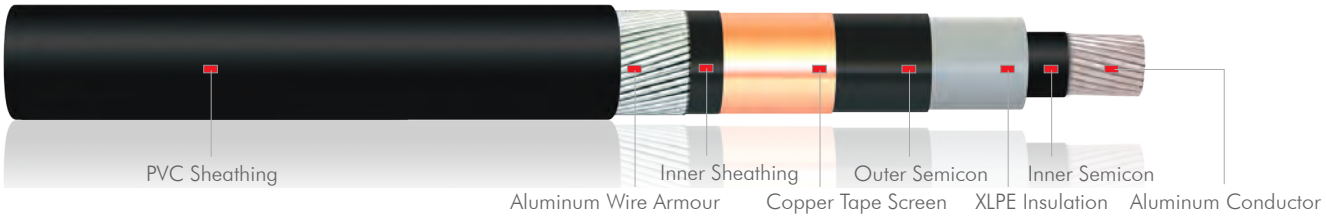
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV
AL/XLPE/AWA/PVC



SINGLE CORE | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25170002	70	9.7	8.0	16	1.2	2.0	2.3	43	2080	500
25170003	95	11.4	8.0	16	1.2	2.0	2.3	45	2270	500
25170004	120	12.86	8.0	16	1.3	2.5	2.4	47	2610	500
25170005	150	14.25	8.0	25	1.3	2.5	2.5	49	2900	500
25170006	185	15.91	8.0	25	1.3	2.5	2.5	51	3100	500
25170007	240	18.4	8.0	25	1.4	2.5	2.6	54	3480	500
25170008	300	20.68	8.0	25	1.4	2.5	2.7	57	3900	500
25170009	400	23.24	8.0	35	1.5	2.5	2.8	62	4580	500
25170010	500	26.35	8.0	35	1.5	2.5	2.9	65	5120	500
25170011	630	30.4	8.0	35	1.6	2.5	3.0	69	5800	500

SINGLE CORE | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25180002	70	9.7	8.0	1.2	2.0	2.2	41	1900	500
25180003	95	11.4	8.0	1.2	2.0	2.3	43	2100	500
25180004	120	12.86	8.0	1.2	2.0	2.3	44	2260	500
25180005	150	14.25	8.0	1.3	2.5	2.4	47	2600	500
25180006	185	15.91	8.0	1.3	2.5	2.5	49	2830	500
25180007	240	18.4	8.0	1.3	2.5	2.5	51	3160	500
25180008	300	20.68	8.0	1.4	2.5	2.6	54	3530	500
25180009	400	23.24	8.0	1.4	2.5	2.7	58	4080	500
25180010	500	26.35	8.0	1.5	2.5	2.8	62	4650	500
25180011	630	30.4	8.0	1.5	2.5	2.9	65	5280	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | ALUMINUM WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	70	95	120	150	185	240	300	400	500	630
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.568	0.411	0.326	0.265	0.211	0.161	0.130	0.1021	0.0814	0.0651
Inductance at 60 Hz	mH/Km	0.485	0.459	0.450	0.438	0.421	0.403	0.395	0.378	0.364	0.351
Reactance at 60 Hz	Ω/km	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.13
Capacitance	μF/Km	0.16	0.17	0.19	0.20	0.21	0.23	0.25	0.29	0.32	0.35
Short Circuit Current For 1 second											
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48	46.85	59.03
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33	4.33	4.33
3- Copper Tape Screen	KA	0.69	0.74	0.77	0.81	0.85	0.91	0.95	1.05	1.13	1.21
Current Rating Capacity											
1- Laid direct in ground (both end bonded)											
Trefoil Formation (Approx.)	A	176	209	237	263	295	338	378	420	467	515
Flat Formation(Approx.)	A	175	208	235	260	291	332	369	408	451	494
2- Laid in free air (both end bonded)											
Trefoil Formation (Approx.)	A	198	241	276	311	354	416	472	543	617	695
Flat (Touching) Formation(Approx.)	A	213	258	294	329	373	432	486	547	611	675
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178	0141	0.113
Minimum Bending radius	mm	645	670	715	745	770	810	860	930	975	1035

The above values are based on the following conditions:

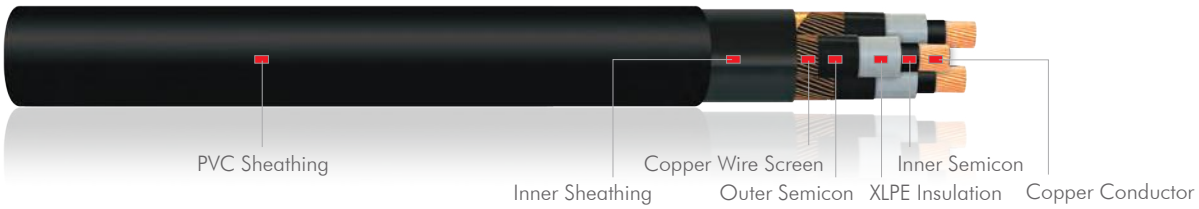
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

CU/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21030002	35	7.0	2.5	16	2.2	43	2500	500
21030003	50	8.12	2.5	16	2.3	45	3000	500
21030004	70	9.7	2.5	16	2.4	50	3650	500
21030005	95	11.4	2.5	16	2.5	53	4680	500
21030006	120	12.86	2.5	16	2.6	58	5580	500
21030007	150	14.25	2.5	25	2.8	61	6500	500
21030008	185	15.91	2.5	25	2.9	65	7600	500
21030009	240	18.4	2.6	25	3.0	71	9800	500
21030010	300	20.68	2.8	25	3.2	77	12000	500
21030011	400	23.24	3.0	35	3.5	83	14500	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21040002	35	7.0	2.5	2.1	41	2380	500
21040003	50	8.12	2.5	2.2	44	2820	500
21040004	70	9.7	2.5	2.3	48	3600	500
21040005	95	11.4	2.5	2.5	52	4500	500
21040006	120	12.86	2.5	2.6	56	5400	500
21040007	150	14.25	2.5	2.7	59	6300	500
21040008	185	15.91	2.5	2.8	63	7600	500
21040009	240	18.4	2.6	3.0	69	9500	500
21040010	300	20.68	2.8	3.2	75	11800	500
21040011	400	23.24	3.0	3.5	81	14200	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0660
Inductance at 60 Hz	mH/Km	0.294	0.283	0.273	0.267	0.260	0.253	0.250	0.244	0.236	0.226
Reactance at 60 Hz	Ω/km	0.111	0.107	0.103	0.101	0.098	0.095	0.094	0.092	0.089	0.085
Capacitance	μF/Km	0.30	0.32	0.36	0.39	0.44	0.46	0.53	0.56	0.58	0.60
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.08	1.17	1.29	1.41	1.53	1.62	1.74	1.92	2.1	2.31
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	155	183	224	267	303	339	378	442	495	558
2- Laid in free air (Approx.)	A	158	189	235	286	328	372	418	502	572	657
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	525	560	600	650	696	740	780	860	940	1050

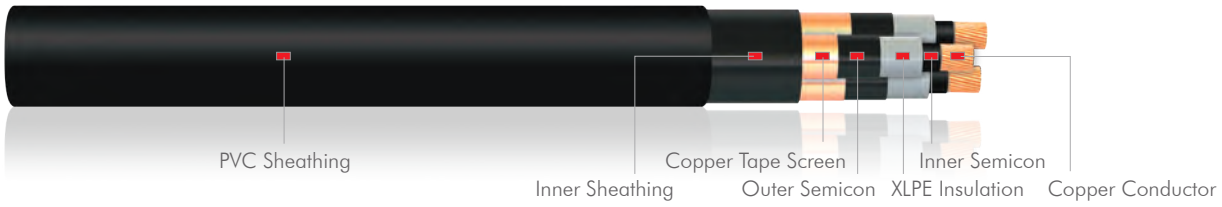
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV CU/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22030002	35	7.0	3.4	16	2.3	48	2800	500
22030003	50	8.12	3.4	16	2.4	51	3200	500
22030004	70	9.7	3.4	16	2.5	55	4000	500
22030005	95	11.4	3.4	16	2.7	60	5000	500
22030006	120	12.86	3.4	16	2.8	63	5800	500
22030007	150	14.25	3.4	25	2.9	64	6800	500
22030008	185	15.91	3.4	25	3.0	70	8200	500
22030009	240	18.4	3.4	25	3.2	76	10200	500
22030010	300	20.68	3.4	25	3.3	81	12000	500
22030011	400	23.24	3.4	35	3.5	85	14800	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22040002	35	7.0	3.4	2.3	46	2700	500
22040003	50	8.12	3.4	2.4	49	3200	500
22040004	70	9.7	3.4	2.5	52	4000	500
22040005	95	11.4	3.4	2.6	56	4900	500
22040006	120	12.86	3.4	2.7	60	5800	500
22040007	150	14.25	3.4	2.8	63	6650	500
22040008	185	15.91	3.4	2.9	67	8100	500
22040009	240	18.4	3.4	3.1	73	9950	500
22040010	300	20.68	3.4	3.3	78	12000	500
22040011	400	23.24	3.4	3.5	81	13900	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0660
Inductance at 60 Hz	mH/Km	0.318	0.306	0.292	0.284	0.276	0.270	0.263	0.256	0.248	0.239
Reactance at 60 Hz	Ω/km	0.120	0.115	0.110	0.107	0.104	0.102	0.099	0.097	0.093	0.090
Capacitance	μF/Km	0.23	0.25	0.29	0.30	0.33	0.37	0.40	0.45	0.49	0.54
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.23	1.32	1.44	1.56	1.65	1.74	1.86	2.04	2.16	2.37
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	155	183	224	267	303	339	378	442	495	558
2- Laid in free air (Approx.)	A	158	189	235	286	328	372	418	502	572	657
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	576	612	660	720	756	768	840	912	972	1020

The above values are based on the following conditions:

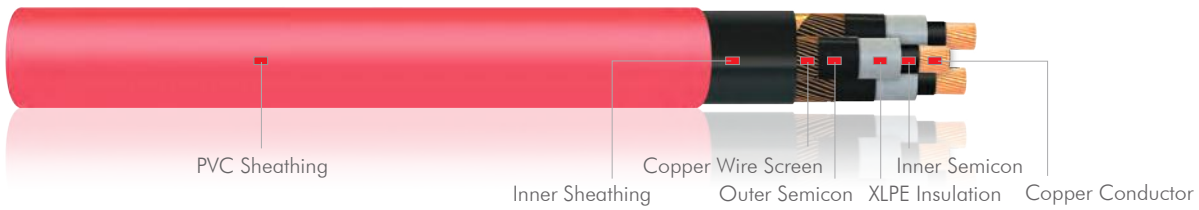
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

CU/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23030002	35	7.0	4.5	16	2.5	54	3200	500
23030003	50	8.12	4.5	16	2.6	56	3800	500
23030004	70	9.7	4.5	16	2.7	61	4700	500
23030005	95	11.4	4.5	16	2.8	64	5600	500
23030006	120	12.86	4.5	16	2.9	68	6500	500
23030007	150	14.25	4.5	25	3.1	71	7500	500
23030008	185	15.91	4.5	25	3.2	76	8600	500
23030009	240	18.4	4.5	25	3.3	81	10500	500
23030010	300	20.68	4.5	25	3.5	86	12600	500
23030011	400	23.24	4.5	35	3.7	90	15500	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23040002	35	7.0	4.5	2.5	50	3000	500
23040003	50	8.12	4.5	2.6	52	3600	500
23040004	70	9.7	4.5	2.7	56	4600	500
23040005	95	11.4	4.5	2.8	60	5500	500
23040006	120	12.86	4.5	2.9	63	6450	500
23040007	150	14.25	4.5	3.0	65	7350	500
23040008	185	15.91	4.5	3.1	72	8400	500
23040009	240	18.4	4.5	3.3	76	10100	500
23040010	300	20.68	4.5	3.4	82	12500	500
23040011	400	23.24	4.5	3.7	87	15400	500

TECHNICAL INFORMATION

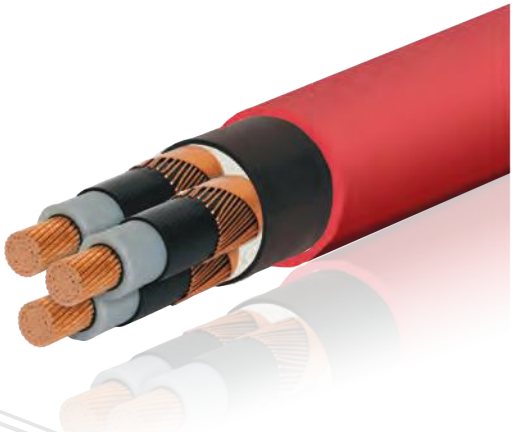
COPPER CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0655
Inductance at 60 Hz	mH/Km	0.345	0.330	0.315	0.306	0.295	0.288	0.280	0.270	0.260	0.251
Reactance at 60 Hz	Ω/km	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.09
Capacitance	μF/Km	0.18	0.2	0.23	0.25	0.27	0.29	0.32	0.35	0.39	0.43
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.38	1.47	1.59	1.68	1.8	1.89	2.01	2.16	2.31	2.52
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	155	183	224	267	303	339	378	442	495	558
2- Laid in free air (Approx.)	A	158	189	235	286	328	372	418	502	572	657
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	648	672	732	768	816	852	912	972	1032	1080

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

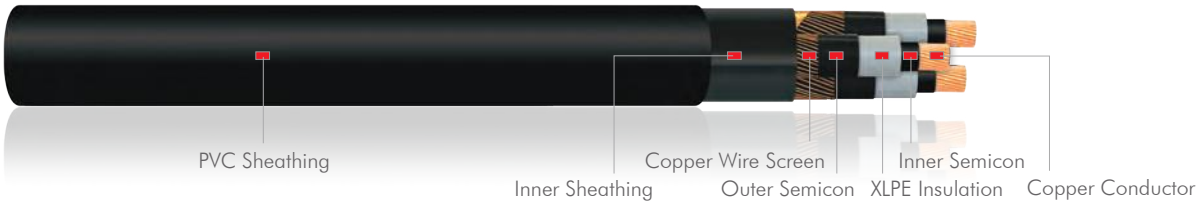
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 12/20 (24)kV

CU/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24030001	35	7.0	5.5	16	2.7	59	3550	500
24030002	50	8.12	5.5	16	2.8	61	3900	500
24030003	70	9.7	5.5	16	2.9	63	4800	500
24030004	95	11.4	5.5	16	3.0	68	5800	500
24030005	120	12.86	5.5	16	3.1	72	6700	500
24030006	150	14.25	5.5	25	3.2	76	7800	500
24030007	185	15.91	5.5	25	3.3	80	9100	500
24030008	240	18.4	5.5	25	3.5	86	11000	500
24030009	300	20.68	5.5	25	3.6	90	13000	400
24030010	400	23.24	5.5	35	3.8	97	15800	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24040001	35	7.0	5.5	2.6	56	3400	500
24040002	50	8.12	5.5	2.7	59	3800	500
24040003	70	9.7	5.5	2.8	63	4700	500
24040004	95	11.4	5.5	2.9	66	5650	500
24040005	120	12.86	5.5	3.0	70	6650	500
24040006	150	14.25	5.5	3.1	73	7700	500
24040007	185	15.91	5.5	3.3	78	9000	500
24040008	240	18.4	5.5	3.4	83	10800	500
24040009	300	20.68	5.5	3.6	88	12800	400
24040010	400	23.24	5.5	3.8	93	15500	400

TECHNICAL INFORMATION

COPPER CONDUCTOR | UNARMOURED | 12/20 (24)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0810	0.0650
Inductance at 60 Hz	mH/Km	0.365	0.350	0.333	0.322	0.312	0.303	0.295	0.285	0.270	0.262
Reactance at 60 Hz	Ω/km	0.14	0.13	0.13	0.12	0.12	0.11	0.11	0.11	0.10	0.10
Capacitance	μF/Km	0.15	0.17	0.2	0.22	0.24	0.26	0.27	0.3	0.33	0.37
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.5	1.59	1.71	1.83	1.92	2.04	2.16	2.31	2.46	2.64
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	155	183	224	267	303	339	378	442	495	558
2- Laid in free air (Approx.)	A	158	189	235	286	328	372	418	502	572	657
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	708	732	756	816	864	912	960	1032	1080	1164

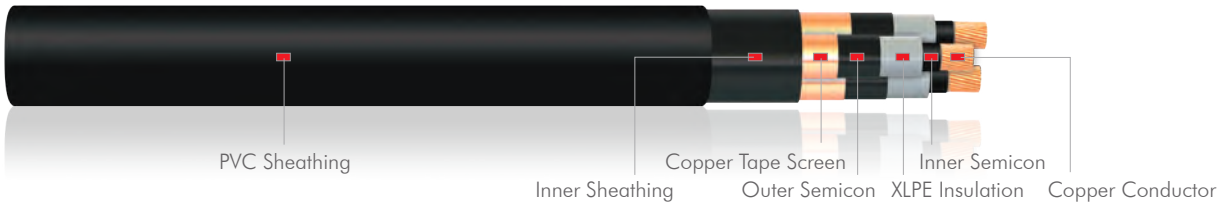
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV CU/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25030001	50	8.12	8.0	16	3.1	73	5250	500
25030002	70	9.7	8.0	16	3.2	78	6100	500
25030003	95	11.4	8.0	16	3.4	81	7300	500
25030004	120	12.86	8.0	16	3.5	84	8200	500
25030005	150	14.25	8.0	25	3.6	88	9200	500
25030006	185	15.91	8.0	25	3.7	92	10500	300
25030007	240	18.4	8.0	25	3.9	97	12800	300
25030008	300	20.68	8.0	25	4.0	101	14800	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25040001	50	8.12	8.0	3.1	71	5100	500
25040002	70	9.7	8.0	3.2	76	6000	500
25040003	95	11.4	8.0	3.3	78	7200	500
25040004	120	12.86	8.0	3.4	82	8050	500
25040005	150	14.25	8.0	3.5	85	9100	500
25040006	185	15.91	8.0	3.6	89	10400	300
25040007	240	18.4	8.0	3.8	95	12600	300
25040008	300	20.68	8.0	4.0	100	14700	300

TECHNICAL INFORMATION

COPPER CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	50	70	95	120	150	185	240	300
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.494	0.341	0.247	0.196	0.161	0.128	0.098	0.0801
Inductance at 60 Hz	mH/Km	0.398	0.380	0.369	0.355	0.345	0.335	0.320	0.308
Reactance at 60 Hz	Ω/km	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12
Capacitance	μF/Km	0.14	0.15	0.17	0.18	0.2	0.21	0.23	0.25
Short Circuit Current For 1 second									
1- Conductor	KA	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1
3- Copper Tape Screen	KA	1.95	2.07	2.19	2.28	2.37	2.49	2.67	2.82
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	183	224	267	303	339	378	442	495
2- Laid in free air (Approx.)	A	189	235	286	328	372	418	502	572
Voltage Drop per phase	V/A/km	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137
Minimum Bending radius	mm	876	936	972	1008	1056	1104	1164	1212

The above values are based on the following conditions:

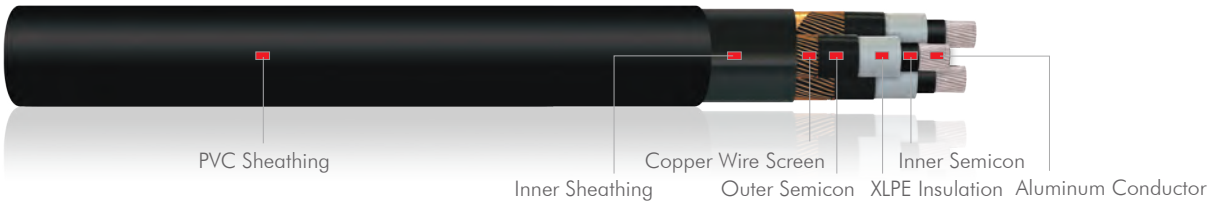
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

AL/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21150003	50	8.3	2.5	16	2.3	48	2300	500
21150004	70	9.7	2.5	16	2.4	51	2600	500
21150005	95	11.55	2.5	16	2.5	56	3150	500
21150006	120	12.95	2.5	16	2.6	59	3500	500
21150007	150	14.3	2.5	25	2.8	63	4000	500
21150008	185	15.9	2.5	25	2.9	67	4500	500
21150009	240	18.4	2.6	25	3.0	72	5400	500
21150010	300	20.5	2.8	25	3.2	78	6500	500
21150011	400	24.0	3.0	35	3.5	85	8000	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21160003	50	8.3	2.5	2.2	45	2150	500
21160004	70	9.7	2.5	2.3	49	2400	500
21160005	95	11.55	2.5	2.5	53	3000	500
21160006	120	12.95	2.5	2.6	57	3300	500
21160007	150	14.3	2.5	2.7	60	3950	500
21160008	185	15.9	2.5	2.8	63	4350	500
21160009	240	18.4	2.6	3.0	70	5200	500
21160010	300	20.5	2.8	3.2	76	6300	500
21160011	400	24.0	3.0	3.5	81	7750	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | UNARMOURED | 3.6/6 (7.2)kV

Size	mm2	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.822	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.283	0.273	0.267	0.260	0.253	0.250	0.244	0.236	0.226
Reactance at 60 Hz	Ω/km	0.107	0.103	0.101	0.098	0.095	0.094	0.092	0.089	0.085
Capacitance	μF/Km	0.32	0.36	0.39	0.44	0.46	0.53	0.56	0.58	0.60
Short Circuit Current For 1 second										
1- Conductor	KA	4.69	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.17	1.29	1.41	1.53	1.62	1.74	1.92	2.1	2.31
Current Rating Capacity (Both ends bonded)										
1- Laid direct in ground (Approx.)	A	142	174	208	236	263	295	347	390	444
2- Laid in free air (Approx.)	A	147	183	222	255	289	326	394	450	522
Voltage Drop per phase	V/A/km	1.424	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	576	612	672	708	756	804	864	936	1020

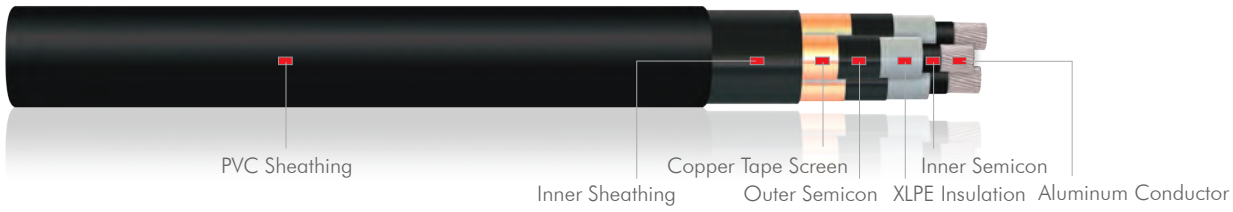
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV AL/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22150004	70	9.7	3.4	16	2.5	55	2900	500
22150005	95	11.55	3.4	16	2.7	60	3500	500
22150006	120	12.95	3.4	16	2.8	63	3900	500
22150007	150	14.3	3.4	25	2.9	66	4500	500
22150008	185	15.9	3.4	25	3.0	70	4900	500
22150009	240	18.4	3.4	25	3.2	76	5800	500
22150010	300	20.5	3.4	25	3.3	81	6800	500
22150011	400	24.0	3.4	35	3.5	85	7500	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22160004	70	9.7	3.4	2.5	53	2750	500
22160005	95	11.55	3.4	2.7	58	3400	500
22160006	120	12.95	3.4	2.7	61	3700	500
22160007	150	14.3	3.4	2.8	64	4350	500
22160008	185	15.9	3.4	2.9	67	4700	500
22160009	240	18.4	3.4	3.1	74	5600	500
22160010	300	20.5	3.4	3.3	79	6650	500
22160011	400	24.0	3.4	3.5	83	7250	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | UNARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.292	0.284	0.276	0.270	0.263	0.256	0.248	0.239
Reactance at 60 Hz	Ω/km	0.110	0.107	0.104	0.102	0.099	0.097	0.093	0.090
Capacitance	μF/Km	0.29	0.30	0.33	0.37	0.40	0.45	0.49	0.54
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.44	1.56	1.65	1.74	1.86	2.04	2.16	2.37
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	174	208	236	263	295	347	390	444
2- Laid in free air (Approx.)	A	183	222	255	289	326	394	450	522
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	660	720	756	792	840	912	972	1020

The above values are based on the following conditions:

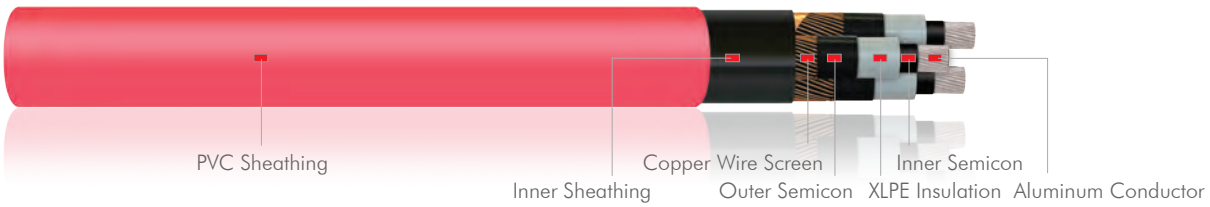
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

AL/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23150004	70	9.7	4.5	16	2.7	61	3400	500
23150005	95	11.55	4.5	16	2.8	65	4000	500
23150006	120	12.95	4.5	16	2.9	68	4300	500
23150007	150	14.3	4.5	25	3.1	72	4850	500
23150008	185	15.9	4.5	25	3.2	76	5500	500
23150009	240	18.4	4.5	25	3.3	81	6400	500
23150010	300	20.5	4.5	25	3.5	86	7300	500
23150011	400	24.0	4.5	35	3.7	90	9800	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23160004	70	9.7	4.5	2.7	58	3250	500
23160005	95	11.55	4.5	2.8	63	3900	500
23160006	120	12.95	4.5	2.9	66	4200	500
23160007	150	14.3	4.5	3.0	69	4700	500
23160008	185	15.9	4.5	3.1	73	5300	500
23160009	240	18.4	4.5	3.3	79	6300	500
23160010	300	20.5	4.5	3.4	84	7150	500
23160011	400	24.0	4.5	3.7	88	9700	500

TECHNICAL INFORMATION

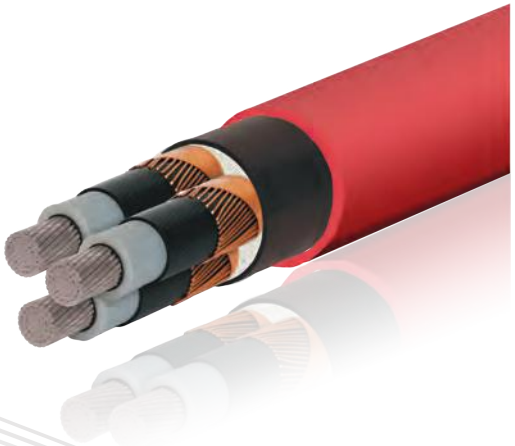
ALUMINUM CONDUCTOR | UNARMOURED | 8.7/15 (17.5)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.315	0.306	0.295	0.288	0.280	0.270	0.260	0.251
Reactance at 60 Hz	Ω/km	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.09
Capacitance	μF/Km	0.23	0.25	0.27	0.29	0.32	0.35	0.39	0.43
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.59	1.68	1.8	1.89	2.01	2.16	2.31	2.52
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	174	208	236	263	295	347	390	444
2- Laid in free air (Approx.)	A	183	222	255	289	326	394	450	522
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	732	780	816	864	912	972	1032	1080

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

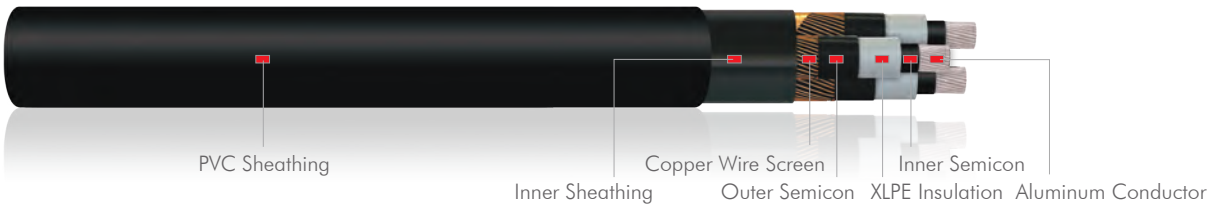
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 12/20 (24)kV

AL/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24150003	70	9.7	5.5	16	2.9	64	3800	500
24150004	95	11.55	5.5	16	3.0	69	4400	500
24150005	120	12.95	5.5	16	3.1	73	4850	500
24150006	150	14.3	5.5	25	3.2	77	5400	500
24150007	185	15.9	5.5	25	3.3	80	6000	500
24150008	240	18.4	5.5	25	3.5	86	7100	500
24150009	300	20.5	5.5	25	3.6	91	7800	400
24150010	400	24.0	5.5	35	3.8	97	8400	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24160003	70	9.7	5.5	2.8	63	3650	500
24160004	95	11.55	5.5	2.9	67	4200	500
24160005	120	12.95	5.5	3.0	70	4700	500
24160006	150	14.3	5.5	3.1	72	5200	500
24160007	185	15.9	5.5	3.3	78	5800	500
24160008	240	18.4	5.5	3.4	83	6900	500
24160009	300	20.5	5.5	3.6	88	7700	400
24160010	400	24.0	5.5	3.8	93	8200	400

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | UNARMOURED | 12/20 (24)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.333	0.322	0.312	0.303	0.295	0.285	0.270	0.262
Reactance at 60 Hz	Ω/km	0.13	0.12	0.12	0.11	0.11	0.11	0.10	0.10
Capacitance	μF/Km	0.2	0.22	0.24	0.26	0.27	0.3	0.33	0.37
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.71	1.83	1.92	2.04	2.16	2.31	2.46	2.64
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	174	208	236	263	295	347	390	444
2- Laid in free air (Approx.)	A	183	222	255	289	326	394	450	522
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	768	828	876	924	960	1032	1092	1164

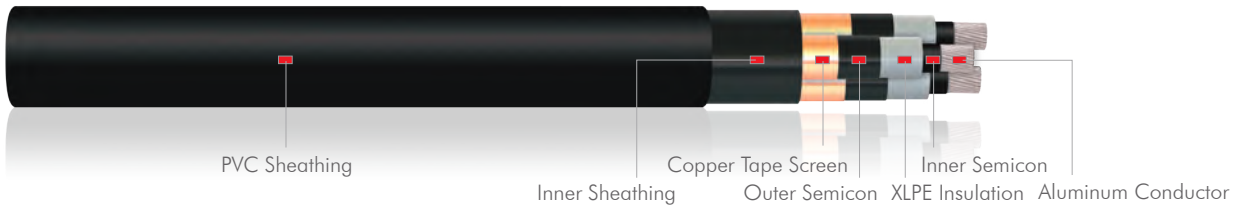
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV AL/XLPE/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25150002	70	9.7	8.0	16	3.2	77	5100	500
25150003	95	11.55	8.0	16	3.4	82	5700	500
25150004	120	12.95	8.0	16	3.5	85	6200	500
25150005	150	14.3	8.0	25	3.6	88	6800	500
25150006	185	15.9	8.0	25	3.7	92	7400	300
25150007	240	18.4	8.0	25	3.9	98	8600	300
25150008	300	20.5	8.0	25	4.0	102	9700	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25160002	70	9.7	8.0	3.2	75	4900	500
25160003	95	11.55	8.0	3.3	79	5500	500
25160004	120	12.95	8.0	3.4	82	6000	500
25160005	150	14.3	8.0	3.5	85	6500	500
25160006	185	15.9	8.0	3.6	89	7200	300
25160007	240	18.4	8.0	3.8	95	8400	300
25160008	300	20.5	8.0	4.0	100	9500	300

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | UNARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	70	95	120	150	185	240	300
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131
Inductance at 60 Hz	mH/Km	0.380	0.369	0.355	0.345	0.335	0.320	0.308
Reactance at 60 Hz	Ω/km	0.14	0.14	0.13	0.13	0.13	0.12	0.12
Capacitance	μF/Km	0.15	0.17	0.18	0.2	0.21	0.23	0.25
Short Circuit Current For 1 second								
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1
3- Copper Tape Screen	KA	2.07	2.19	2.28	2.37	2.49	2.67	2.82
Current Rating Capacity (Both ends bonded)								
1- Laid direct in ground (Approx.)	A	174	208	236	263	295	347	390
2- Laid in free air (Approx.)	A	183	222	255	289	326	394	450
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226
Minimum Bending radius	mm	924	984	1020	1056	1104	1176	1224

The above values are based on the following conditions:

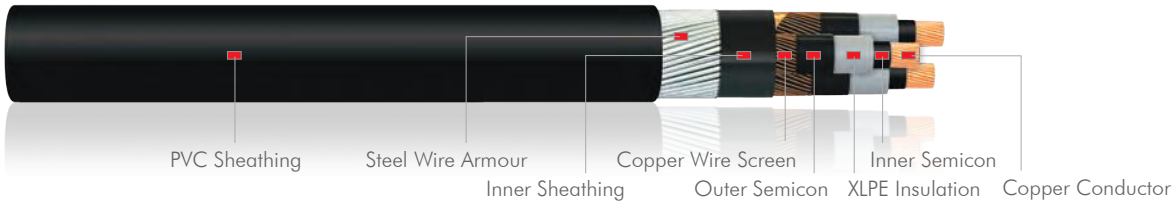
Ambient Air Temperature:	40 °C
Ambient Ground Temperature:	35 °C
Depth of laying in ground:	0.80 m
Soil Thermal Resistivity:	1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 3.6/6 (7.2)kV

CU/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21110002	35	7.0	2.5	16	1.3	2.5	2.5	51	4500	500
21110003	50	8.12	2.5	16	1.4	2.5	2.6	55	5200	500
21110004	70	9.7	2.5	16	1.4	2.5	2.7	59	6100	500
21110005	95	11.4	2.5	16	1.5	2.5	2.8	63	7300	500
21110006	120	12.86	2.5	16	1.5	2.5	2.9	67	8300	500
21110007	150	14.25	2.5	25	1.6	2.5	3.0	70	9500	500
21110008	185	15.91	2.5	25	1.7	2.5	3.2	74	11800	500
21110009	240	18.4	2.6	25	1.8	2.5	3.4	82	14100	500
21110010	300	20.68	2.8	25	1.9	3.15	3.6	88	16200	500
21110011	400	23.24	3.0	35	2.0	3.15	3.9	95	21000	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21120002	35	7.0	2.5	1.2	2.5	2.3	47	4350	500
21120003	50	8.12	2.5	1.3	2.5	2.5	49	5000	500
21120004	70	9.7	2.5	1.4	2.5	2.6	55	5900	500
21120005	95	11.4	2.5	1.4	2.5	2.7	59	7100	500
21120006	120	12.86	2.5	1.5	2.5	2.8	63	8100	500
21120007	150	14.25	2.5	1.5	2.5	2.9	65	9250	500
21120008	185	15.91	2.5	1.6	2.5	3.0	70	11500	500
21120009	240	18.4	2.6	1.7	2.5	3.2	75	14000	500
21120010	300	20.68	2.8	1.8	3.15	3.5	82	15800	500
21120011	400	23.24	3.0	1.9	3.15	3.8	92	20500	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 3.6/6 (7.2)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0660
Inductance at 60 Hz	mH/Km	0.345	0.334	0.322	0.316	0.10	0.303	0.300	0.294	0.286	0.279
Reactance at 60 Hz	Ω/km	0.13	0.13	0.12	0.12	0.04	0.11	0.11	0.11	0.11	0.11
Capacitance	μF/Km	0.30	0.32	0.36	0.39	0.44	0.46	0.53	0.56	0.58	0.60
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.08	1.17	1.29	1.41	1.53	1.62	1.74	1.92	2.1	2.31
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	148	174	212	252	285	317	355	406	450	500
2- Laid in free air (Approx.)	A	151	180	221	267	305	342	389	452	509	573
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	612	660	708	756	804	840	888	984	1056	1140

The above values are based on the following conditions:

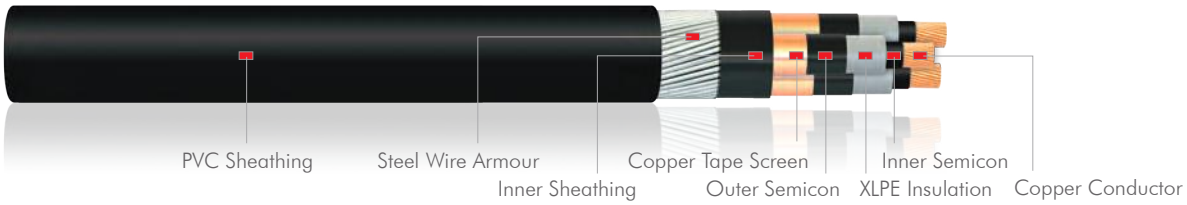
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

CU/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22110002	35	7.0	3.4	16	1.4	2.5	2.6	55	5000	500
22110003	50	8.12	3.4	16	1.4	2.5	2.7	57	5700	500
22110004	70	9.7	3.4	16	1.5	2.5	2.8	62	6700	500
22110005	95	11.4	3.4	16	1.6	2.5	2.9	66	7700	500
22110006	120	12.86	3.4	16	1.6	2.5	3.0	69	8550	500
22110007	150	14.25	3.4	25	1.7	2.5	3.2	72	9800	500
22110008	185	15.91	3.4	25	1.7	2.5	3.3	76	11200	500
22110009	240	18.4	3.4	25	1.8	3.15	3.5	82	14300	500
22110010	300	20.68	3.4	25	1.9	3.15	3.6	88	16600	400
22110011	400	23.24	3.4	35	2.0	3.15	3.9	96	21000	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22120002	35	7.0	3.4	1.3	2.5	2.5	52	4700	500
22120003	50	8.12	3.4	1.4	2.5	2.6	55	5500	500
22120004	70	9.7	3.4	1.4	2.5	2.7	59	6500	500
22120005	95	11.4	3.4	1.5	2.5	2.9	63	7500	500
22120006	120	12.86	3.4	1.6	2.5	3.0	65	8300	500
22120007	150	14.25	3.4	1.6	2.5	3.1	70	9500	500
22120008	185	15.91	3.4	1.7	2.5	3.2	73	11000	500
22120009	240	18.4	3.4	1.8	3.15	3.4	79	14150	500
22120010	300	20.68	3.4	1.9	3.15	3.6	85	16400	400
22120011	400	23.24	3.4	2.0	3.15	3.9	95	20700	400

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0660
Inductance at 60 Hz	mH/Km	0.369	0.355	0.342	0.335	0.326	0.320	0.313	0.305	0.298	0.290
Reactance at 60 Hz	Ω/km	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11
Capacitance	μF/Km	0.23	0.25	0.29	0.30	0.33	0.37	0.40	0.45	0.49	0.54
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.23	1.32	1.44	1.56	1.65	1.74	1.86	2.04	2.16	2.37
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	148	174	212	252	285	317	355	406	450	500
2- Laid in free air (Approx.)	A	151	180	221	267	305	342	389	452	509	573
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	660	684	744	792	828	864	912	912	984	1056

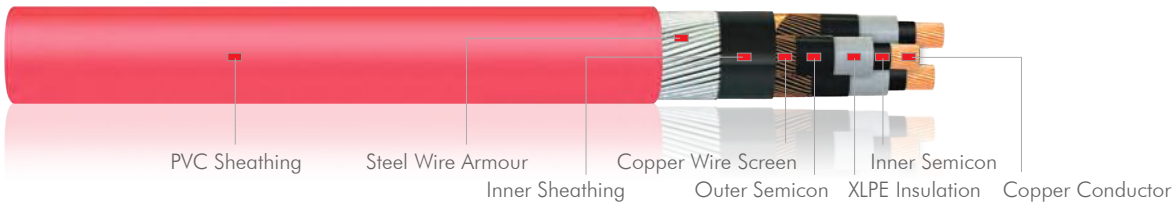
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 8.7/15 (17.5)kV
CU/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23110002	35	7.0	4.5	16	1.5	2.5	2.7	59	5700	500
23110003	50	8.12	4.5	16	1.5	2.5	2.8	62	6400	500
23110004	70	9.7	4.5	16	1.6	2.5	2.9	66	7400	500
23110005	95	11.4	4.5	16	1.7	2.5	3.1	71	8500	500
23110006	120	12.86	4.5	16	1.7	2.5	3.2	74	9700	500
23110007	150	14.25	4.5	25	1.8	3.15	3.4	79	11800	500
23110008	185	15.91	4.5	25	1.8	3.15	3.5	83	13500	500
23110009	240	18.4	4.5	25	1.9	3.15	3.7	89	15800	500
23110010	300	20.68	4.5	25	2.0	3.15	3.8	94	18500	400
23110011	400	23.24	4.5	35	2.1	3.15	4.0	100	21500	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23120002	35	7.0	4.5	1.4	2.5	2.7	56	5500	500
23120003	50	8.12	4.5	1.5	2.5	2.8	60	6200	500
23120004	70	9.7	4.5	1.5	2.5	2.9	63	7200	500
23120005	95	11.4	4.5	1.6	2.5	3.0	67	8300	500
23120006	120	12.86	4.5	1.7	2.5	3.2	72	9500	500
23120007	150	14.25	4.5	1.7	3.15	3.3	75	11500	500
23120008	185	15.91	4.5	1.8	3.15	3.4	80	13300	500
23120009	240	18.4	4.5	1.9	3.15	3.6	86	15500	500
23120010	300	20.68	4.5	2.0	3.15	3.8	91	18300	400
23120011	400	23.24	4.5	2.1	3.15	4.0	96	21300	400

TECHNICAL INFORMATION

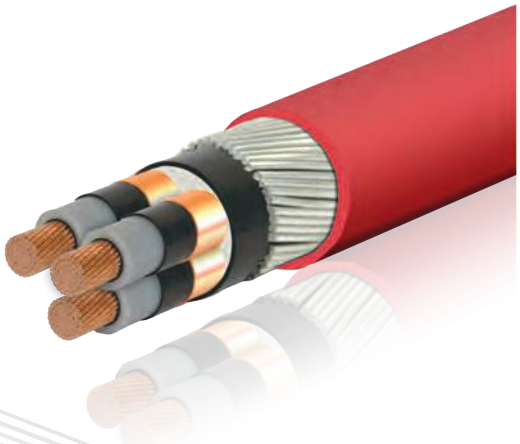
COPPER CONDUCTOR | STEEL WIRE ARMOURED | 8.7/15 (17.5)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0655
Inductance at 60 Hz	mH/Km	0.395	0.380	0.365	0.356	0.345	0.339	0.330	0.321	0.312	0.302
Reactance at 60 Hz	Ω/km	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.11
Capacitance	μF/Km	0.18	0.2	0.23	0.25	0.27	0.29	0.32	0.35	0.39	0.43
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.38	1.47	1.59	1.68	1.8	1.89	2.01	2.16	2.31	2.52
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	148	174	212	252	285	317	355	406	450	500
2- Laid in free air (Approx.)	A	151	180	221	267	305	342	389	452	509	573
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	708	744	792	852	888	948	996	1068	1128	1200

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

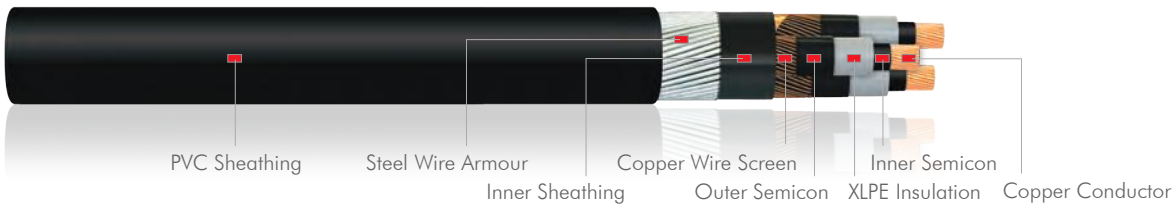
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 12/20 (24)kV

CU/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24110001	35	7.0	5.5	16	1.5	2.5	2.9	65	6500	500
24110002	50	8.12	5.5	16	1.6	2.5	3.1	68	7400	500
24110003	70	9.7	5.5	16	1.7	2.5	3.2	72	8500	500
24110004	95	11.4	5.5	16	1.7	2.5	3.3	77	9800	500
24110005	120	12.86	5.5	16	1.8	3.15	3.4	81	11800	500
24110006	150	14.25	5.5	25	1.9	3.15	3.6	85	13000	500
24110007	185	15.91	5.5	25	1.9	3.15	3.7	89	14600	400
24110008	240	18.4	5.5	25	2.0	3.15	3.8	95	17000	400
24110009	300	20.68	5.5	25	2.1	3.15	4.0	100	19500	300
24110010	400	23.24	5.5	35	2.2	3.15	4.2	104	24000	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24120001	35	7.0	5.5	1.5	2.5	2.9	63	6200	500
24120002	50	8.12	5.5	1.6	2.5	3.0	65	7100	500
24120003	70	9.7	5.5	1.6	2.5	3.1	69	8200	500
24120004	95	11.4	5.5	1.7	2.5	3.2	75	9500	500
24120005	120	12.86	5.5	1.7	3.15	3.3	78	11500	500
24120006	150	14.25	5.5	1.8	3.15	3.5	82	12700	500
24120007	185	15.91	5.5	1.9	3.15	3.6	86	14400	400
24120008	240	18.4	5.5	2.0	3.15	3.7	91	16800	400
24120009	300	20.68	5.5	2.0	3.15	3.9	97	19300	300
24120010	400	23.24	5.5	2.1	3.15	4.1	102	23800	300

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 12/20 (24)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0810	0.0650
Inductance at 60 Hz	mH/Km	0.415	0.400	0.381	0.374	0.362	0.354	0.345	0.335	0.320	0.305
Reactance at 60 Hz	Ω/km	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.11
Capacitance	μF/Km	0.15	0.17	0.2	0.22	0.24	0.26	0.27	0.3	0.33	0.37
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.5	1.59	1.71	1.83	1.92	2.04	2.16	2.31	2.46	2.64
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	148	174	212	252	285	317	355	406	450	500
2- Laid in free air (Approx.)	A	151	180	221	267	305	342	389	452	509	573
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	780	816	864	924	972	1020	1068	1140	1200	1248

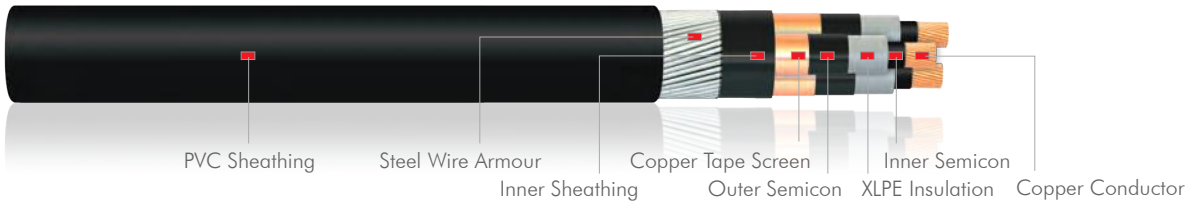
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV CU/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25110001	50	8.12	8.0	16	1.8	3.15	3.5	82	10100	400
25110002	70	9.7	8.0	16	1.9	3.15	3.6	86	11500	400
25110003	95	11.4	8.0	16	2.0	3.15	3.7	90	12800	400
25110004	120	12.86	8.0	16	2.0	3.15	3.8	93	14000	400
25110005	150	14.25	8.0	25	2.1	3.15	4.0	97	15200	400
25110006	185	15.91	8.0	25	2.1	3.15	4.1	101	16800	400
25110007	240	18.4	8.0	25	2.2	3.15	4.2	106	19500	300
25110008	300	20.68	8.0	25	2.3	3.15	4.4	112	21000	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25120001	50	8.12	8.0	1.8	3.15	3.4	79	9800	400
25120002	70	9.7	8.0	1.9	3.15	3.5	83	11200	400
25120003	95	11.4	8.0	2.0	3.15	3.6	87	12500	400
25120004	120	12.86	8.0	2.0	3.15	3.7	90	13700	400
25120005	150	14.25	8.0	2.1	3.15	3.9	94	14900	400
25120006	185	15.91	8.0	2.1	3.15	4.0	98	16500	400
25120007	240	18.4	8.0	2.2	3.15	4.1	103	19100	300
25120008	300	20.68	8.0	2.3	3.15	4.3	109	20700	300

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	50	70	95	120	150	185	240	300
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.494	0.341	0.247	0.196	0.161	0.128	0.098	0.0801
Inductance at 60 Hz	mH/Km	0.450	0.432	0.420	0.405	0.395	0.385	0.372	0.360
Reactance at 60 Hz	Ω/km	0.17	0.16	0.16	0.15	0.15	0.15	0.14	0.14
Capacitance	μF/Km	0.14	0.15	0.17	0.18	0.2	0.21	0.23	0.25
Short Circuit Current For 1 second									
1- Conductor	KA	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1
3- Copper Tape Screen	KA	1.95	2.07	2.19	2.28	2.37	2.49	2.67	2.82
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	174	212	252	285	317	355	406	450
2- Laid in free air (Approx.)	A	180	221	267	305	342	389	452	509
Voltage Drop per phase	V/A/km	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137
Minimum Bending radius	mm	984	1032	1080	1116	1164	1212	1272	1344

The above values are based on the following conditions:

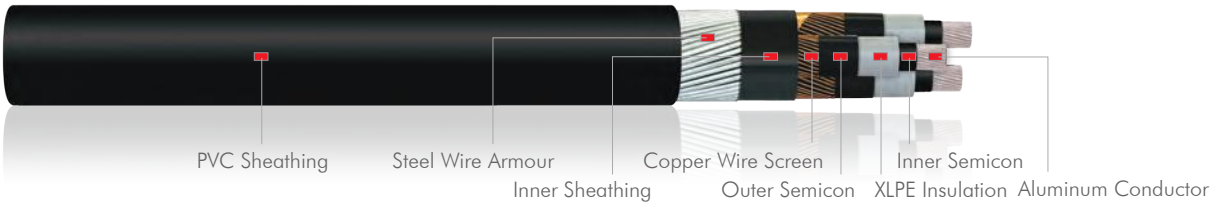
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 3.6/6 (7.2)kV

AL/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21230003	50	8.3	2.5	16	1.4	2.5	2.5	53	4400	500
21230004	70	9.7	2.5	16	1.4	2.5	2.6	57	4950	500
21230005	95	11.55	2.5	16	1.5	2.5	2.8	61	5600	500
21230006	120	12.95	2.5	16	1.5	2.5	2.9	64	6150	500
21230007	150	14.3	2.5	25	1.6	2.5	3.0	68	6900	500
21230008	185	15.9	2.5	25	1.7	2.5	3.1	73	7800	500
21230009	240	18.4	2.6	25	1.8	2.5	3.4	80	9900	500
21230010	300	20.5	2.8	25	1.9	3.15	3.6	87	11200	500
21230011	400	24.0	3.0	35	2.0	3.15	3.9	94	11500	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21240003	50	8.3	2.5	1.3	2.5	2.5	51	4200	500
21240004	70	9.7	2.5	1.4	2.5	2.6	54	4700	500
21240005	95	11.55	2.5	1.4	2.5	2.7	58	5400	500
21240006	120	12.95	2.5	1.5	2.5	2.8	62	5900	500
21240007	150	14.3	2.5	1.5	2.5	2.9	65	6650	500
21240008	185	15.9	2.5	1.6	2.5	3.1	70	7550	500
21240009	240	18.4	2.6	1.7	2.5	3.2	76	9700	500
21240010	300	20.5	2.8	1.8	3.15	3.5	83	11000	500
21240011	400	24.0	3.0	1.9	3.15	3.8	88	11300	500

TECHNICAL INFORMATION

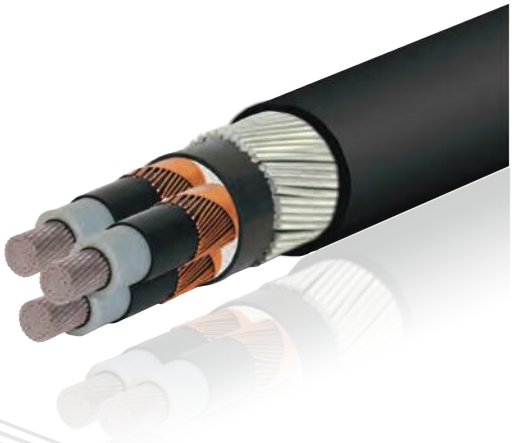
ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 3.6/6 (7.2)kV

Size	mm2	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.822	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.334	0.322	0.316	0.10	0.303	0.300	0.294	0.286	0.279
Reactance at 60 Hz	Ω/km	0.13	0.12	0.12	0.04	0.11	0.11	0.11	0.11	0.11
Capacitance	μF/Km	0.32	0.36	0.39	0.44	0.46	0.53	0.56	0.58	0.60
Short Circuit Current For 1 second										
1- Conductor	KA	4.69	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.17	1.29	1.41	1.53	1.62	1.74	1.92	2.1	2.31
Current Rating Capacity (Both ends bonded)										
1- Laid direct in ground (Approx.)	A	135	165	196	222	248	280	322	360	407
2- Laid in free air (Approx.)	A	139	172	208	238	268	306	359	406	468
Voltage Drop per phase	V/A/km	1.424	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	636	684	732	768	816	876	960	1044	1128

The above values are based on the following conditions:

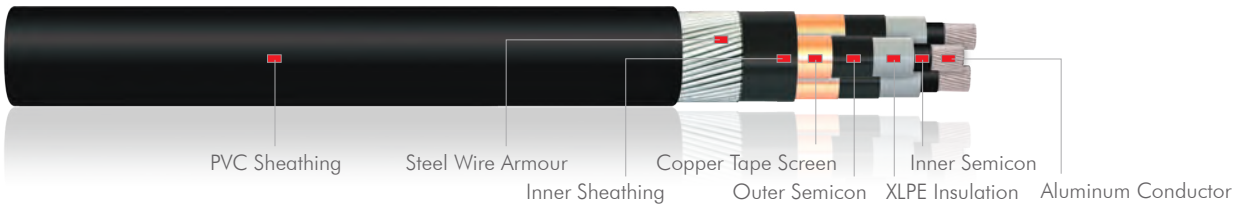
Ambient Air Temperature:	40 °C
Ambient Ground Temperature:	35 °C
Depth of laying in ground:	0.80 m
Soil Thermal Resistivity:	1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV AL/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22230004	70	9.7	3.4	16	1.5	2.5	2.8	61	5550	500
22230005	95	11.55	3.4	16	1.6	2.5	2.9	65	7000	500
22230006	120	12.95	3.4	16	1.6	2.5	3.0	69	6900	500
22230007	150	14.3	3.4	25	1.7	2.5	3.2	72	7700	500
22230008	185	15.9	3.4	25	1.7	2.5	3.3	76	8300	500
22230009	240	18.4	3.4	25	1.8	3.15	3.5	84	10600	500
22230010	300	20.5	3.4	25	1.9	3.15	3.6	89	11650	400
22230011	400	24.0	3.4	35	2.0	3.15	3.9	94	14000	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22240004	70	9.7	3.4	1.4	2.5	2.7	58	5300	500
22240005	95	11.55	3.4	1.5	2.5	2.9	63	6800	500
22240006	120	12.95	3.4	1.6	2.5	3.0	66	6700	500
22240007	150	14.3	3.4	1.6	2.5	3.1	70	7500	500
22240008	185	15.9	3.4	1.7	2.5	3.2	73	8100	500
22240009	240	18.4	3.4	1.8	3.15	3.4	80	10400	500
22240010	300	20.5	3.4	1.9	3.15	3.6	85	11400	400
22240011	400	24.0	3.4	2.0	3.15	3.9	93	13700	400

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.342	0.335	0.326	0.320	0.313	0.305	0.298	0.290
Reactance at 60 Hz	Ω/km	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11
Capacitance	μF/Km	0.29	0.30	0.33	0.37	0.40	0.45	0.49	0.54
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.44	1.56	1.65	1.74	1.86	2.04	2.16	2.37
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	165	196	222	248	280	322	360	407
2- Laid in free air (Approx.)	A	172	208	238	268	306	359	406	468
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	732	780	828	864	912	1008	1068	1128

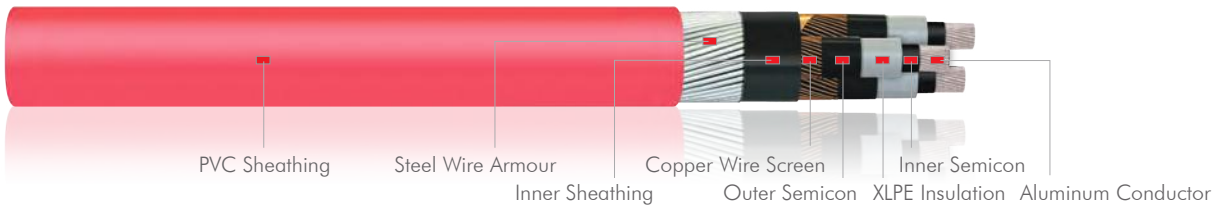
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 8.7/15 (17.5)kV
AL/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23230004	70	9.7	4.5	16	1.6	2.5	2.9	66	6200	500
23230005	95	11.55	4.5	16	1.7	2.5	3.1	71	7150	500
23230006	120	12.95	4.5	16	1.7	2.5	3.2	74	7700	500
23230007	150	14.3	4.5	25	1.8	3.15	3.4	80	9300	500
23230008	185	15.9	4.5	25	1.8	3.15	3.5	83	10100	500
23230009	240	18.4	4.5	25	1.9	3.15	3.7	89	11500	500
23230010	300	20.5	4.5	25	2.0	3.15	3.8	94	12700	400
23230011	400	24.0	4.5	35	2.1	3.15	4.0	100	13000	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23240004	70	9.7	4.5	1.5	2.5	2.9	64	6000	500
23240005	95	11.55	4.5	1.6	2.5	3.0	68	7000	500
23240006	120	12.95	4.5	1.7	2.5	3.2	72	7500	500
23240007	150	14.3	4.5	1.7	3.15	3.3	75	9100	500
23240008	185	15.9	4.5	1.8	3.15	3.4	80	10000	500
23240009	240	18.4	4.5	1.9	3.15	3.6	86	11300	500
23240010	300	20.5	4.5	2.0	3.15	3.8	92	12500	400
23240011	400	24.0	4.5	2.1	3.15	4.0	96	12800	400

TECHNICAL INFORMATION

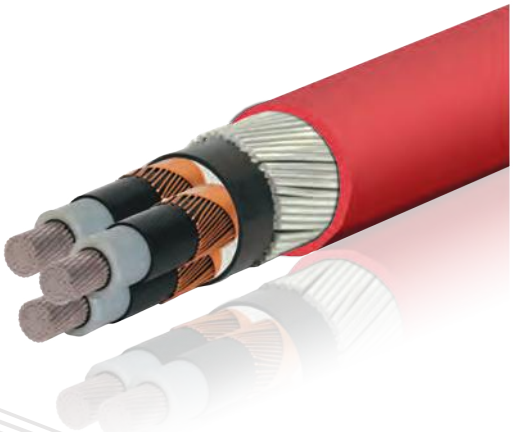
ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 8.7/15 (17.5)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.365	0.356	0.345	0.339	0.330	0.321	0.312	0.302
Reactance at 60 Hz	Ω/km	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.11
Capacitance	μF/Km	0.23	0.25	0.27	0.29	0.32	0.35	0.39	0.43
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.59	1.68	1.8	1.89	2.01	2.16	2.31	2.52
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	165	196	222	248	280	322	360	407
2- Laid in free air (Approx.)	A	172	208	238	268	306	359	406	468
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	792	852	888	960	996	1068	1128	1200

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

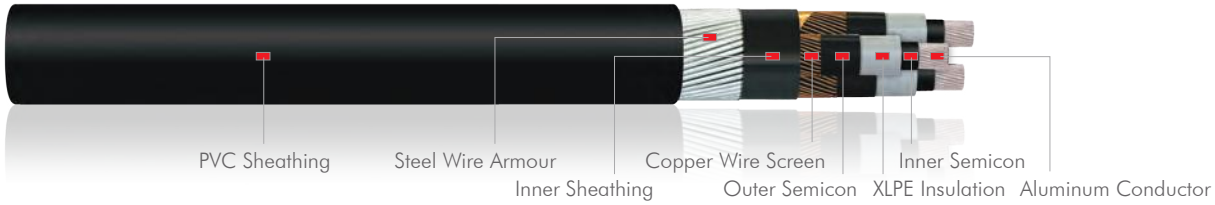
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 12/20 (24)kV

AL/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24230003	70	9.7	5.5	16	1.7	2.5	3.2	72	6200	500
24230004	95	11.55	5.5	16	1.7	2.5	3.3	76	7000	500
24230005	120	12.95	5.5	16	1.8	3.15	3.4	81	7900	500
24230006	150	14.3	5.5	25	1.9	3.15	3.6	84	9400	500
24230007	185	15.9	5.5	25	1.9	3.15	3.7	88	10150	400
24230008	240	18.4	5.5	25	2.0	3.15	3.8	94	11000	400
24230009	300	20.5	5.5	25	2.1	3.15	4.0	99	12300	300
24230010	400	24.0	5.5	35	2.2	3.15	4.2	104	13600	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24240003	70	9.7	5.5	1.6	2.5	3.1	68	6000	500
24240004	95	11.55	5.5	1.7	2.5	3.2	73	6800	500
24240005	120	12.95	5.5	1.7	3.15	3.4	78	7700	500
24240006	150	14.3	5.5	1.8	3.15	3.5	82	9250	500
24240007	185	15.9	5.5	1.9	3.15	3.6	85	10000	400
24240008	240	18.4	5.5	2.0	3.15	3.8	91	10800	400
24240009	300	20.5	5.5	2.0	3.15	3.9	96	12100	300
24240010	400	24.0	5.5	2.1	3.15	4.1	100	13400	300

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 12/20 (24)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.381	0.374	0.362	0.354	0.345	0.335	0.320	0.305
Reactance at 60 Hz	Ω/km	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.11
Capacitance	μF/Km	0.2	0.22	0.24	0.26	0.27	0.3	0.33	0.37
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.71	1.83	1.92	2.04	2.16	2.31	2.46	2.64
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	165	196	222	248	280	322	360	407
2- Laid in free air (Approx.)	A	172	208	238	268	306	359	406	468
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	864	912	972	1008	1056	1128	1188	1248

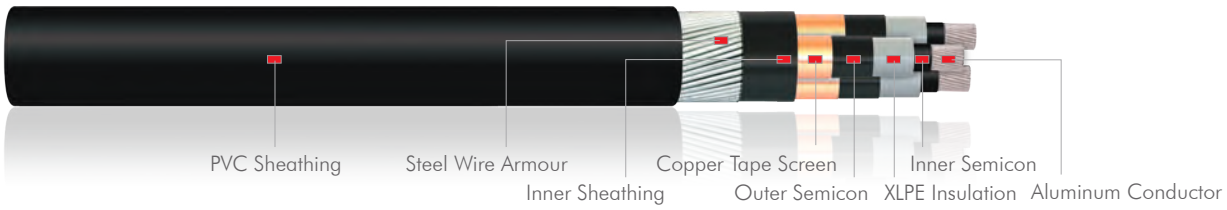
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV AL/XLPE/SWA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25230002	70	9.7	8.0	16	1.9	3.15	3.6	86	9900	400
25230003	95	11.55	8.0	16	2.0	3.15	3.7	90	10800	400
25230004	120	12.95	8.0	16	2.0	3.15	3.8	93	11500	400
25230005	150	14.3	8.0	25	2.1	3.15	4.0	97	12300	400
25230006	185	15.9	8.0	25	2.1	3.15	4.1	101	13200	400
25230007	240	18.4	8.0	25	2.2	3.15	4.2	106	14600	300
25230008	300	20.5	8.0	25	2.3	3.15	4.4	112	16000	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25240002	70	9.7	8.0	1.9	3.15	3.5	83	9600	400
25240003	95	11.55	8.0	2.0	3.15	3.6	87	10500	400
25240004	120	12.95	8.0	2.0	3.15	3.7	90	11150	400
25240005	150	14.3	8.0	2.1	3.15	3.9	94	12100	400
25240006	185	15.9	8.0	2.1	3.15	4.0	98	13000	400
25240007	240	18.4	8.0	2.2	3.15	4.1	103	14300	300
25240008	300	20.5	8.0	2.3	3.15	4.3	108	15700	300

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | STEEL WIRE ARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	70	95	120	150	185	240	300
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131
Inductance at 60 Hz	mH/Km	0.432	0.420	0.405	0.395	0.385	0.372	0.360
Reactance at 60 Hz	Ω/km	0.16	0.16	0.15	0.15	0.15	0.14	0.14
Capacitance	μF/Km	0.15	0.17	0.18	0.2	0.21	0.23	0.25
Short Circuit Current For 1 second								
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1
3- Copper Tape Screen	KA	2.07	2.19	2.28	2.37	2.49	2.67	2.82
Current Rating Capacity (Both ends bonded)								
1- Laid direct in ground (Approx.)	A	165	196	222	248	280	322	360
2- Laid in free air (Approx.)	A	172	208	238	268	306	359	406
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226
Minimum Bending radius	mm	1032	1080	1116	1164	1212	1272	1344

The above values are based on the following conditions:

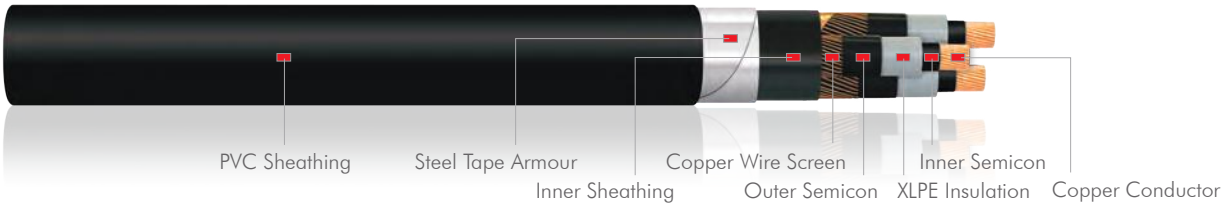
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 3.6/6 (7.2)kV

CU/XLPE/STA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21090002	35	7.0	2.5	16	1.3	0.5	2.4	48	3200	500
21090003	50	8.12	2.5	16	1.4	0.5	2.5	50	3700	500
21090004	70	9.7	2.5	16	1.4	0.5	2.6	54	4700	500
21090005	95	11.4	2.5	16	1.5	0.5	2.7	58	5600	500
21090006	120	12.86	2.5	16	1.5	0.5	2.8	62	6450	500
21090007	150	14.25	2.5	25	1.6	0.5	2.9	66	7600	500
21090008	185	15.91	2.5	25	1.7	0.5	3.1	70	8850	500
21090009	240	18.4	2.6	25	1.8	0.5	3.2	75	11000	500
21090010	300	20.68	2.8	25	1.9	0.5	3.4	81	13200	500
21090011	400	23.24	3.0	35	2.0	0.5	3.7	90	17900	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21100002	35	7.0	2.5	1.2	0.5	2.3	45	3100	500
21100003	50	8.12	2.5	1.3	0.5	2.4	47	3600	500
21100004	70	9.7	2.5	1.4	0.5	2.5	51	4500	500
21100005	95	11.4	2.5	1.4	0.5	2.6	55	5500	500
21100006	120	12.86	2.5	1.5	0.5	2.7	59	6300	500
21100007	150	14.25	2.5	1.5	0.5	2.8	63	7400	500
21100008	185	15.91	2.5	1.6	0.5	2.9	66	8700	500
21100009	240	18.4	2.6	1.7	0.5	3.1	72	10800	500
21100010	300	20.68	2.8	1.8	0.5	3.3	79	13000	500
21100011	400	23.24	3.0	1.9	0.5	3.6	88	17650	500

TECHNICAL INFORMATION

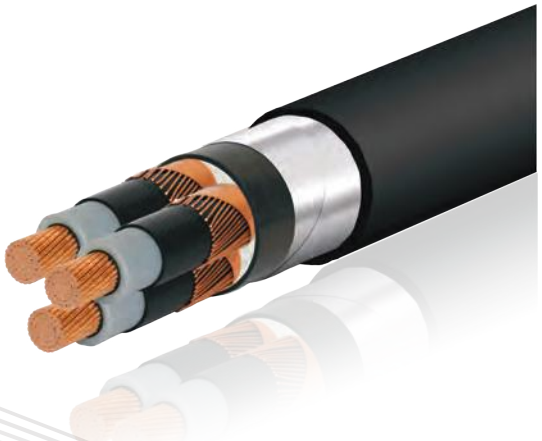
COPPER CONDUCTOR | STEEL TAPE ARMOURED | 3.6/6 (7.2)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0660
Inductance at 60 Hz	mH/Km	0.344	0.333	0.322	0.316	0.310	0.303	0.300	0.295	0.286	0.275
Reactance at 60 Hz	Ω/km	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.10
Capacitance	μF/Km	0.30	0.32	0.36	0.39	0.44	0.46	0.53	0.56	0.58	0.60
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.08	1.17	1.29	1.41	1.53	1.62	1.74	1.92	2.1	2.31
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	151	178	215	257	290	323	363	418	467	515
2- Laid in free air (Approx.)	A	154	183	225	272	310	348	396	462	523	582
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	576	600	648	696	744	792	840	900	972	1080

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

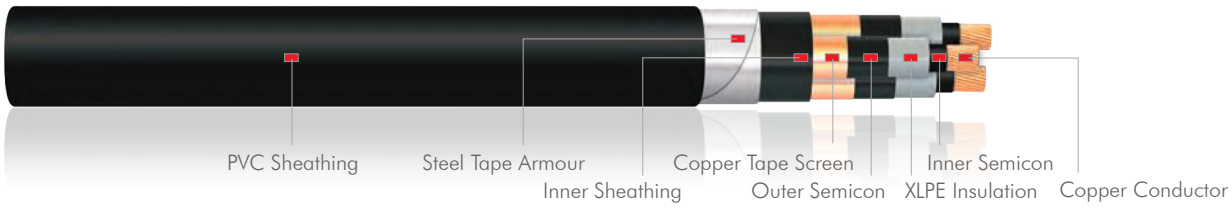
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

CU/XLPE/STA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22090002	35	7.0	3.4	16	1.4	0.5	2.5	52	3700	500
22090003	50	8.12	3.4	16	1.4	0.5	2.6	56	4200	500
22090004	70	9.7	3.4	16	1.5	0.5	2.7	60	5200	500
22090005	95	11.4	3.4	16	1.6	0.5	2.9	65	6100	500
22090006	120	12.86	3.4	16	1.6	0.5	3.0	68	7400	500
22090007	150	14.25	3.4	25	1.7	0.5	3.1	72	8400	500
22090008	185	15.91	3.4	25	1.7	0.5	3.2	75	9500	500
22090009	240	18.4	3.4	25	1.8	0.5	3.4	81	11700	500
22090010	300	20.68	3.4	25	1.9	0.5	3.6	88	13800	500
22090011	400	23.24	3.4	35	2.0	0.8	3.7	89	17600	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22100002	35	7.0	3.4	1.3	0.5	2.4	50	3500	500
22100003	50	8.12	3.4	1.4	0.5	2.5	53	4000	500
22100004	70	9.7	3.4	1.4	0.5	2.6	57	5000	500
22100005	95	11.4	3.4	1.5	0.5	2.7	60	5850	500
22100006	120	12.86	3.4	1.6	0.5	2.9	64	7150	500
22100007	150	14.25	3.4	1.6	0.5	3.0	68	8200	500
22100008	185	15.91	3.4	1.7	0.5	3.1	71	9300	500
22100009	240	18.4	3.4	1.8	0.5	3.3	78	11500	500
22100010	300	20.68	3.4	1.9	0.5	3.4	83	13550	500
22100011	400	23.24	3.4	2.0	0.8	3.6	86	17400	500

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0660
Inductance at 60 Hz	mH/Km	0.369	0.358	0.342	0.335	0.326	0.320	0.315	0.306	0.298	0.290
Reactance at 60 Hz	Ω/km	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.11	0.11
Capacitance	μF/Km	0.23	0.25	0.29	0.30	0.33	0.37	0.40	0.45	0.49	0.54
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.23	1.32	1.44	1.56	1.65	1.74	1.86	2.04	2.16	2.37
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	151	178	215	257	290	323	363	418	467	515
2- Laid in free air (Approx.)	A	154	183	225	272	310	348	396	462	523	582
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	624	672	720	780	816	864	900	972	1056	1068

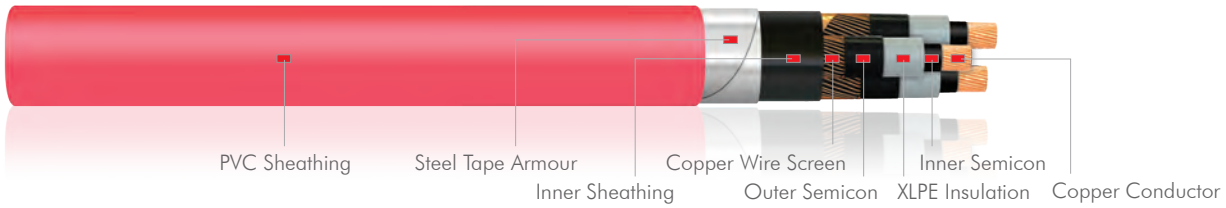
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 8.7/15 (17.5)kV
CU/XLPE/STA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23090002	35	7.0	4.5	16	1.5	0.5	2.7	58	4300	500
23090003	50	8.12	4.5	16	1.5	0.5	2.8	61	4800	500
23090004	70	9.7	4.5	16	1.6	0.5	2.9	65	5800	500
23090005	95	11.4	4.5	16	1.7	0.5	3.0	69	6700	500
23090006	120	12.86	4.5	16	1.7	0.5	3.1	73	7800	500
23090007	150	14.25	4.5	25	1.8	0.5	3.3	76	8900	500
23090008	185	15.91	4.5	25	1.8	0.5	3.4	80	10200	500
23090009	240	18.4	4.5	25	1.9	0.5	3.6	83	12500	500
23090010	300	20.68	4.5	25	2.0	0.8	3.7	91	15500	400
23090011	400	23.24	4.5	35	2.1	0.8	3.8	93	18700	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23100002	35	7.0	4.5	1.4	0.5	2.6	55	4100	500
23100003	50	8.12	4.5	1.5	0.5	2.7	57	4500	500
23100004	70	9.7	4.5	1.5	0.5	2.8	61	5500	500
23100005	95	11.4	4.5	1.6	0.5	2.9	66	6500	500
23100006	120	12.86	4.5	1.7	0.5	3.0	69	7600	500
23100007	150	14.25	4.5	1.7	0.5	3.1	73	8700	500
23100008	185	15.91	4.5	1.8	0.5	3.3	77	9950	500
23100009	240	18.4	4.5	1.9	0.5	3.4	81	12200	500
23100010	300	20.68	4.5	2.0	0.8	3.6	88	15000	400
23100011	400	23.24	4.5	2.1	0.8	3.8	92	18500	400

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 8.7/15 (17.5)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.669	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0815	0.0655
Inductance at 60 Hz	mH/Km	0.395	0.382	0.365	0.355	0.346	0.339	0.330	0.321	0.312	0.303
Reactance at 60 Hz	Ω/km	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.11
Capacitance	μF/Km	0.18	0.2	0.23	0.25	0.27	0.29	0.32	0.35	0.39	0.43
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.38	1.47	1.59	1.68	1.8	1.89	2.01	2.16	2.31	2.52
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	151	178	215	257	290	323	363	418	467	515
2- Laid in free air (Approx.)	A	154	183	225	272	310	348	396	462	523	582
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	696	732	780	828	876	912	960	996	1092	1116

The above values are based on the following conditions:

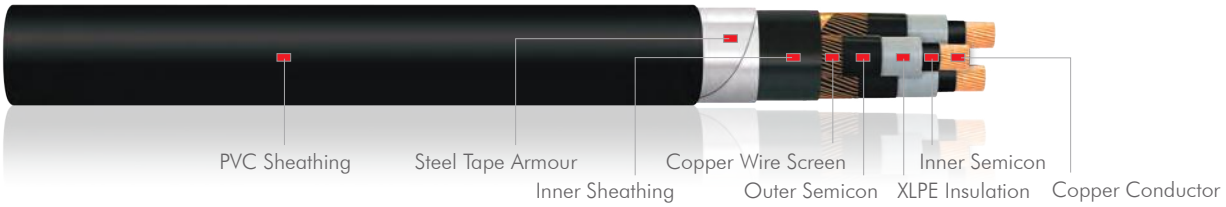
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 12/20 (24)kV

CU/XLPE/STA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24090001	35	7.0	5.5	16	1.5	0.5	2.8	62	4500	500
24090002	50	8.12	5.5	16	1.6	0.5	2.9	65	5200	500
24090003	70	9.7	5.5	16	1.7	0.5	3.1	69	6000	500
24090004	95	11.4	5.5	16	1.7	0.5	3.2	72	7200	500
24090005	120	12.86	5.5	16	1.8	0.5	3.3	75	8100	500
24090006	150	14.25	5.5	25	1.9	0.5	3.4	80	9300	500
24090007	185	15.91	5.5	25	1.9	0.5	3.6	83	10700	500
24090008	240	18.4	5.5	25	2.0	0.8	3.7	90	13800	500
24090009	300	20.68	5.5	25	2.1	0.8	3.9	95	16000	400
24090010	400	23.24	5.5	35	2.2	0.8	4.1	98	18500	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24100001	35	7.0	5.5	1.5	0.5	2.8	59	4300	500
24100002	50	8.12	5.5	1.6	0.5	2.9	62	5000	500
24100003	70	9.7	5.5	1.6	0.5	3.0	66	5800	500
24100004	95	11.4	5.5	1.7	0.5	3.2	68	7000	500
24100005	120	12.86	5.5	1.7	0.5	3.3	70	7850	500
24100006	150	14.25	5.5	1.8	0.5	3.4	74	9150	500
24100007	185	15.91	5.5	1.9	0.5	3.5	80	10500	500
24100008	240	18.4	5.5	2.0	0.8	3.7	88	13550	500
24100009	300	20.68	5.5	2.0	0.8	3.9	92	15850	400
24100010	400	23.24	5.5	2.1	0.8	4.0	96	18300	400

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 12/20 (24)kV

Size	mm2	35	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.668	0.494	0.344	0.247	0.196	0.161	0.129	0.099	0.0810	0.0650
Inductance at 60 Hz	mH/Km	0.415	0.402	0.381	0.374	0.362	0.353	0.345	0.336	0.320	0.305
Reactance at 60 Hz	Ω/km	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.11
Capacitance	μF/Km	0.15	0.17	0.2	0.22	0.24	0.26	0.27	0.3	0.33	0.37
Short Circuit Current For 1 second											
1- Conductor	KA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.5	1.59	1.71	1.83	1.92	2.04	2.16	2.31	2.46	2.64
Current Rating Capacity (Both ends bonded)											
1- Laid direct in ground (Approx.)	A	151	178	215	257	290	323	363	418	467	515
2- Laid in free air (Approx.)	A	154	183	225	272	310	348	396	462	523	582
Voltage Drop per phase	V/A/km	1.157	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137	0.111
Minimum Bending radius	mm	744	780	828	864	900	960	996	1080	1140	1176

The above values are based on the following conditions:

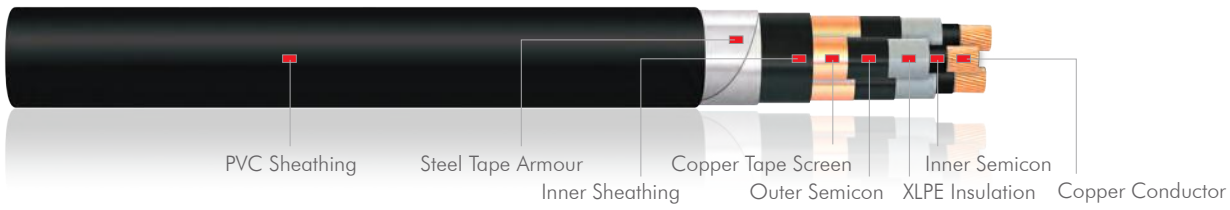
Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 18/30(36)kV, 19/33(36)kV

CU/XLPE/STA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25090001	50	8.12	8.0	16	1.8	0.5	3.3	78	6800	400
25090002	70	9.7	8.0	16	1.9	0.5	3.4	81	7850	400
25090003	95	11.4	8.0	16	2.0	0.5	3.5	86	8900	400
25090004	120	12.86	8.0	16	2.0	0.8	3.7	90	10900	400
25090005	150	14.25	8.0	25	2.1	0.8	3.8	92	12000	400
25090006	185	15.91	8.0	25	2.1	0.8	3.9	96	13500	400
25090007	240	18.4	8.0	25	2.2	0.8	4.1	102	15900	300
25090008	300	20.68	8.0	25	2.3	0.8	4.2	108	18100	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25100001	50	8.12	8.0	1.8	0.5	3.2	75	6650	400
25100002	70	9.7	8.0	1.8	0.5	3.3	78	7650	400
25100003	95	11.4	8.0	1.9	0.5	3.5	83	8700	400
25100004	120	12.86	8.0	2.0	0.8	3.6	87	10700	400
25100005	150	14.25	8.0	2.0	0.8	3.7	90	11750	400
25100006	185	15.91	8.0	2.1	0.8	3.9	94	13500	400
25100007	240	18.4	8.0	2.2	0.8	4.0	100	15500	300
25100008	300	20.68	8.0	2.3	0.8	4.2	106	17800	300

TECHNICAL INFORMATION

COPPER CONDUCTOR | STEEL TAPE ARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	50	70	95	120	150	185	240	300
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.494	0.341	0.247	0.196	0.161	0.128	0.098	0.0801
Inductance at 60 Hz	mH/Km	0.450	0.430	0.419	0.403	0.395	0.381	0.371	0.359
Reactance at 60 Hz	Ω/km	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.14
Capacitance	μF/Km	0.14	0.15	0.17	0.18	0.2	0.21	0.23	0.25
Short Circuit Current For 1 second									
1- Conductor	KA	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1
3- Copper Tape Screen	KA	1.95	2.07	2.19	2.28	2.37	2.49	2.67	2.82
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	178	215	257	290	323	363	418	467
2- Laid in free air (Approx.)	A	183	225	272	310	348	396	462	523
Voltage Drop per phase	V/A/km	0.855	0.593	0.428	0.340	0.276	0.222	0.171	0.137
Minimum Bending radius	mm	936	972	1032	1080	1104	1152	1224	1296

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 3.6/6 (7.2)kV

AL/XLPE/STA/PVC

THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21210003	50	8.3	2.5	16	1.4	0.5	2.4	50	3100	500
21210004	70	9.7	2.5	16	1.4	0.5	2.5	54	3350	500
21210005	95	11.55	2.5	16	1.5	0.5	2.6	58	3900	500
21210006	120	12.95	2.5	16	1.5	0.5	2.8	61	4400	500
21210007	150	14.3	2.5	25	1.6	0.5	2.9	66	5000	500
21210008	185	15.9	2.5	25	1.7	0.5	3.0	69	5600	500
21210009	240	18.4	2.6	25	1.8	0.5	3.2	75	6600	500
21210010	300	20.5	2.8	25	1.9	0.5	3.4	81	7700	500
21210011	400	24.0	3.0	35	2.0	0.5	3.7	88	9800	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
21220003	50	8.3	2.5	1.3	0.5	2.4	48	2950	500
21220004	70	9.7	2.5	1.4	0.5	2.5	51	3200	500
21220005	95	11.55	2.5	1.4	0.5	2.6	55	3700	500
21220006	120	12.95	2.5	1.5	0.5	2.7	59	4200	500
21220007	150	14.3	2.5	1.5	0.5	2.8	62	4800	500
21220008	185	15.9	2.5	1.6	0.5	2.9	66	5400	500
21220009	240	18.4	2.6	1.7	0.5	3.1	71	6400	500
21220010	300	20.5	2.8	1.8	0.5	3.3	77	7500	500
21220011	400	24.0	3.0	1.9	0.5	3.6	85	9600	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 3.6/6 (7.2)kV

Size	mm2	50	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.822	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.334	0.322	0.316	0.10	0.303	0.300	0.294	0.286	0.279
Reactance at 60 Hz	Ω/km	0.13	0.12	0.12	0.04	0.11	0.11	0.11	0.11	0.11
Capacitance	μF/Km	0.32	0.36	0.39	0.44	0.46	0.53	0.56	0.58	0.60
Short Circuit Current For 1 second										
1- Conductor	KA	4.69	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.17	1.29	1.41	1.53	1.62	1.74	1.92	2.1	2.31
Current Rating Capacity (Both ends bonded)										
1- Laid direct in ground (Approx.)	A	138	167	199	226	251	284	329	369	415
2- Laid in free air (Approx.)	A	142	175	211	241	271	310	364	413	470
Voltage Drop per phase	V/A/km	1.424	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	600	648	696	732	792	828	900	972	1056

The above values are based on the following conditions:

Ambient Air Temperature:	40 °C
Ambient Ground Temperature:	35 °C
Depth of laying in ground:	0.80 m
Soil Thermal Resistivity:	1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 6/10(12)kV, 6.35/11(12)kV AL/XLPE/STA/PVC

THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22210004	70	9.7	3.4	16	1.5	0.5	2.7	58	3900	500
22210005	95	11.55	3.4	16	1.6	0.5	2.8	63	4500	500
22210006	120	12.95	3.4	16	1.6	0.5	2.9	66	5000	500
22210007	150	14.3	3.4	25	1.7	0.5	3.0	70	5500	500
22210008	185	15.9	3.4	25	1.7	0.5	3.1	73	6150	500
22210009	240	18.4	3.4	25	1.8	0.5	3.3	79	7200	500
22210010	300	20.5	3.4	25	1.9	0.5	3.5	84	8200	500
22210011	400	24.0	3.4	35	2.0	0.8	3.6	87	9500	500

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
22220004	70	9.7	3.4	1.4	0.5	2.6	56	3700	500
22220005	95	11.55	3.4	1.5	0.5	2.7	60	4300	500
22220006	120	12.95	3.4	1.6	0.5	2.8	63	4800	500
22220007	150	14.3	3.4	1.6	0.5	3.0	66	5300	500
22220008	185	15.9	3.4	1.7	0.5	3.1	70	6000	500
22220009	240	18.4	3.4	1.8	0.5	3.3	77	7000	500
22220010	300	20.5	3.4	1.9	0.5	3.5	81	8000	500
22220011	400	24.0	3.4	2.0	0.8	3.6	84	9300	500

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 6/10(12)kV, 6.35/11(12)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.342	0.335	0.326	0.320	0.313	0.305	0.298	0.290
Reactance at 60 Hz	Ω/km	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11
Capacitance	μF/Km	0.29	0.30	0.33	0.37	0.40	0.45	0.49	0.54
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.44	1.56	1.65	1.74	1.86	2.04	2.16	2.37
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	167	199	226	251	284	329	369	415
2- Laid in free air (Approx.)	A	175	211	241	271	310	364	413	470
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	696	756	792	840	876	948	1008	1044

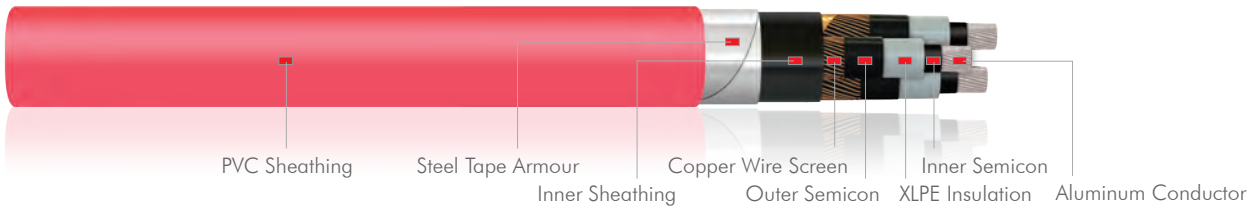
The above values are based on the following conditions:

Ambient Air Temperature:	40 °C
Ambient Ground Temperature:	35 °C
Depth of laying in ground:	0.80 m
Soil Thermal Resistivity:	1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 8.7/15 (17.5)kV
AL/XLPE/STA/PVC



THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23210004	70	9.7	4.5	16	1.6	0.5	2.8	63	4400	500
23210005	95	11.55	4.5	16	1.7	0.5	3.0	68	5000	500
23210006	120	12.95	4.5	16	1.7	0.5	3.1	72	5550	500
23210007	150	14.3	4.5	25	1.8	0.5	3.2	75	6150	500
23210008	185	15.9	4.5	25	1.8	0.5	3.3	79	6700	500
23210009	240	18.4	4.5	25	1.9	0.5	3.5	83	7850	500
23210010	300	20.5	4.5	25	2.0	0.8	3.7	90	9700	400
23210011	400	24.0	4.5	35	2.1	0.8	3.8	93	10200	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
23220004	70	9.7	4.5	1.5	0.5	2.8	61	4200	500
23220005	95	11.55	4.5	1.6	0.5	2.9	66	4800	500
23220006	120	12.95	4.5	1.7	0.5	3.0	69	5350	500
23220007	150	14.3	4.5	1.7	0.5	3.1	73	6000	500
23220008	185	15.9	4.5	1.8	0.5	3.3	77	6500	500
23220009	240	18.4	4.5	1.9	0.5	3.4	81	7650	500
23220010	300	20.5	4.5	2.0	0.8	3.6	88	9500	400
23220011	400	24.0	4.5	2.1	0.8	3.8	92	10000	400

TECHNICAL INFORMATION

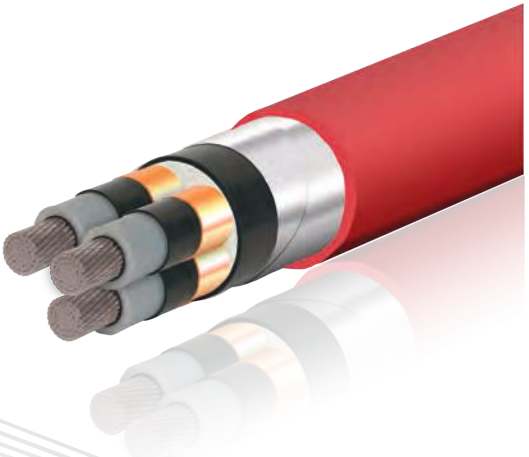
ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 8.7/15 (17.5)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.365	0.356	0.345	0.339	0.330	0.321	0.312	0.302
Reactance at 60 Hz	Ω/km	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.11
Capacitance	μF/Km	0.23	0.25	0.27	0.29	0.32	0.35	0.39	0.43
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.59	1.68	1.8	1.89	2.01	2.16	2.31	2.52
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	167	199	226	251	284	329	369	415
2- Laid in free air (Approx.)	A	175	211	241	271	310	364	413	470
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	756	816	864	900	948	996	1080	1116

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)



XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 12/20 (24)kV

AL/XLPE/STA/PVC

THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24210003	70	9.7	5.5	16	1.7	0.5	3.0	69	5000	500
24210004	95	11.55	5.5	16	1.7	0.5	3.1	72	5600	500
24210005	120	12.95	5.5	16	1.8	0.5	3.3	75	6150	500
24210006	150	14.3	5.5	25	1.9	0.5	3.4	79	6700	500
24210007	185	15.9	5.5	25	1.9	0.5	3.5	83	7400	500
24210008	240	18.4	5.5	25	2.0	0.8	3.7	90	9300	500
24210009	300	20.5	5.5	25	2.1	0.8	3.9	95	10500	400
24210010	400	24.0	5.5	35	2.2	0.8	4.1	97	12000	400

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
24220003	70	9.7	5.5	1.6	0.5	3.0	67	4850	500
24220004	95	11.55	5.5	1.7	0.5	3.1	71	5400	500
24220005	120	12.95	5.5	1.7	0.5	3.2	75	6000	500
24220006	150	14.3	5.5	1.8	0.5	3.3	78	6500	500
24220007	185	15.9	5.5	1.9	0.5	3.4	81	7200	500
24220008	240	18.4	5.5	2.0	0.8	3.7	89	9150	500
24220009	300	20.5	5.5	2.0	0.8	3.8	94	10300	400
24220010	400	24.0	5.5	2.1	0.8	4.0	96	11800	400

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 12/20 (24)kV

Size	mm2	70	95	120	150	185	240	300	400
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131	0.1034
Inductance at 60 Hz	mH/Km	0.381	0.374	0.362	0.354	0.345	0.335	0.320	0.305
Reactance at 60 Hz	Ω/km	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.11
Capacitance	μF/Km	0.2	0.22	0.24	0.26	0.27	0.3	0.33	0.37
Short Circuit Current For 1 second									
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11	37.48
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1	4.33
3- Copper Tape Screen	KA	1.71	1.83	1.92	2.04	2.16	2.31	2.46	2.64
Current Rating Capacity (Both ends bonded)									
1- Laid direct in ground (Approx.)	A	167	199	226	251	284	329	369	415
2- Laid in free air (Approx.)	A	175	211	241	271	310	364	413	470
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226	0.178
Minimum Bending radius	mm	828	864	900	948	996	1080	1140	1164

The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

XLPE INSULATED PVC SHEATHED CABLE

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 18/30(36)kV, 19/33(36)kV
AL/XLPE/STA/PVC

THREE CORES | COPPER WIRE SCREENED

Cable Code	Conductor		Insulation	Screening	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Nominal sectional area of Screening mm2	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25210002	70	9.7	8.0	16	1.9	0.5	3.4	80	6400	400
25210003	95	11.55	8.0	16	2.0	0.5	3.5	85	7150	400
25210004	120	12.95	8.0	16	2.0	0.8	3.7	89	8600	400
25210005	150	14.3	8.0	25	2.1	0.8	3.8	91	9150	400
25210006	185	15.9	8.0	25	2.1	0.8	3.9	95	10100	400
25210007	240	18.4	8.0	25	2.2	0.8	4.1	101	11300	300
25210008	300	20.5	8.0	25	2.3	0.8	4.2	107	12600	300

THREE CORES | COPPER TAPE SCREENED

Cable Code	Conductor		Insulation	Inner Sheath	Armouring	Outer Sheath		Packaging	
	Cross Sectional Area Nominal mm2	Diameter Nominal mm	Thickness Nominal mm	Thickness Nominal mm	Dia. Of Aluminum Wire Nominal mm	Thickness Nominal mm	Overall Diameter Approx. mm	Net Weight Approx. Kg/Km	Standard Drum m+/-5%
25220002	70	9.7	8.0	1.8	0.5	3.3	77	6200	400
25220003	95	11.55	8.0	1.9	0.5	3.5	82	7000	400
25220004	120	12.95	8.0	2.0	0.8	3.6	86	8400	400
25220005	150	14.3	8.0	2.0	0.8	3.7	89	9000	400
25220006	185	15.9	8.0	2.1	0.8	3.9	93	9850	400
25220007	240	18.4	8.0	2.2	0.8	4.0	100	11100	300
25220008	300	20.5	8.0	2.3	0.8	4.2	104	12400	300

TECHNICAL INFORMATION

ALUMINUM CONDUCTOR | STEEL TAPE ARMOURED | 18/30(36)kV, 19/33(36)kV

Size	mm2	70	95	120	150	185	240	300
Maximum DC resistance of Conductor @ 20°C	Ω/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100
Approximate AC resistance of Conductor @ 90°C	Ω/km	0.569	0.411	0.325	0.265	0.212	0.163	0.131
Inductance at 60 Hz	mH/Km	0.432	0.420	0.405	0.395	0.385	0.372	0.360
Reactance at 60 Hz	Ω/km	0.16	0.16	0.15	0.15	0.15	0.14	0.14
Capacitance	μF/Km	0.15	0.17	0.18	0.2	0.21	0.23	0.25
Short Circuit Current For 1 second								
1- Conductor	KA	6.56	8.90	11.24	14.06	17.33	22.49	28.11
2- Copper Wire Screen	KA	1.96	1.96	1.96	3.1	3.1	3.1	3.1
3- Copper Tape Screen	KA	2.07	2.19	2.28	2.37	2.49	2.67	2.82
Current Rating Capacity (Both ends bonded)								
1- Laid direct in ground (Approx.)	A	167	199	226	251	284	329	369
2- Laid in free air (Approx.)	A	175	211	241	271	310	364	413
Voltage Drop per phase	V/A/km	0.984	0.712	0.563	0.459	0.366	0.281	0.226
Minimum Bending radius	mm	960	1020	1068	1092	1140	1212	1284

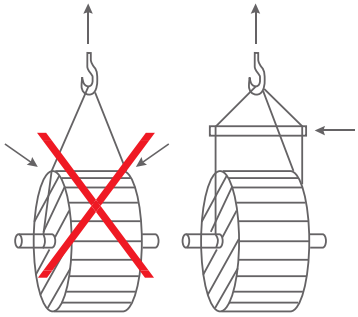
The above values are based on the following conditions:

Ambient Air Temperature: 40 °C
Ambient Ground Temperature: 35 °C
Depth of laying in ground: 0.80 m
Soil Thermal Resistivity: 1.2 °K.m/W

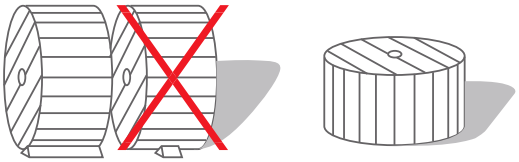
(Current Rating Capacities for all cables mentioned in this catalogue are focused according to the special climatic conditions in the Middle East)

DRUM HANDLING INSTRUCTIONS

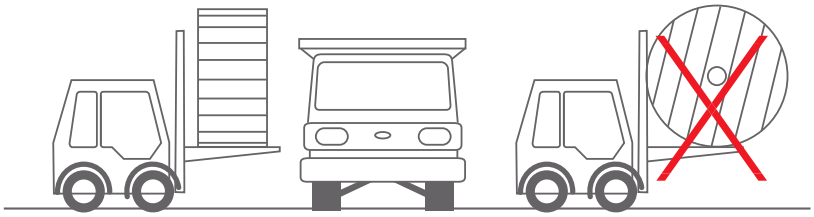
Cables and Conductors should be installed by trained personnel in accordance with good engineering practices, recognized codes of practise, statutory local requirements, IEE wiring regulations and where relevant, in accordance with any specific instructions issued by the company. Cables are often supplied 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.



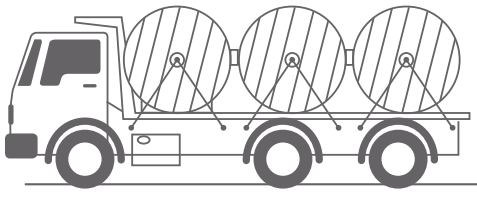
Lifting cable drums using crane.



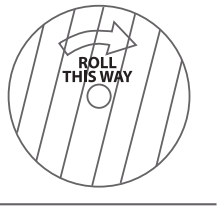
Do not lay drums flat on their sides, use proper stops to prevent drums roling.



Lift drums on fork trucks correctly.



Secure drums adequately before transportation.



Roll in the direction shown by the arrow.

RECOMMENDATIONS
FOR SELECTION OF CABLES

GENERAL

The cables specified in this catalog are designed to be installed in air or to be buried in free draining soil.
Where cables are to be laid in other environments, Bahra Cables Company should be consulted.

VOLTAGE RATINGS

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. IEC 60183 recommends that this period 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 or B.

NOTE In a system in which an earth fault is not automatically and promptly isolated, the extra stresses on the insulation of cables during the earth fault might reduce the life of the cables. If the system is expected to be operated fairly often with a permanent earth fault, it might be advisable to classify the system as category C.

Table 1 gives the lowest rated voltage of cable that should be used according to the system voltage and category.

Table-1: Selection of cables for three-phase a.c. systems:

System Voltage		System Category	Minimum Rated Voltage of cable U0/U
Nominal Voltage, U	Maximum Sustained Voltage, Um		
kV	kV		kV
6.6 or 6	7.2	A or B	3.8/6.6
6.6 or 6	7.2	C	6.35/11
11 or 10	12	A or B	6.35/11
11 or 10	12	C	8.7/15
15	17.5	A or B	8.7/15
15	17.5	C	12.7/22
22 or 20	24	A or B	12.7/22
22 or 20	24	C	19/33
33 or 30	36	A or B	19/33

NOTE: For a 33 kV or 30 kV system of category C, the cable manufacturer should be consulted.

The nominal system voltage, U, given in Table 1 is the nominal voltage between phases.
The maximum sustained system voltage, Um, 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 disconnection of loads.

The nominal system voltages shown in Table 1 are generally in accordance with series 1 as given in IEC 60038:2002. For system voltages intermediate between the values in Table 1, the cable should be selected with a rated voltage not less than the next highest value (e.g. for a 13.8 kV system of category A or B, the cable should have a rated voltage not less than 8.7/15 kV and for a 13.8 kV system of category C, not less than 12.7/22 kV).

METALLIC COVERINGS

All the cable designs in this standard include metallic coverings surrounding the cores individually which is
intended to be earthed when the cables are in use.

SELECTION OF METALLIC COVERINGS IN RELATION TO EARTH FAULT CAPACITY

The metallic coverings are usually required to carry earth fault current. Under the conditions of an earth fault in the cable itself, due, for example, to spiking, the local heating at the fault position, caused by contact resistance or resistance in the fault, is more intense than in the metallic screen as a whole. This causes fusing of the screen locally and the current which the screen will sustain for a given time under these conditions is less than that for which it is suitable under through-fault conditions.

Advice on the most suitable type and cross-sectional area of metallic screen for a particular application and short circuit requirement has to be requested from Bahra Cable Company.

SEMI-CONDUCTING LAYER ON THE OVERSHEATH

The purchaser has the option to specify a d.c. voltage test on the oversheath of the cable, and if this is specified, the cable is required to have a semi-conducting layer applied over the oversheath.

It is not envisaged that such a test would be needed unless it was also intended to apply a voltage test to the oversheath after the cable had been laid, to confirm that the oversheath had not been substantially damaged during installation or to detect such damage as might have occurred in order to enable repairs to be made.

A d.c. voltage test on the oversheath might be necessary in the following situations:

a) when the oversheath is required to perform an insulating function during the operation of the cable. This applies when the method of bonding of the metallic screens of single-core cables is designed to eliminate induced circulating currents, but gives rise to standing voltages between the metallic screens of the cables of the different phases.

b) when damage to the oversheath is likely to lead to corrosion of an essential metallic layer which it protects, due to an environment aggressive to the particular metal.

CURRENT CARRYING CAPACITY

The cable that is selected should have a sustained current rating under the conditions of installation not less than the maximum current that it will be required to carry during normal operation. It should also have a
short-circuit current rating adequate for the prospective short-circuit current and the time for which it can persist.

Standardized current rating data for the cables are specified as per Bahra Cables Company catalog.

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

NOTE: The performance of accessories should be taken into account in deciding the operating temperature of the cable.

RECOMMENDATIONS
FOR INSTALLATION OF CABLES

MINIMUM TEMPERATURE DURING INSTALLATION

It is recommended that the cables specified in this standard 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

Except where bends in the cables are positioned adjacent to joints or terminations, none of the cables specified in this catalog should be bent during installation to a radius smaller than that given in Table 2. Wherever possible, larger installation radii should be used.

Table-2: Bending radius during installation:

Type of cable	Minimum radius
Single core	15D
Three core	12D

NOTE: D is the overall diameter of the cable.

Where bends in the cables are positioned adjacent to joints or terminations the minimum bending radius may be reduced to that given in the below table provided that the bending is carefully controlled, e.g. by the use of a former.

Table-3: Bending radius during installation for cables adjacent to joints or terminations

Type of cable	Minimum bending radius
Single core	12D
Three core	10D

NOTE: D is the overall diameter of the cable.

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, especially for cables that do not have an extruded inner covering or separation layer. The protective cap should not be removed from the ends of the cable until immediately prior to termination or jointing. When the caps have been removed the unprotected ends of the cable should not be exposed to moisture.

The possibility of damage to moisture seals during handling and installation or during storage of the cable should be borne in mind. Where such damage might have occurred, the seals should be inspected and remade if necessary.

JOINTS AND TERMINATIONS

In the absence of a metal sheath, all earth fault currents return through the armour and/or screens unless there is a parallel bonding connection to relieve them of some of the fault current. In either case it is necessary to ensure that there is no discontinuity in the return circuit via the armour and/or screens and no local spot of high resistance. Careful attention, therefore, should be paid to the design of all bonding clamps in joints and terminations to ensure that each tape, wire or strip contributes equally to the conductance of the bonding connection and that the resistance across a connector is not higher than that of the equivalent length of connected armour and/or screens of the cable. It is also important to ensure that all tapes, strips or wires and all faces of clamps or connectors making contact with them are thoroughly cleaned during installation and that the clamps are adequately tightened to ensure good electrical contact. Bonding clamps in joints should be electrically connected with a bond having a conductance at least equivalent to that of an equal length of the complete armour and/or screens of the cable, and with adequate thermal capacity to avoid excessive overheating under short circuit conditions.

With all the cables specified in this catalog, it is important to ensure that the semi-conducting insulation screen is removed from the core(s) and any remaining semi-conducting coating or semiconducting particles are thoroughly removed before application of the stress control components, which may be made up of:

a) moulded components b) various tapes c) heat shrinkable tubes

COMPOUND FILLING

For compound filled joints, the design of the box and the composition of the filling compound should be such as to provide an effective seal to prevent moisture gaining access to the conductor ferrules and armour connections. The filling compound should be compatible with the materials of the cable components with which it comes into contact. Account should be taken of the pouring temperatures and the temperatures resulting from any exothermic reactions.

For terminations, provided that adequate clearances are maintained between phases and between each phase and earth, compound filling is not necessary. The minimum clearances should be related to the voltage and category of the system and to the environmental conditions. Guidance on minimum clearances can be obtained from the relevant equipment standards. Where the required clearances cannot be achieved, some other effective means of insulation should be provided.

EARTHING OF ARMOUR AND SCREEN(S)

Provision should be made for earthing the armour and screen(s) to the main earth system at the supply end by means of a metallic bond of adequate conductance, the bonding connection being as short and straight as possible. It is also desirable to earth the armour and screens at additional accessible positions, unless single-point bonding is being employed.

Special precautions may be necessary to eliminate the risk of corrosion, especially corrosion due to the use of dissimilar metals.

Care should be taken with single-core cables to ensure that the bonding and earthing arrangements are adequate to cater for circulating currents in the armour and screen(s).

TESTS AFTER INSTALLATION

Tests on insulation:

General:

If agreed between the purchaser and the installer, the cable may be subjected to an a.c. voltage test at power frequency or to a d.c. voltage test.

By agreement between the purchaser and the contractor, an a.c. voltage test in accordance with IEC 60060-3 and in accordance with item a), b) or c) as below may be used:
b) test for 24 h with the normal rated voltage;

A.C. Testing:

If an a.c. voltage test at power frequency has been agreed, this should be performed using one of the following methods.

a) Test for 15 min with the phase-to-phase voltage U, at a frequency between 20 Hz to 300 Hz shall be applied between the conductor and the metal screen/sheath;
b) The cable should be tested for 24 h with the normal operating voltage U0 of the system.
c) test for 15 min with the RMS rated voltage value of 3 U0 at a frequency of 0,1 Hz applied between the conductor and the metal screen/sheath

No breakdown of the insulation should occur.

D.C. Testing:

If a d.c. voltage test has been agreed, a d.c. test voltage equal to 4U0 should be applied for 15 min. No breakdown of the insulation should occur.

NOTE: A d.c. test can endanger the insulation system under test. Other methods are under consideration. For installations which have been in use, lower voltages and/or shorter durations may be used. Values should be negotiated, taking into account the age, environment, history of breakdowns and the purpose of carrying out the test.

D.C. VOLTAGE TEST ON OVERSHEATH

When a semi-conducting layer has been applied to the oversheath in accordance with a d.c. voltage test can be performed after installation. This d.c. voltage test should only be performed on the installed system if the joints are suitably insulated from earth; otherwise the test should be performed on the cable prior to jointing.

A d.c. voltage of 8 kV should be applied for 1 min between the semi-conducting layer and the oversheath. No breakdown of the oversheath should occur.

GUIDE
TO USE OF CABLES

CABLE SELECTION IN RELATION TO INSTALLATION DESIGN

- The cables specified in this catalog are intended to be used for the supply of electrical energy up to the rated voltage indicated on the cable. The voltage ratings of the cables specified in this standard are listed in Table 1. These voltages should not be exceeded.
- These cables are intended for use at a nominal power frequency range of 49 Hz to 61 Hz.
- There are several aspects which need to be taken into account relating to the ability of the cable to withstand the worst anticipated fault condition of the system, as follows:
  1. In a solidly or directly earthed system, in general the earth fault current is at least equal to the three-phase or phase-to-phase fault current.
  2. When an earth fault current is specified for a system, it is necessary to ensure that the phase conductor of the cable selected has a corresponding earth fault capacity.
  3. This catalog specifies different forms of metallic screen having different earth fault capacities. In general, copper tape screen has a lower earth fault current capacity than standard copper wire screen.
  4. It is essential that connections at joints between, and terminations onto, metallic elements carrying fault currents to earth have an earth fault capacity at least equal to that of the metallic elements.
- The possible effects of transient over-voltages should be recognized as they can be detrimental to cables.
- In cases of doubt as to the suitability of cables specified in this catalog for a particular use, further specific information should be obtained from Bahra Cables Company.

ENVIRONMENTAL FACTORS

- Cables should be provided with protection against mechanical damage appropriate to the type of cable and the installation conditions.
- Cables specified in this catalog, when installed in vertical bunches, can propagate fire, and when exposed to fire can produce harmful smoke and effluents.
- Cables can be damaged by exposure to corrosive substances or solvents, including petroleum based vapours.
- Cables specified in this catalog are not specifically designed for the following:
  1. For use as self supporting aerial cables
  2. For use as submarine cable or for laying in waterlogged conditions
  3. For use in situations where subsidence is likely, unless special precautions are taken to minimize damage if subsidence should occur
  4. For use in situations where they could be exposed to excessive heat.
- If the cables specified in this standard are exposed to localized heat, solar radiation or high temperature ambient conditions, this reduces the current carrying capacity.
- The cable sheathing components can be provided with protection against damage by rodents, termites, etc if agreed prior to order and included in product data sheet.
- Loaded cables can have a high surface temperature which requires protection to be provided against accidental contact.

INSTALLATION

- Precautions should be taken to avoid mechanical damage to the cables before and during installation.
- Exceeding Bahra Cables Company recommended maximum pulling tensions should be avoided as this can result in damage to the cable.
- If cables are to be installed in ducts, the correct size of duct should be used.
- The type of jointing and filling compounds employed should be chemically compatible with the cable materials.
- The cable support system should be such as to avoid damage to the cables.
- Cables specified in this catalog are designed for fixed installations only; they are not intended for use as, for example, trailing or reeling cables.
- Repeated over-voltage testing can lead to premature failure of the cable.
- The selection of cable glands, accessories and any associated tools should take account of all aspects of intended use. Any semi-conducting coating present on the oversheath should be removed for a suitable distance from joints and terminations.
- Care should be exercised with single-core cables to ensure that the bonding and earthing arrangements are adequate to cater for circulating currents in the armour and screen(s).

STORAGE AND HANDLING OF DRUMS

- Cable drums should be regularly inspected during storage to assess their physical condition.
- Battens, wooden fiber or plastic cover , where applied, should not be removed from the drums until the cable is about to be installed.
- When handling drums, precautions should be taken to avoid injury. Due regard should be given to the weight of the drums, the method and direction of rolling, the method of lifting, and any protruding nails or splinters.
- Drums should be protected from the weather so as to avoid deterioration. Care should be taken that drums are not left anywhere where they could be a hazard to the public.

INCINERATION OF SCRAP CABLE

Incineration of scrap cable should only be undertaken by a licensed contractor and following the country / authority rules. For further information, the Environment Agency should be contacted.

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 (3 or 1).
2. Conductor required cross sectional area.
3. Metallic screen type (copper tape or copper wire) and area (copper wire screen)
4. System Voltage Rate.
5. System Short Circuit required.
6. Applicable customer specification or International Standard / Norm.
7. Conductor material (Copper/Aluminum).
8. Insulation Material (XLPE).
9. Bedding / Inner Sheathing (Inner Jacketing (PVC/PE, ..).
10. Armouring Type (SWA, AWA or STA).
11. Cable jacketing material (PVC/MDPE/LSZH).
12. Cable special features required, e.g. Flame Retardant Type to IEC 60332-3, Anti-termite
13. Required length of cables (drum schedules)

LOCATION MAP