GIZA POWER INDUSTRY

GPI Power Cables & Wires Catalogue

EMPOWERING
A SUSTAINABLE FUTURE

INDEX

WHO WE ARE

Company Overview

Established in 1984, GPI is a fast-growing leading player that has evolved from a local manufacturer of electrical cables into an integrated energy and infrastructure solutions provider. Our operations span across distinct energy sectors including Cables & Wires, Lighting, Advanced Metering Technologies, and Turnkey Engineering and Construction Projects.

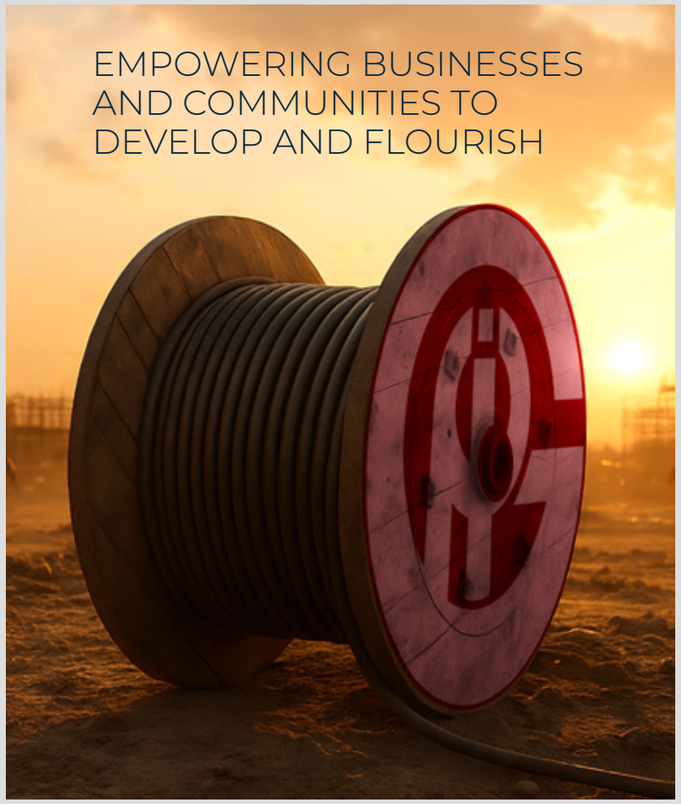
With over 600 employees, +20 distributors in Egypt, and +400 clients spread across Europe, Middle East & Africa (EMEA) region, and backed by the heritage and experience of our holding company Electro Cable Egypt (ECE), our growth has been driven by constant innovation in technology, machinery, and talent.

We export a diverse range of high-end products to numerous countries including Egypt, the United Kingdom, Poland, the Netherlands, Cyprus, Libya, Morocco, Algeria, Iraq, Yemen, Saudi Arabia, the United Arab Emirates, Sudan, Kenya, Tanzania, Uganda, Rwanda, and Chad.

+600
Employees Experience

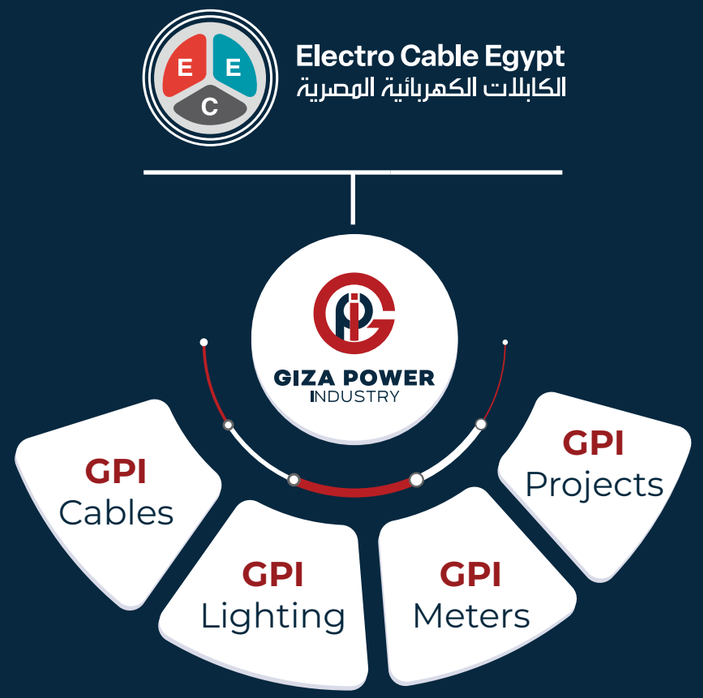
+20
Distributors in Egypt

+400
Clients



GROUP STRUCTURE

GPI is a subsidiary of Electro Cable Egypt (ECE), the industrial edifice that represents the origin of the cable industry in Egypt, Middle East and Africa, and it comprises of four business lines:



GPI Cables: Manufacture and supply of a wide range of high-performance LV, MV, HV, OHTL conductors and winding wires designed to meet the diverse needs of our customers with an annual production capacity of more than 25,000 tons.

GPI Lighting: Manufactures and delivers a broad range of reliable indoor and outdoor optimal lighting solutions that combine innovation and sustainability to create energy-efficient and aesthetically pleasing environments.

GPI Meters: Established in 2022 on an area of 5000 square meters with a production capacity of up to 6 million meters per year, GPI Meters plant leverages advanced metering technologies to provide accurate and reliable data collection meters to support the growing need for smart grid solutions, optimize energy usage and improve operational efficiency.

GPI Projects: Turnkey construction projects, general and electromechanical contracting, public supplies, project management and engineering consulting.

OUR HISTORY

A JOURNEY OF RESILIENCE & INNOVATION

Over more than four decades, we have faced numerous challenges, including market shifts, economic hurdles, evolving trends, and the constant march of technology.

Yet, guided by experienced leaders and a dedicated team, we have been able to transform these challenges into opportunities. We have already achieved so much, and for us, it's always just the beginning!

Key Milestones:

1984

Inception

The factory was established in 1984 to produce different varieties of power cables under the name of "Giza Cables" at the industrial sector of Abo Rawash, Giza, Egypt.

1988

Legally Commissioned

Factory was legally commissioned for commercial production under license number 986.

2015

Acquisition

"Giza Cables" was acquired by Electro Cable Egypt (ECE) and rebranded as "Giza Power Industry." This acquisition, supported by ECE's expertise and industry leadership, expanded the company's market presence and positioned it as a leader in innovation and product growth.

2018

Growth

This year marked significant growth and a stronger global presence, with the company expanding its product range, adopting advanced manufacturing and sustainable practices, and successfully entering new markets in Europe, the Middle East, and Africa (EMEA).

2020

GPI Projects Inception

GPI launched "GPI Projects" a new company with a capital of 250M EGP to provide customers with seamless, fast-track turn-key projects through integrated Engineering, Procurement, and Construction services.

2022

Meters Market Entry

The GPI Meters plant, covering 5,000 square meters, produces up to 6 million meters annually, utilizing advanced technology to manufacture single and triple prepaid smart meters, street lighting smart meters, and indirect smart meters.

2024

BASEC Certification

GPI has successfully acquired the BASEC certification for its Medium-Voltage cables range which provides our customers in the UK the best possible assurance that GPI cables will consistently meet or exceed all the required product manufacturing standards and operational performance requirements.

SUSTAINABILITY

At our core, sustainability is more than a responsibility—it's a chance to innovate and lead. Across all subsidiaries, we focus on improving efficiency and reducing our carbon footprint, driven by a team committed to protecting the planet.

Our approach includes eco-friendly manufacturing, sustainable products like energy-efficient lighting and durable cables, active community engagement, and a strong commitment to environmental responsibility on a global scale.

QHSE & Energy Management Systems

Giza Power Industry (GPI) is dedicated to maintaining the highest standards of quality, Health, safety and environmental & energy management responsibility. Our commitment to excellence is reflected in the various certifications we have earned and maintained over the years. These certificates validate our adherence to international standards and best practices across our operations.

From ISO certifications to specialized industry accreditations, our certifications demonstrate our dedication to continuous improvement and our unwavering focus on delivering superior products and services. They provide our clients and partners with the confidence that GPI is a reliable and trusted leader in the power and infrastructure sectors.

Our products and systems have been awarded certifications from ISO, KEMA, CPRI and BASEC (British Approvals Service for Cables). Our products also comply with DIN , HD , NF, IEC, BS and ASTM standards

The company has successfully achieved, implemented and maintained the following quality systems and certificates:

- Quality Management System - ISO 9001:2015
- Testing and Calibration Laboratories System - ISO/IEC 17025:2017
- Occupational Safety and Health System - ISO 45001:2018
- Environmental Management System - ISO 14001:2015
- BASEC Product Certification Requirements
- Energy Management System - ISO 50001:2018

Standards

IEC Standard

S/N	No.of IEC	Subject
1	60028	International Standard of Resistance for Copper.
2	60060	High-Voltage Test Techniques.
3	60104	Aluminum-Magnesium-Silicon Alloy Wire for Overhead Line Conductors.
4	60121	Recommendation for commercial annealed aluminum electrical conductor wire.
5	60173	Colours of the cores of flexible cables and cores.
6	60183	Guide to the selection of high voltage cables.
7	60227	Polyvinyl chloride insulated cables of rated voltages up to and including 750/450 V.
8	60228	Conductors of insulated cables.
9	60229	Electric cables – Tests on extruded oversheaths with a special protective function
10	60230	Impulse tests on cables and their accessories.
11	60270	High-Voltage test techniques – Partial discharge measurements
12	60287	Electric cables - Calculation of the current rating.
13	60304	standard colours for insulation for low-frequency cables and wires
14	60331	Test on electric cables under fire conditions.
15	60332	Tests on electric and optical fibre cables under fire conditions.
16	60502-1	Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV up to
		30 kV (Um = 36 kV) - Part 1: Cables for rated voltages of 1 kV (Um = 1,2 kV) and 3 kV (Um = 3,6 kV)
17	60502-2	Power cables with extruded insulation and their accessories for rated voltages from 1 kV(Um = 1,2 kV) up to
		30 kV (Um = 36 kV) – Part 2: Cables for rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV)
18	60719	Calculation of the lower and upper limits for the average outer dimensions of cables with circular copper
		conductors and of rated voltages up to and including 750/450 V.
19	60724	Short-circuit temperature limits of electric cables with rated voltages of1kV(Um=1.2 kV)and 3kV(Um=3.6 kV).
20	60754	Test on gases evolved during combustion of materials from cables.
21	60811	Electric and optical fibre cables - Test methods for non-metallic materials.
22	60840	Power cables with extruded insulation and their accessories for rated voltages above 30kV (Um = 36 kV)
		up to 150 kV (Um = 170 kV) – Test methods and requirements.
23	60853	Calculation of the cyclic and emergency current rating of cables
24	60865	Short circuit currents - calculation of effects
25	60885	Electrical test methods for electric cables.
26	60888	Zinc-Coated steel wires for stranded conductors
27	60889	Hard drawn aluminum wire for overhead line conductors
28	60949	Calculation of thermally permissible short-circuits currents, taking into account non-adiabatic heating effects
29	60986	Short-caircuit temperature limits of electric cables with rated voltages from6kV(Um=7.2 kV)
		and to 30 kV (Um=36 kV).
30	61034	Measurement of smoke density of cables burning under defined conditions.
31	61089	Round wire concentric lay overhead electrical stranded conductors
32	61232	Aluminum – clad steel wires for electrical purposes.
33	61394	Overhead lines - Characteristics of greases for aluminum, aluminum alloy and steel bare conductors.
34	61443	Short circuit temperature limits of electric cables with rated voltages above 30 kV (Um=36 kV).
35	61597	Overhead electrical conductors – calculation methods for stranded bare conductors.
36	TR 61901	Tests recommended on cables with a longitudinally applied metal foil for rated voltages above 30 kV
		(Um = 36 kV) up to and including 500 kV (Um = 550 kV).
37	62067	Power cables with extruded insulation and their accessories for rated voltages above 150 kV(Um = 170 kV)
		up to 500 kV (Um = 550 kV) – Test methods and requirements.
38	62095	Electric Cables –Calculations for current ratings – Finite element method.
39	62230	Electric cables – Spark-test method
40	62440	Electric cables with a rated voltage not exceeding 750/450 V - Guide to use.

GENERAL INFORMATION

Standards

BS Standard

S/N	No.of BS	Subject
1	2627	Wrought aluminum for electrical purposes. Wire.
2	4553	600/1000 V single-phase split concentric electric cables.
3	5467	Thermosetting insulated, armoured cables of rated voltages of 600/1000 V and
		1900/3 300 V for fixed installations. specification
4	6231	Electric cables - Single core PVC insulated flexible cables of rated voltage 600/1000V
		for switchgear and control gear wiring
5	6387	Test method for resistance to fire of cables required to maintain circuit integrity under
		fire conditions
6	6485	PVC-covered conductors for overhead power lines.
7	6622	Electric cables - Armoured cables with thermosetting insulation for rated voltages
		from 3.8/6.6kV to 19/33kV - Requirements and test methods.
8	6724	Thermosetting insulated, armoured cables of rated voltages of 600/1000 V and
		1900/3 300 V for fixed installations, having low emission of smoke and corrosive gases
		when affected by fire. Specification
9	7655	Specification for insulating and sheathing materials for cables.
10	7671	Requirements for Electrical Installations
11	7835	Armoured cables with thermosetting insulation for rated voltages from 3.8/6.6 kV
		to 19/33 kV having low emission of smoke and corrosive gases when affected by fire.
		Requirements and test methods
12	7846	Thermosetting insulated, armoured, fire-resistant cables of rated voltage 600/1 000 V
		for fixed installations, having low emission of smoke and corrosive gases when affected
		by fire. Specification
13	7870	LV and MV polymeric insulated cables for use by distribution and generation utilities.
14	7884	Copper and copper-cadmium stranded conductors for overhead electric traction and
		power transmission systems.

BS Standard

S/N	No.of BS	Subject
15	7889	Thermosetting insulated, non-armoured cables with a voltage of 600/1 000 V, for fixed installations.
16	8573	Thermosetting insulated, non-armoured cables with a voltage of 600/1 000V, for fixed installations, having low emissions of smoke and corrosive gases when affected by fire
17	EN 10244	Steel wire and wire products - Non-ferrous metallic coatings on steel wire
18	EN 10257	Zinc or zinc alloy coated non-alloy steel wire for armouring either power cables or telecommunication cables
19	EN 50182	Conductors for overhead lines - Round wire concentric lay stranded conductors
20	EN 50183	Conductors for overhead lines - Aluminum - magnesium - silicon alloy wires
21	EN 50189	Conductors for overhead lines - Zinc coated steel wires
22	EN 50288	Multi-element metallic cables used in analogue and digital communication and control
23	EN 50363	Insulating, sheathing and covering materials for low voltage energy cables
24	EN 50397	covered conductors for overhead lines and the related accessories for rated voltages above 1 kV a.c. and not exceeding 36 kV a.c.
25	EN 1-50525	Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). General requirements
26	EN 12-2-50525	Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). Cables for general applications. Cables with thermoplastic PVC insulation for extensible leads
27	EN 21-2-50525	Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). Cables for general applications. Flexible cables with crosslinked elastomeric insulation
28	EN 31-2-50525	Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). Cables for general applications. Single core non-sheathed cables with thermoplastic PVC insulation
29	EN 41-2-50525	Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). Cables for general applications. Single core cables with crosslinked silicone rubber insulation
30	EN 42-2-50525	Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U). Cables for general applications. Single core non-sheathed cables with crosslinked EVA insulation
31	EN ISO 9001	Quality management systems – Requirements

Definitions

a. Dimension Values

1. Nominal value

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

2. Approximate value

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

3. Median value

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

4. Fictitious value

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

b. Concerning Tests

1. Routine tests

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

2. Sample tests

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

3. Type tests

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

4. Electrical test after installation

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

Technical Data

1. Resistance

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

$R_0=R_{20}$ (1+a(Ø-20)) Ω/km

Where

R_0 : Conductor DC resistance at °C Ω/km
R_{20} Conductor DC resistance at 20 °C Ω /km °C
Φ: Operating temperature 1/°C
a : Resistance temperature coefficient
0.00393 for Copper
0.00403 for Aluminium
To get AC resistance of the conductor at its operating temperature the following formula is used
R_{AC} = R0(1+Yp+Ys) Ω /km

Where

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

2. Inductance

The self and mutual inductance are formulated as follow:

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

Where

L: Inductance mh/km
K : Constant depends on the conductors number of wires

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

d : Conductors diameter mm
S : Axial spacing between cables in trefoil formation mm
S: 1.26 x axial spacing between cables in flat formation mm

3. Capacitance

The capacitance is formulated as follow

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

Where

C : Capacitance µf/km
E_r : Relative permittivity of insulation material
D : Diameter over insulation (excluding Outer Semi conductor layer in case of M.V, H.V & E.H.V) mm
d : Conductor diameter (including Inner Semi conductor layer in case of M.V, H.V & E.H.V) mm

4. Insulation Resistance

The Insulation Resistance is formulated as follow $R=K\ln(\frac{D}{d})$

Where

R : Insulation resistance MΩ/km
K : Constant depends on the insulation material
d : Diameter of the conductor (including Inner Semi conductor layer in case of (M.V, H.V& E.H.V) mm
D : Diameter of the insulated core (excluding Outer semi conductor layer in case of (M.V, H.V& E.H.V) mm

5. Charging Current

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

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

Where

I_C : Charging current A/km
U_O: Voltage between phase and earth. v
ω : 2TTf
F : Frequency Hz
C : Capacitance to neutral µf

6. Dielectric Losses

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

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

Where

W_D: Dielectric losses watt/km/phase
f : Frequency Hz
C : Capacitance to neutral µf/km
U_O: Voltage between phase and earth V
tan ó : Dielectric power factor

7. Cable Ampacity

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

the current calculation:

- Ambient air temperature = 30 °C
- Ground temperature = 20 °C
- Ground thermal resistivity = 120 °C. cm/Watt
- Burial depth = 0.5 mt.

- In case of installation conditions are different from the stated, derating factors tabulated in tables 3 to 11 page 17-20 must be used for calculating the new current carrying capacity.
- All cable ampacities are based on IEC 60287

8. Cable Short Circuit Capacity

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

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

B- Maximum temperature during short circuit

C- Maximum short circuit current duration is 5 seconds.

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

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

Where

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

9. Voltage Drop

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

A. Single phase circuit.

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

B. Three phase circuit.

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

Where

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

Relation between cosø and sinø

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

* L.V. cable systems should be planned so as not to exceed voltage drop 3-5 % in normal operating conditions.

* Voltage drop data for L.V. Cable (Single & Multi Core) are tabulated in Tables 19&18 in pages 24,25

Metals

Table 1
Electrical Properties

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

Table 2
Physical Properties

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

Derating Factor

Table 3
Ground Temperature Derating Factor

Ground Temperature °C	15	20	25	30	35	40	45	50	55
PVC cables rated 70 °C	1.05	1.00	0.95	0.9	0.84	0.78	0.71	0.63	0.54
XLPE cables rated 90 °C	1.03	1.00	0.96	0.93	0.89	0.85	0.80	0.76	0.70
High & Extra High Voltage	1.14	1.11	1.07	1.04	1.00	0.955	0.90	0.855	0.79

Table 4
Air Temperature Derating Factor

Air Temperature °C	20	30	35	40	45	50	55
PVC cables rated 70 °C	1.15	1.00	0.93	0.87	0.77	0.70	0.61
XLPE cables rated 90 °C	1.1	1.00	0.96	0.91	0.87	0.82	0.76
High & Extra High Voltage	1.13	1.09	1.05	1.00	0.95	0.90	0.83

Table 5
Burial Depth derating factor

Depth (m)	0.5	0.6	0.8	1	1.1	1.2	1.5	1.75	2
PVC cables rated 70 °C	1.00	0.98	0.96	0.93	0.92	0.91	0.89	0.87	0.86
XLPE cables rated 90 °C	1.00	0.98	0.96	0.93	0.92	0.91	0.89	0.87	0.86
High & Extra High Voltage	1.08	1.06	1.04	1.01	1.00	0.99	0.97	0.95	0.94

Table 6
Soil Thermal Resistivity Derating Factor

Soil Thermal Resistivity in °C. cm/Watt	80	90	100	120	150	200	250	300
for direct buried	1.17	1.12	1.075	1.0	0.91	0.80	0.73	0.67
for buried ducts	1.12	1.07	1.04	1	0.94	0.83	0.76	0.69

Table 7
PVC Rated Temperature Derating Factor

Type of PVC Rated Temperature °C	70	90	105
De-rating factors for cable directly buried in ground	1	1.15	1.24
De-rating factors for cable in air	1	1.28	1.46
De-rating factors for cable in duct	1	1.2	1.34

Table 8
Trefoil or Flat Formation Derating Factors for Three Single Core Cables Laid Direct in Ground

Number of Circuits	Trefoil formation		Flat formation			
	Touching		Spacing= 0.15 M		Spacing = 0.30 M	
	Trefoil	Flat	Trefoil	Flat	Trefoil	Flat
2	0.77	0.80	0.82	0.85	0.88	0.91
3	0.66	0.69	0.73	0.76	0.80	0.83
4	0.60	0.63	0.68	0.71	0.74	0.77
5	0.56	0.59	0.64	0.67	0.72	0.75
6	0.53	0.57	0.61	0.64	0.70	0.73

*L=Spacing

Table 9
Trefoil Formation Derating Factors for Multi-core Core Cables Laid Direct in Ground

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

*L=Spacing

Table 10
Reduction factors for groups of more than one multi-core cable in air
To be applied to the current-carrying capacity for one multi-core cable in free air

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

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

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

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

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

Table 11
Reduction factors for groups of more than one circuit of single-core cables (Note 2)
To be applied to the current-carrying capacity for one circuit of single-core cables in free air

Number of Trays	Number of Cables			Use as a multiplier to rating for	Method of installation
	1	2	3		
1	0.98	0.91	0.87	Three cables in horizontal formation	Perforated trays (Note 3) Spaced ≥ 20mm
2	0.96	0.87	0.81		
3	0.95	0.85	0.78		
1	1.00	0.97	0.96	Three cables in horizontal formation	Ladder supports, cleats, etc. (Note 3) Spaced ≥ 20mm
2	0.98	0.93	0.89		
3	0.97	0.90	0.86		
1	1.00	0.98	0.96	Three cables in trefoil formation	Perforated trays (Note 3) ≥ 2D, D, ≥ 20mm
2	0.97	0.93	0.89		
3	0.96	0.92	0.86		
1	1.00	0.91	0.89		Vertical Perforated trays (Note 3) Spaced ≥ 225mm ≥ 2D, D,
2	1.00	0.90	0.86		
1	1.00	1.00	1.00		Ladder supports, cleats, etc. (Note 3) ≥ 2D, D, ≥ 20mm
2	0.97	0.95	0.93		
3	0.96	0.94	0.90		

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

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

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

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

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

Short Circuit Current

Table 12
Max. Short Circuit Temperature for Cable Components

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

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

Table 13
KA Short Circuit Current- Copper Conductor- PVC Insulated

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

Table 14
KA Short Circuit Current - Aluminium Conductor – PVC Insulated

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

Table 15
kA Short Circuit Current - Copper Conductor - XLPE Insulated Duration sec.

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

Table 16
kA Short Circuit Current - Aluminium Conductor – XLPE Insulated

C.S.A. mm2	Duration sec.									
	0.1	0.2	0.3	0.4	0.5	1.0	2.0	3.0	4.0	5.0
16	4.8	3.4	2.8	2.4	2.1	1.5	1.1	0.9	0.8	0.7
25	7.4	5.2	4.3	3.7	3.3	2.3	1.7	1.4	1.2	1.0
35	10.4	7.3	6.0	5.2	4.6	3.3	2.3	1.9	1.6	1.5
50	14.8	10.5	8.6	7.4	6.6	4.7	3.3	2.7	2.3	2.1
70	20.7	14.7	12.0	10.4	9.3	6.6	4.6	3.8	3.3	2.9
95	28.1	19.9	16.3	14.1	12.6	8.9	6.3	5.1	4.5	4.0
120	35.6	25.1	20.5	17.8	15.9	11.2	8.0	6.5	5.6	5.0
150	44.4	31.4	25.7	22.2	19.9	14.1	9.9	8.1	7.0	6.3
185	54.8	38.8	31.6	27.4	24.5	17.3	12.3	10.0	8.7	7.8
240	71.1	50.3	41.1	35.6	31.8	22.5	15.9	13.0	11.2	10.1
300	88.9	62.9	51.3	44.4	39.8	28.1	19.9	16.2	14.1	12.6
400	118.2	83.8	68.4	59.3	53.0	37.5	26.5	21.6	18.7	16.8
500	148.2	104.8	85.5	74.1	66.3	46.9	33.1	27.0	23.4	21.0
630	186.7	132.0	107.8	93.3	83.5	59.0	41.7	34.1	29.2	26.4
800	237.0	167.6	136.9	118.2	106.0	75.0	53.0	43.3	37.5	33.5
1000	296.3	209.5	171.1	148.2	132.5	93.7	66.3	54.1	46.9	41.9
1200	355.6	251.4	205.3	179	159.0	112.4	79.5	64.9	56.2	50.3
1600	474.1	335.2	273.7	237	212	149.9	106	86.6	75	67
2000	592.6	419	342.1	296.3	265	187.4	132.5	108.2	93.7	83.8
2500	741.2	524.1	427.9	370.6	331.5	234.4	165.7	135.3	117.2	104.8

Table 17
KA Short Circuit Current Copper Screen

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

Conductor temperature before short circuit = °90C

Maximum conductor temperature during short circuit = °250 C

Maximum screen temperature before short circuit = 80C°

Voltage Drop

Table 18
Voltage Drop for Single Core L.V Cables

C.S.A. mm2	PVC Insulation & PVC Sheathed		XLPE Insulation & PVC Sheathed	
	Flat	Trefoil	Flat	Trefoil
Copper Conductor Voltage Drop (mv / AMP / Meter)				
4	7.830	7.770	8.337	8.277
6	5.287	5.226	5.628	5.568
10	3.184	3.124	3.401	3.341
16	1.357	2.008	2.203	2.142
25	1.034	1.297	1.440	1.380
35	0.793	0.971	1.085	1.024
50	0.595	0.732	0.836	0.776
70	0.469	0.534	0.624	0.564
95	0.410	0.408	0.490	0.430
120	0.354	0.349	0.417	0.357
150	0.312	0.294	0.366	0.305
185	0.272	0.252	0.322	0.262
240	0.247	0.211	0.278	0.218
300	0.224	0.187	0.253	0.192
400	0.208	0.164	0.220	0.159
500	7.830	0.148	0.211	0.150
630	0.194	0.134	0.191	0.131
Aluminium Conductor Voltage Drop (mv / AMP / Meter)				
16	3.343	3.283	3.561	3.500
25	2.161	2.100	2.296	2.235
35	1.602	1.542	1.700	1.640
50	1.222	1.162	1.291	1.230
70	0.890	0.830	0.937	0.877
95	0.686	0.623	0.719	0.655
120	0.569	0.509	0.594	0.534
150	0.490	0.430	0.511	0.451
185	0.420	0.360	0.437	0.377
240	0.353	0.293	0.367	0.307
300	0.312	0.252	0.322	0.262
400	0.274	0.214	0.278	0.218
500	0.245	0.185	0.260	0.199
630	0.222	0.162	0.233	0.163

The above data are based on:

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

Table 19
Voltage Drop for Multi Core L.V Cables

C.S.A. mm2	PVC Insulation & PVC Sheathed	XLPE Insulation & PVC Sheathed
	Flat	Flat
Copper Conductor Voltage Drop (mv / AMP / Meter)		
1.5	20.345	20.341
2.5	12.397	13.197
4	7.741	7.731
6	5.199	5.191
10	3.101	3.094
16	1.988	1.982
25	1.280	1.276
35	0.959	0.955
50	0.720	0.715
70	0.524	0.520
95	0.398	0.394
120	0.341	0.337
150	0.285	0.282
185	0.244	0.241
240	0.204	0.201
300	0.180	0.177
400	0.157	0.155
Aluminium Conductor Voltage Drop (mv / AMP / Meter)		
16	3.263	3.479
25	2.084	2.218
35	1.527	1.624
50	1.150	1.217
70	0.819	0.865
95	0.613	0.645
120	0.500	0.524
150	0.421	0.442
185	0.352	0.369
240	0.286	0.299
300	0.245	0.255
400	0.208	0.211

The above data are based on:

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

Conversion Table

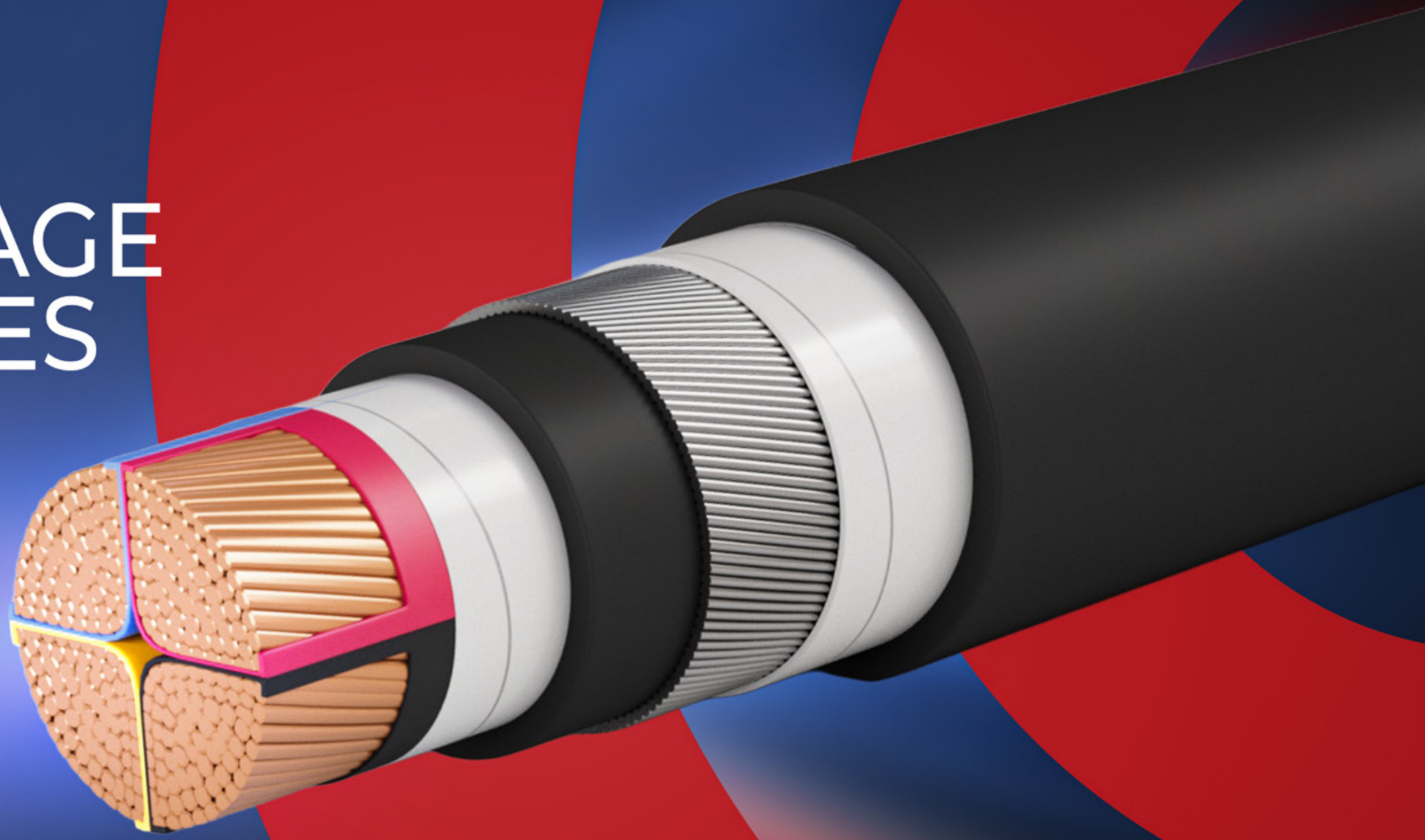
AWG	SI unit		Imperial unit	
	Diameter (mm)	Cross-Section (mm2)	Diameter (mil)	Cross-Section (Cmil)
4/0	11.68	107.2	460	211600
3/0	10.40	85.03	409.6	167772
2/0	9.266	67.42	364.8	133079
1/0	8.254	53.49	324.9	195600
1	7.343	42.41	289.3	83694
2	6.544	33.63	257.6	66358
3	5.827	26.66	229.4	52624
4	5.189	21.15	204.3	41738
5	4.621	16.77	181.9	33088
6	4.115	13.30	162.0	26244
7	3.665	10.55	144.3	20822
8	3.264	8.368	128.5	16512
9	2.906	6.632	114.4	13087
10	2.588	5.262	101.9	10384
11	2.305	4.172	90.74	8234
12	2.053	3.309	80.81	6530
13	1.828	2.625	71.96	5178
14	1.628	2.081	64.08	4106
15	1.450	1.650	57.07	3257
16	1.291	1.309	50.82	2583
17	1.150	1.037	45.26	2048
18	1.024	0.8226	40.30	1624
19	0.9116	0.6529	35.89	1288
20	0.8118	0.5174	31.96	1021
21	0.7229	0.4105	28.46	810
22	0.6438	0.3256	25.35	642.6
23	0.5733	0.2581	22.57	509.4
24	0.5106	0.2047	20.10	404
25	0.4547	0.1623	17.90	320.4
26	0.4094	0.1288	15.94	254.1
27	0.3606	0.1021	14.20	201.6
28	0.3211	0.08097	12.64	159.8
29	0.2859	0.06425	11.26	126.8
30	0.2546	0.05097	10.03	100.6
31	0.2268	0.04039	8.928	79.71
32	0.2019	0.03203	7.950	63.20
33	0.1797	0.02540	7.080	50.13
34	0.1601	0.02014	6.305	39.75
35	0.1426	0.01597	5.615	31.53
36	0.1270	0.01267	5.000	25.00
37	0.1131	0.01005	4.453	19.83
38	0.1007	0.007968	3.965	15.72
39	0.08969	0.006319	3.531	12.47
40	0.07937	0.005012	3.145	9.891
41	0.07113	0.003973	2.800	7.842
42	0.06334	0.003151	2.494	6.219
43	0.05541	0.002499	2.221	4.932
44	0.05023	0.001982	1.978	3.911
45	0.0473	0.001572	1.761	3.102
46	0.03984	0.001246	1.568	2.460
47	0.03547	0.0009884	1.397	1.951
48	0.03159	0.0007838	1.244	1.547
49	0.02813	0.0006216	1.108	1.227
50	0.02505	0.0004929	0.9863	0.9728

Conversion Table

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

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

LOW VOLTAGE CABLES



Single-core non-sheathed cable 300/500 V With (Solid / Stranded / Flexible)

Conductor for internal wiring and PVC Insulated

Voltage Grade

300 / 500 V

Description

Soft annealed solid / Stranded / flexible Copper conductors (Class 1 , 2 or 5) insulated with PVC compound rated 70° C.

Application

For internal wiring of equipment and protected installation in and on luminaires, also for installation in conduit on and under plaster, but only for signaling systems

Technical Data

Relevant Standard	IEC 60277-3 , BS EN 50525 and HD 21.3
Harmonized Code	H05V-U (Solid) · H05V-R (Stranded) · H05V-K (Flexible)
Conductor	Plain copper conductor class 1 , class 2 or class 5
Insulation	PVC Compound type or PVC / C Rated 70° C
Color Code	Red , Yellow, Blue , Black , Green / Yellow as per IEC 60277-3 Brown , Grey , Black , Blue , Green / Yellow as per BS EN 50525 Or Any colors according to customer request.
Maximum Operating Temp.	70° C
Minimum bending Radius	6 x outer diameter
Packing Condition	100 Meters or 100 yards on **A-** Air Coil · **B-** Plastic Spools

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating In Air		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Free A	In Pipe A	Diameter mm	Weight kg/km
H05V-U (Solid)							
PB-CS01-P1-01-U0	0.5	36	43.9	2.2	1.6	2.12	8.66
PB-CS02-P1-01-U0	0.75	24.5	29.9	10.4	1.6	2.12	8.66
PB-CS03-P1-01-U0	1	18.1	22.08	13.8	10.4	2.50	14.19
H05V-R (Stranded)							
PB-CT01-P1-01-U0	0.5	36	43.9	2.2	1.6	2.12	8.66
PB-CT02-P1-01-U0	0.75	24.5	29.9	10.9	7.6	2.35	11.89
PB-CT03-P1-01-U0	1	18.1	22.08	14.4	10.8	2.50	14.19
H05V-K (Flexible)							
PB-CF01-P1-01-U0	0.5	39	46.7	2.30	1.60	2.12	8.66
PB-CF02-P1-01-U0	0.75	26	31.6	11.5	8.1	2.35	11.89
PB-CF03-P1-01-U0	1	19.5	23.4	15.0	11.5	2.50	14.19

The above data is approximate and subject to manufacturing tolerances

Note:-

Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Single-core non-sheathed cable with Flexible conductor

for internal wiring and PVC Insulated 450/750 V

CU/PVC

Voltage Grade

450 / 750 V

Description

Soft annealed flexible Copper conductors (Class 5) insulated with PVC compound rated 70° C .

Application

For indoor installations In dry locations, Laid in conduits or steel support brackets.

Technical Data

Relevant Standard	IEC 60277-3 , BSEN 50525 HD 21.3 S3
Harmonized Code	H07V-K
Conductor	Plain copper conductor class 5
Insulation	PVC Compound type or PVC / C Rated 70° C
Color Code	Red , Yellow, Blue , Black , Green / Yellow as per IEC 60277-3 Brown , Grey , Black , Blue , Green / Yellow as per BS EN 50525 Or Any colors according to customer request.
Maximum Operating Temp.	70° C
Minimum bending Radius	6 x outer diameter
Packing Condition	100 Meters or 100 yards on **A-** Air Coil · **B-** Plastic Spools

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating In Air		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Free	In Pipe	Diameter	Weight
				A	A	mm	kg/km
H07V-K							
PB-CF04-P2-01-U0	1.5	13.3	15.95	20	15	2.96	20.74
PB-CF05-P2-01-U0	2	9.42	11.27	22	18	3.44	27.55
PB-CF06-P2-01-U0	2.5	7.98	9.56	28	22	3.66	32.9
PB-CF07-P2-01-U0	3	6.65	7.96	32	25	3.97	40.34
PB-CF08-P2-01-U0	4	4.95	5.93	38	27	4.2	48.22
PB-CF09-P2-01-U0	6	3.3	3.95	48	35	4.86	68.35
PB-CF10-P2-01-U0	10	1.91	2.29	68	49	6.00	109.54
PB-CF11-P2-01-U0	16	1.21	1.45	92	66	7.3	164.91
PB-CF12-P2-01-U0	25	0.78	0.94	124	85	9.2	266
PB-CF13-P2-01-U0	35	0.554	0.663	155	106	10.4	350.6
PB-CF14-P2-01-U0	50	0.386	0.462	189	128	12.5	502
PB-CF15-P2-01-U0	70	0.272	0.326	241	158	14.4	701
PB-CF16-P2-01-U0	95	0.206	0.247	303	200	17.5	928.2
PB-CF17-P2-01-U0	120	0.161	0.193	353	229	19.2	1178.7
PB-CF18-P2-01-U0	150	0.129	0.155	405	264	21.1	1432
PB-CF19-P2-01-U0	185	0.106	0.127	471	302	22	1770
PB-CF20-P2-01-U0	240	0.0801	0.096	569	362	24.4	2339

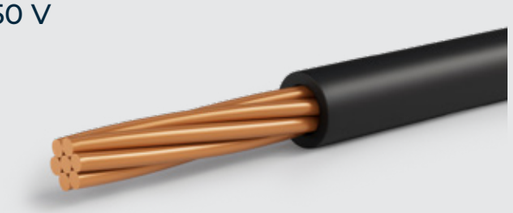
The above data is approximate and subject to manufacturing tolerances

Note:-

Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Single-core non-sheathed cable with stranded conductor

for internal wiring and PVC Insulated 450/750 V
CU/PVC



Voltage Grade

450 / 750 V

Description

Soft annealed stranded or Solid Copper conductors (Class 2 or Class 1) insulated with PVC compound rated 70° C .

Application

For indoor installations In dry locations ,Laid in conduits or steel support brackets..

Technical Data

Relevant Standard	IEC 60277-3 , BSEN 50525 and BS 6004
Harmonized Code	H07V-R
Conductor	Plain copper conductor class 2
Insulation	PVC Compound type or PVC / C Rated 70° C
Color Code	Red , Yellow, Blue , Black , Green / Yellow as per IEC 60277-3 Brown , Grey , Black , Blue , Green / Yellow as per BS 6004 and BSEN 50525 Or Any colors according to customer request.
Maximum Operating Temp.	70° C
Minimum bending Radius	6 x outer diameter
Packing Condition	100 Meters or 100 yards on **A-** Air Coil · **B-** Plastic Spools

Note:-

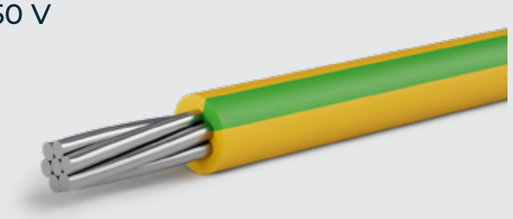
Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating In Air		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Free	In Pipe	Diameter	Weight
				A	A	mm	kg/km
H07V-R (Stranded)							
PB-CT04-P2-01-U0	1.5	12.1	14.6	19.6	15.0	2.96	21.34
PB-CT05-P2-01-U0	2	9.14	11.03	21.9	17.3	3.4	28.26
PB-CT06-P2-01-U0	2.5	7.41	8.89	27.6	21.9	3.58	32.88
PB-CT07-P2-01-U0	3	6.1	7.41	31.1	24.2	3.76	37.76
PB-CT08-P2-01-U0	4	4.61	5.51	36.8	26.5	4.12	48.79
PB-CT09-P2-01-U0	6	3.08	3.68	46.0	33.4	4.66	68.04
PB-CT10-P2-01-U0	10	1.83	2.17	65.6	47.2	5.7	107.63
PB-CT11-P2-01-U0	16	1.15	1.37	88	63	6.7	162.5
PB-CT12-P2-01-U0	25	0.727	0.86	119	81	8.2	260
PB-CT13-P2-01-U0	35	0.524	0.63	148	101	9.3	350
PB-CT14-P2-01-U0	50	0.387	0.46	180	122	10.8	475
PB-CT15-P2-01-U0	70	0.268	0.32	230	151	12.6	675
PB-CT16-P2-01-U0	95	0.193	0.23	289	191	14.5	920
PB-CT17-P2-01-U0	120	0.153	0.19	337	219	15.9	1140
PB-CT18-P2-01-U0	150	0.124	0.15	386	252	17.6	1415
PB-CT19-P2-01-U0	185	0.0991	0.12	449	288	19.9	1775
PB-CT20-P2-01-U0	240	0.0754	0.092	542	345	22.7	2320
PB-CT21-P2-01-U0	300	0.0601	0.075	621	391	25.3	2915
PB-CT22-P2-01-U0	400	0.047	0.0617	725	449	28.4	3735
PB-CT23-P2-01-U0	500	0.0366	0.0506	828	501	32.1	4800
PB-CT24-P2-01-U0	630	0.0283	0.0423	953	558	35.7	6045
H07V-U (Solid)							
PB-CS04-P2-01-U0	1.5	12.1	14.6	19.6	15.0	2.75	19.49
PB-CS05-P2-01-U0	2	9.14	11.03	21.9	17.3	3.17	26.1
PB-CS06-P2-01-U0	2.5	7.41	8.89	27.6	21.9	3.33	30.39
PB-CS07-P2-01-U0	3	6.1	7.41	31.1	24.2	3.51	35.57
PB-CS08-P2-01-U0	4	4.61	5.51	36.8	26.5	3.8	45.01
PB-CS09-P2-01-U0	6	3.08	3.68	46.0	33.4	4.3	64.03
PB-CS10-P2-01-U0	10	1.83	2.17	65.6	47.2	5.5	106.64

The above data is approximate and subject to manufacturing tolerances

Single-core non-sheathed cable with stranded conductor

for internal wiring and PVC Insulated 450/750 V
AL/PVC



Voltage Grade

450 / 750 V

Description

Stranded Aluminum conductors (Class 2) insulated with PVC compound rated 70° C .

Application

For indoor installations In dry locations ,Laid in conduits or steel support brackets.

Technical Data

Relevant Standard	in Principle of IEC 60277-3
Conductor	Aluminum conductor H12 class 2
Insulation	PVC Compound type or PVC / C Rated 70° C
Color Code	Red , Yellow, Blue , Black , Green / Yellow as per IEC 60277-3 Or Any colors according to customer request.
Maximum Operating Temp.	70° C
Minimum bending Radius	6 x outer diameter
Packing Condition	100 Meters or 100 yards on A- Air Coil · B- Plastic Spools

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating In Air		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Free A	In Pipe A	Diameter mm	Weight kg/km
PB-AT11-P2-01-U0	16	1.91	2.3	62	51	7.04	77.1
PB-AT12-P2-01-U0	25	1.2	1.44	95	67	8.7	119.4
PB-AT13-P2-01-U0	35	0.868	1.043	118	83	9.8	153.4
PB-AT14-P2-01-U0	50	0.641	0.771	144	101	11.2	191.2
PB-AT15-P2-01-U0	70	0.443	0.533	184	125	12.7	256.3
PB-AT16-P2-01-U0	95	0.32	0.385	231	158	14.7	351
PB-AT17-P2-01-U0	120	0.253	0.305	270	181	15.9	425.1
PB-AT18-P2-01-U0	150	0.206	0.249	308	208	17.8	523.4
PB-AT19-P2-01-U0	185	0.164	0.199	359	238	19.9	657.7
PB-AT20-P2-01-U0	240	0.125	0.153	433	286	22.7	847.2
PB-AT21-P2-01-U0	300	0.1	0.123	464	324	25.3	1049.7
PB-AT22-P2-01-U0	400	0.0778	0.09747	540	370	28.4	1343.2
PB-AT23-P2-01-U0	500	0.0605	0.0777	630	427	32.1	1711
PB-AT24-P2-01-U0	630	0.0469	0.0629	730	490	36.4	2153.5

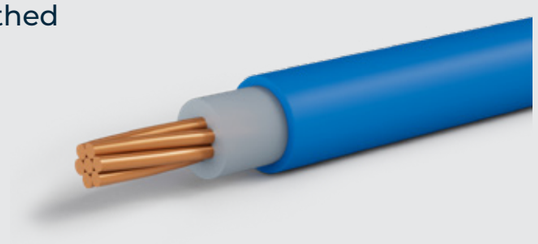
The above data is approximate and subject to manufacturing tolerances

Note:-

Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Single Core Cables, With Stranded Circular Copper

Conductors, PVC Insulated And PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Soft annealed stranded Copper conductor, Insulated with PVC compound rated 70° C and sheathed with PVC Compound layer.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C Extruded
Outer Sheath	PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

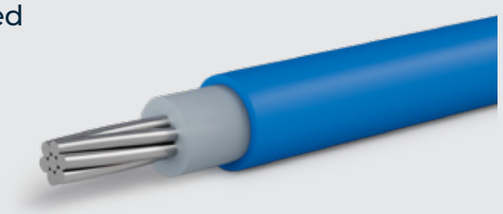
Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating						Approx. Overall	Approx.
				Laid in ground			Laid in Free Air				
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Flat A	Trefoil A	Laid in duct A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A- Copper Conductors											
PL-CT08-P3-01-UP	4	4.6100	5.5100	49	49	36	50	37	35	6.9	90
PL-CT09-P3-01-UP	6	3.0800	3.6800	60	61	45	65	48	46	7.5	110
PL-CT10-P3-01-UP	10	1.8300	2.1700	83	81	62	85	67	59	8.1	150
PL-CT11-P3-01-UP	16	1.1500	1.3700	107	103	77	110	86	75	9.1	210
PL-CT12-P3-01-UP	25	0.7270	0.8600	133	134	97	143	112	109	10.6	310
PL-CT13-P3-01-UP	35	0.5240	0.6300	159	161	118	176	138	134	11.7	410
PL-CT14-P3-01-UP	50	0.3870	0.4600	189	191	142	214	170	165	13.2	545
PL-CT15-P3-01-UP	70	0.2680	0.3200	231	234	176	271	215	209	15.0	755
PL-CT16-P3-01-UP	95	0.1930	0.2300	275	280	215	332	267	259	17.1	1020
PL-CT17-P3-01-UP	120	0.1530	0.1900	313	318	245	386	310	301	18.5	1250
PL-CT18-P3-01-UP	150	0.1240	0.1500	352	356	280	442	357	347	20.2	1535
PL-CT19-P3-01-UP	185	0.0991	0.1200	396	403	320	510	415	402	22.7	1920
PL-CT20-P3-01-UP	240	0.0754	0.0920	459	466	377	608	496	481	25.7	2495
PL-CT21-P3-01-UP	300	0.0601	0.0750	517	525	432	704	575	558	28.5	3125
PL-CT22-P3-01-UP	400	0.0470	0.0590	585	594	495	819	669	648	31.8	3980
PL-CT23-P3-01-UP	500	0.0366	0.0480	659	671	570	957	777	753	35.7	5090
PL-CT24-P3-01-UP	630	0.0283	0.0390	737	751	645	1113	893	864	39.5	6390
PL-CT25-P3-01-UP	800	0.0221	0.0350	813	829	723	1284	1014	982	43.8	8205

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, With Stranded Circular Aluminum

Conductors, PVC Insulated And PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Stranded Aluminium conductor, Insulated with PVC compound rated 70° C and sheathed with PVC Compound layer.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C Extruded
Outer Sheath	PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating						Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Laid in ground			Laid in Free Air				
				Flat A	Trefoil A	Laid in duct A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A- Aluminum Conductors											
PL-AT11-P3-01-UP	16	1.9100	2.2900	80	81	58	83	65	63	9.4	125.0
PL-AT12-P3-01-UP	25	1.2000	1.4400	103	104	76	111	87	85	11.1	180.0
PL-AT13-P3-01-UP	35	0.8680	1.0400	124	125	91	136	107	104	12.2	220.0
PL-AT14-P3-01-UP	50	0.6410	0.7700	146	148	110	166	132	128	13.6	265.0
PL-AT15-P3-01-UP	70	0.4430	0.5330	179	181	136	210	167	162	15.1	340.0
PL-AT16-P3-01-UP	95	0.3200	0.3850	214	217	167	258	207	201	17.3	455.0
PL-AT17-P3-01-UP	120	0.2530	0.3050	244	247	190	300	241	234	18.5	535.0
PL-AT18-P3-01-UP	150	0.2060	0.2480	273	277	218	343	278	269	20.4	645.0
PL-AT19-P3-01-UP	185	0.1640	0.1980	310	315	250	397	324	314	23.1	810.0
PL-AT20-P3-01-UP	240	0.1250	0.1510	359	365	295	473	388	376	25.7	1025.0
PL-AT31-P3-01-UP	300	0.1000	0.1220	406	413	339	548	451	438	28.5	1260.0
PL-AT22-P3-01-UP	400	0.0778	0.0954	464	472	394	644	531	515	31.8	1590.0
PL-AT23-P3-01-UP	500	0.0605	0.0751	530	539	459	757	625	605	35.7	2005.0
PL-AT24-P3-01-UP	630	0.0469	0.0595	603	614	528	889	730	707	40.2	2505.0
PL-AT25-P3-01-UP	800	0.0367	0.0503	679	692	605	1045	850	822	44.6	3080.0

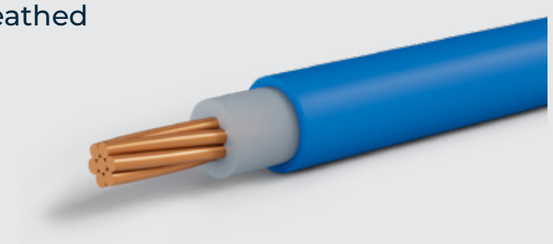
The above data is approximate and subject to manufacturing tolerances

Note:-

Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Single Core Cables, With Stranded Circular Copper

Conductors, XLPE Insulated And PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Soft annealed stranded Copper conductor, Insulated with XLPE compound rated 90° C and sheathed with PVC Compound layer.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 7889
Conductor	Plain copper conductor class 2
Insulation	Extruded XLPE Compound Rated 90° C
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

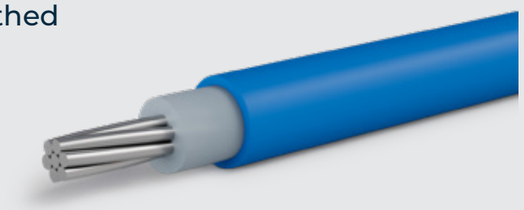
Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating						Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Laid in ground			Laid in Free Air				
				Flat A	Trefoil A	Laid in duct A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Copper Conductors											
PL-CT08-X3-01-UP	4	4.6100	5.8800	55	55	40	65	47	44	6.3	75
PL-CT09-X3-01-UP	6	3.0800	3.9300	70	71	54	80	59	59	6.9	95
PL-CT10-X3-01-UP	10	1.8300	2.3300	111	97	77	113	87	75	7.5	135
PL-CT11-X3-01-UP	16	1.1500	1.4700	131	125	98	157	121	105	8.5	190
PL-CT12-X3-01-UP	25	0.7270	0.9270	154	156	113	179	138	134	10.0	285
PL-CT13-X3-01-UP	35	0.5240	0.6690	185	187	137	219	171	166	11.1	380
PL-CT14-X3-01-UP	50	0.3870	0.4940	219	222	165	269	210	204	12.4	505
PL-CT15-X3-01-UP	70	0.2680	0.3430	268	272	205	339	268	260	14.4	710
PL-CT16-X3-01-UP	95	0.1930	0.2480	320	325	249	419	331	321	16.1	955
PL-CT17-X3-01-UP	120	0.1530	0.1970	364	369	286	486	386	375	17.7	1185
PL-CT18-X3-01-UP	150	0.1240	0.1600	408	414	325	558	446	433	19.4	1455
PL-CT19-X3-01-UP	185	0.0991	0.1290	461	468	374	649	519	503	21.7	1815
PL-CT20-X3-01-UP	240	0.0754	0.0990	534	542	439	763	622	602	24.5	2360
PL-CT21-X3-01-UP	300	0.0601	0.0810	602	612	503	886	722	699	27.1	2960
PL-CT22-X3-01-UP	400	0.0470	0.0638	681	692	579	1033	842	815	30.4	3785
PL-CT23-X3-01-UP	500	0.0366	0.0517	768	781	667	1219	981	950	34.3	4860
PL-CT24-X3-01-UP	630	0.0283	0.0425	860	876	762	1415	1132	1096	38.7	6175
PL-CT25-X3-01-UP	800	0.0221	0.0366	950	969	858	1634	1291	1249	43.4	7990

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, With Stranded Circular Aluminum

Conductors, XLPE Insulated And PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Stranded Aluminium conductor, Insulated with XLPE compound rated 90° C and sheathed with PVC Compound layer.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded XLPE Compound Rated 90° C
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

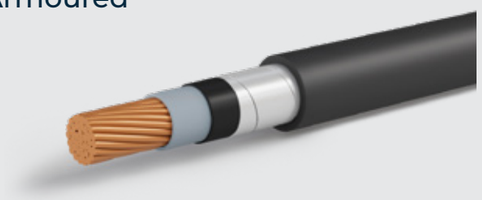
Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating						Approx. Overall	Approx.
				Laid in ground			Laid in Free Air				
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Flat A	Trefoil A	Laid in duct A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
B- Aluminum Conductors											
PL-AT11-X3-01-UP	16	1.9100	2.4500	93	94	67	104	80	77	8.8	105.0
PL-AT12-X3-01-UP	25	1.2000	1.5400	120	121	88	139	107	104	10.5	150.0
PL-AT13-X3-01-UP	35	0.8680	1.1130	143	145	107	171	133	129	11.6	185.0
PL-AT14-X3-01-UP	50	0.6410	0.8220	170	172	129	208	163	158	12.8	220.0
PL-AT15-X3-01-UP	70	0.4430	0.5690	208	211	159	264	208	202	14.5	295.0
PL-AT16-X3-01-UP	95	0.3200	0.4110	248	252	193	324	256	249	16.3	390.0
PL-AT17-X3-01-UP	120	0.2530	0.3250	283	287	223	377	300	291	17.7	470.0
PL-AT18-X3-01-UP	150	0.2060	0.2650	317	322	252	432	346	336	19.6	565.0
PL-AT19-X3-01-UP	185	0.1640	0.2120	359	365	292	502	404	392	22.1	705.0
PL-AT20-X3-01-UP	240	0.1250	0.1630	417	424	343	599	485	470	24.5	890.0
PL-AT21-X3-01-UP	300	0.1000	0.1310	472	480	395	696	566	548	27.1	1095.0
PL-AT22-X3-01-UP	400	0.0778	0.1000	539	549	459	819	667	646	30.4	1395.0
PL-AT23-X3-01-UP	500	0.0605	0.0870	617	628	536	965	787	762	34.3	1775.0
PL-AT24-X3-01-UP	630	0.0469	0.0620	701	714	621	1131	922	892	39.4	2285.0
PL-AT25-X3-01-UP	800	0.0367	0.0531	791	806	714	1329	1077	1042	44.2	2860.0

The above data is approximate and subject to manufacturing tolerances

Note:-

Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Single Core Cables, with Stranded Circular Copper Conductors, PVC Insulated , Aluminum Tape Armoured and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Soft annealed stranded Copper conductor, Insulated with PVC compound rated 70° C , Aluminum tape armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C Extruded
Inner Sheath	PVC Compound
Armoring	Aluminum tape armoured applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

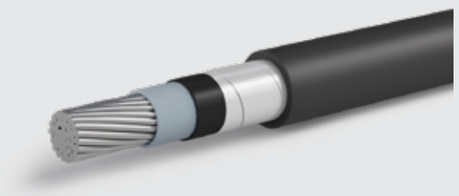
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Copper Conductors										
PL-CT15-P3-01-DP	70	0.2680	0.3212	229	233	280	230	224	19.2	931
PL-CT16-P3-01-DP	95	0.1930	0.2317	273	278	340	281	274	21.1	1210
PL-CT17-P3-01-DP	120	0.1530	0.1841	310	316	392	325	317	22.5	1451
PL-CT18-P3-01-DP	150	0.1240	0.1497	347	353	445	371	362	24.4	1763
PL-CT19-P3-01-DP	185	0.0991	0.1203	391	398	509	427	416	26.9	2170
PL-CT20-P3-01-DP	240	0.0754	0.0926	450	460	599	506	494	29.9	2774
PL-CT21-P3-01-DP	300	0.0601	0.0750	504	517	684	581	569	32.5	3413
PL-CT22-P3-01-DP	400	0.0470	0.0601	566	582	779	669	656	36.0	4315
PL-CT23-P3-01-DP	500	0.0366	0.0488	632	654	889	769	756	39.9	5458
PL-CT24-P3-01-DP	630	0.0283	0.0402	700	728	1007	872	862	43.7	6758
PL-CT25-P3-01-DP	800	0.0221	0.0340	763	798	1121	978	970	48.7	8686

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, with Stranded Aluminium

Conductors, PVC Insulated , Aluminum Tape Armoured and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Stranded Aluminium conductor, Insulated with PVC compound rated 70° C , Aluminum tape armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminium conductor H12 class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C Extruded
Inner Sheath	PVC Compound
Armoring	Aluminum tape armoured applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

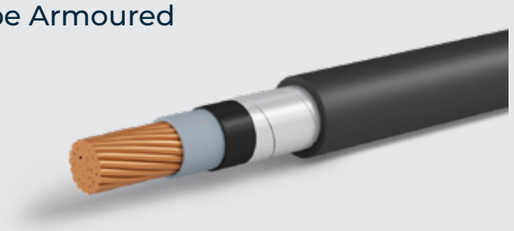
Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Aluminium Conductors										
PL-AT15-X3-01-DP	70	0.4430	0.5326	178	181	218	179	174	19.3	522
PL-AT16-X3-01-DP	95	0.3200	0.3850	213	216	265	219	213	21.3	650
PL-AT17-X3-01-DP	120	0.2530	0.3046	242	246	306	253	247	22.5	743
PL-AT18-X3-01-DP	150	0.2060	0.2483	270	275	348	289	281	24.6	884
PL-AT19-X3-01-DP	185	0.1640	0.1981	306	312	400	334	325	27.3	1077
PL-AT20-X3-01-DP	240	0.1250	0.1517	354	361	472	397	387	29.9	1319
PL-AT21-X3-01-DP	300	0.1000	0.1221	398	408	542	459	447	32.5	1566
PL-AT22-X3-01-DP	400	0.0778	0.0959	454	465	626	535	523	36.0	1949
PL-AT23-X3-01-DP	500	0.0605	0.0759	514	529	724	624	611	39.9	2404
PL-AT24-X3-01-DP	630	0.0469	0.0606	580	599	833	721	708	43.8	2920
PL-AT25-X3-01-DP	800	0.0367	0.0495	646	671	951	829	817	48.7	3619

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, with Stranded Circular Copper Conductors, XLPE Insulated , Aluminum Tape Armoured and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Soft annealed stranded Copper conductor, Insulated with XLPE compound rated 90° C , Aluminum tape armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded XLPE Compound Rated 90° C
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum tape armoured applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

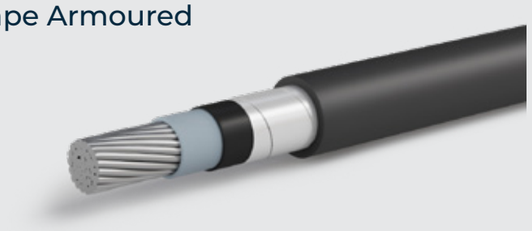
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Copper Conductors										
PL-CT15-X3-01-DP	70	0.2680	0.3423	267	270	352	287	279	18.6	881
PL-CT16-X3-01-DP	95	0.1930	0.2469	318	323	429	351	341	20.1	1133
PL-CT17-X3-01-DP	120	0.1530	0.1962	361	367	495	406	395	21.7	1376
PL-CT18-X3-01-DP	150	0.1240	0.1595	404	411	563	465	452	23.6	1676
PL-CT19-X3-01-DP	185	0.0991	0.1281	454	464	646	536	522	25.9	2055
PL-CT20-X3-01-DP	240	0.0754	0.0985	524	536	762	636	620	28.7	2627
PL-CT21-X3-01-DP	300	0.0601	0.0797	589	604	872	732	715	31.3	3247
PL-CT22-X3-01-DP	400	0.0470	0.0638	661	680	997	846	828	34.6	4104
PL-CT23-X3-01-DP	500	0.0366	0.0516	741	765	1141	975	957	38.5	5209
PL-CT24-X3-01-DP	630	0.0283	0.0423	821	852	1291	1110	1094	42.9	6560
PL-CT25-X3-01-DP	800	0.0221	0.0356	897	937	1439	1248	1236	48.3	8464

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, with Stranded Aluminium

Conductors, XLPE Insulated , Aluminum Tape Armoured and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Stranded Aluminium conductor, Insulated with XLPE compound rated 90° C, Aluminum tape armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminium conductor H12 class 2
Insulation	Extruded XLPE Compound Rated 90° C
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum tape armoured applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

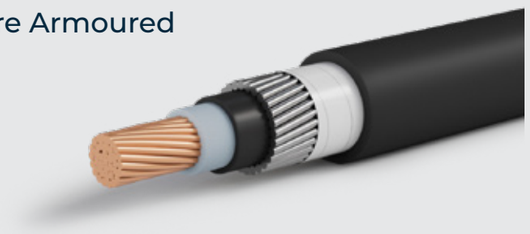
Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Aluminium Conductors										
PL-AT15-X3-01-DP	70	0.4430	0.5683	207	210	274	223	217	18.7	471
PL-AT16-X3-01-DP	95	0.3200	0.4108	247	251	333	272	265	20.3	575
PL-AT17-X3-01-DP	120	0.2530	0.3250	281	285	386	316	308	21.7	668
PL-AT18-X3-01-DP	150	0.2060	0.2649	314	319	439	362	352	23.8	798
PL-AT19-X3-01-DP	185	0.1640	0.2113	355	362	506	419	408	26.3	960
PL-AT20-X3-01-DP	240	0.1250	0.1617	411	420	599	498	485	28.7	1172
PL-AT21-X3-01-DP	300	0.1000	0.1301	464	474	689	577	561	31.3	1400
PL-AT22-X3-01-DP	400	0.0778	0.1022	528	541	798	675	658	34.6	1738
PL-AT23-X3-01-DP	500	0.0605	0.0808	600	616	925	788	770	38.5	2155
PL-AT24-X3-01-DP	630	0.0469	0.0643	676	698	1064	913	895	43.0	2692
PL-AT25-X3-01-DP	800	0.0367	0.0523	755	784	1214	1052	1035	48.3	3397

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, with Stranded Circular Copper Conductors, PVC Insulated , Aluminum Wire Armoured and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Soft annealed stranded Copper conductor, Insulated with PVC compound rated 70° C , Aluminum Wire armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum wire armoured applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Copper Conductors										
PL-CT12-P3-01-RP	25	0.7270	0.8700	133	136	156	130	126	16.3	512
PL-CT13-P3-01-RP	35	0.5240	0.6272	160	163	190	158	154	17.6	637
PL-CT14-P3-01-RP	50	0.3870	0.4634	189	191	228	190	185	19.1	788
PL-CT15-P3-01-RP	70	0.2680	0.3212	230	234	283	237	231	20.9	1026
PL-CT16-P3-01-RP	95	0.1930	0.2316	272	278	340	287	281	22.8	1311
PL-CT17-P3-01-RP	120	0.1530	0.1840	307	315	389	330	323	24.4	1569
PL-CT18-P3-01-RP	150	0.1240	0.1496	342	351	437	374	367	26.3	1890
PL-CT19-P3-01-RP	185	0.0991	0.1202	382	394	493	427	420	28.6	2301
PL-CT20-P3-01-RP	240	0.0754	0.0924	435	452	568	499	493	31.6	2914
PL-CT21-P3-01-RP	300	0.0601	0.0747	477	500	630	563	561	35.0	3644
PL-CT22-P3-01-RP	400	0.0470	0.0598	526	557	699	636	639	38.3	4554
PL-CT23-P3-01-RP	500	0.0366	0.0484	576	615	776	716	726	42.2	5726
PL-CT24-P3-01-RP	630	0.0283	0.0397	623	673	850	794	812	46.2	7097
PL-CT25-P3-01-RP	800	0.0221	0.0333	639	703	897	846	877	52.2	9190

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, with Stranded Circular Aluminium Conductors, PVC Insulated , Aluminum Wire Armoured and PVC Sheathed

Voltage Grade

0.6 / 1 (1.2) KV

Description

Stranded Aluminum conductor, Insulated with PVC compound rated 70° C , Aluminum Wire armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum wire armoured applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

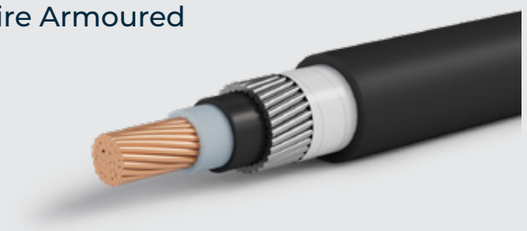
Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Aluminum Conductors										
PL-AT12-P3-01-RP	25	1.2000	1.4419	104	106	122	101	98	16.8	388
PL-AT13-P3-01-RP	35	0.8680	1.0430	124	126	148	123	119	18.1	454
PL-AT14-P3-01-RP	50	0.6410	0.7703	146	149	178	148	144	19.5	519
PL-AT15-P3-01-RP	70	0.4430	0.5326	179	182	222	185	180	21.0	617
PL-AT16-P3-01-RP	95	0.3200	0.3849	213	217	268	224	219	23.0	750
PL-AT17-P3-01-RP	120	0.2530	0.3046	241	247	308	259	253	24.4	861
PL-AT18-P3-01-RP	150	0.2060	0.2483	269	275	347	294	287	26.5	1016
PL-AT19-P3-01-RP	185	0.1640	0.1980	303	310	395	337	331	29.0	1206
PL-AT20-P3-01-RP	240	0.1250	0.1515	347	358	459	397	390	31.6	1459
PL-AT21-P3-01-RP	300	0.1000	0.1219	386	400	517	454	448	35.0	1797
PL-AT22-P3-01-RP	400	0.0778	0.0957	432	452	585	522	518	38.3	2188
PL-AT23-P3-01-RP	500	0.0605	0.0757	483	509	662	598	598	42.2	2672
PL-AT24-P3-01-RP	630	0.0469	0.0603	534	568	740	678	683	46.3	3232
PL-AT25-P3-01-RP	800	0.0367	0.0490	567	613	807	748	763	52.2	4123

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, with Stranded Circular Copper Conductors, XLPE Insulated , Aluminum Wire Armoured and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Soft annealed stranded Copper conductor, Insulated with XLPE compound rated 90° C , Aluminum Wire armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded XLPE Compound Rated 90° C
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum wire armoured applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Copper Conductors										
PL-CT12-X3-01-RP	25	0.7270	0.9271	156	158	198	162	158	15.7	478
PL-CT13-X3-01-RP	35	0.5240	0.6684	187	190	240	197	192	16.8	590
PL-CT14-X3-01-RP	50	0.3870	0.4938	220	224	288	238	232	18.3	735
PL-CT15-X3-01-RP	70	0.2680	0.3422	268	272	358	297	289	20.3	973
PL-CT16-X3-01-RP	95	0.1930	0.2468	317	324	431	360	351	21.8	1229
PL-CT17-X3-01-RP	120	0.1530	0.1960	358	367	493	414	405	23.6	1492
PL-CT18-X3-01-RP	150	0.1240	0.1593	399	409	555	471	461	25.3	1790
PL-CT19-X3-01-RP	185	0.0991	0.1279	446	460	628	538	529	27.8	2193
PL-CT20-X3-01-RP	240	0.0754	0.0983	509	527	726	630	622	30.6	2781
PL-CT21-X3-01-RP	300	0.0601	0.0794	565	589	814	717	711	33.2	3413
PL-CT22-X3-01-RP	400	0.0470	0.0635	619	653	898	809	810	37.1	4349
PL-CT23-X3-01-RP	500	0.0366	0.0512	679	724	997	913	923	41.0	5486
PL-CT24-X3-01-RP	630	0.0283	0.0418	737	795	1097	1019	1038	45.2	6846
PL-CT25-X3-01-RP	800	0.0221	0.0349	759	833	1152	1088	1126	51.8	8957

The above data is approximate and subject to manufacturing tolerances

Single Core Cables, with Stranded Circular Aluminium Conductors, XLPE Insulated , Aluminum Wire Armoured and PVC Sheathed

Voltage Grade

0.6 / 1 (1.2) KV

Description

Stranded Aluminum conductor, Insulated with XLPE compound rated 90° C, Aluminum Wire armoured and sheathed with PVC Compound layer.

Application

For outdoor and indoor installations in damp and wet locations where mechanical damages are expected to occur. They are normally used for power distribution in urban networks, industrial plants, as well as in thermopower and hydropower stations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded XLPE Compound Rated 90° C
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum wire armoured applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Insulation Color	Natural (default color), or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

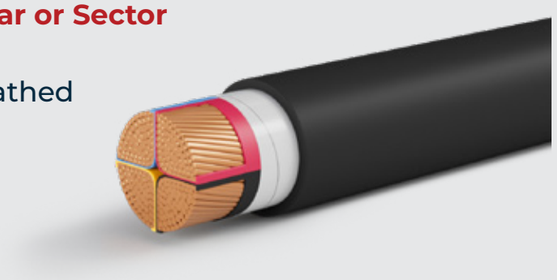
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm2	Max. Conductor Resistance		Current Rating					Approx. Overall	Approx.
				Laid in ground		Laid in Free Air				
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Flat A	Trefoil A	Flat separated A	Flat touched A	Trefoil A	Diameter mm	Weight kg/km
A - Aluminum Conductors										
PL-AT12-X3-01-RP	25	1.2000	1.5386	121	123	154	126	123	16.2	348
PL-AT13-X3-01-RP	35	0.8680	1.1130	144	147	187	153	149	17.3	401
PL-AT14-X3-01-RP	50	0.6410	0.8220	171	174	225	185	180	18.7	466
PL-AT15-X3-01-RP	70	0.4430	0.5683	209	212	280	231	225	20.4	563
PL-AT16-X3-01-RP	95	0.3200	0.4107	247	252	338	281	274	22.0	674
PL-AT17-X3-01-RP	120	0.2530	0.3249	281	286	389	325	317	23.6	784
PL-AT18-X3-01-RP	150	0.2060	0.2648	313	320	439	369	360	25.5	910
PL-AT19-X3-01-RP	185	0.1640	0.2112	352	362	501	425	415	28.2	1101
PL-AT20-X3-01-RP	240	0.1250	0.1616	405	417	585	500	491	30.6	1326
PL-AT21-X3-01-RP	300	0.1000	0.1299	453	468	663	573	564	33.2	1566
PL-AT22-X3-01-RP	400	0.0778	0.1020	507	528	749	661	655	37.1	1983
PL-AT23-X3-01-RP	500	0.0605	0.0805	567	595	847	759	757	41.0	2432
PL-AT24-X3-01-RP	630	0.0469	0.0640	628	666	951	865	868	45.3	2978
PL-AT25-X3-01-RP	800	0.0367	0.0518	667	719	1031	955	972	51.8	3890

The above data is approximate and subject to manufacturing tolerances

Multi Core Cables, with Stranded Circular or Sector Copper

Conductors, PVC Insulated and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Soft annealed Stranded Copper conductors are insulated with PVC compound rated 70° C, assembled together, covered with an overall jacket of PVC compound.

Application

For outdoor and indoor installations in damp and wet locations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

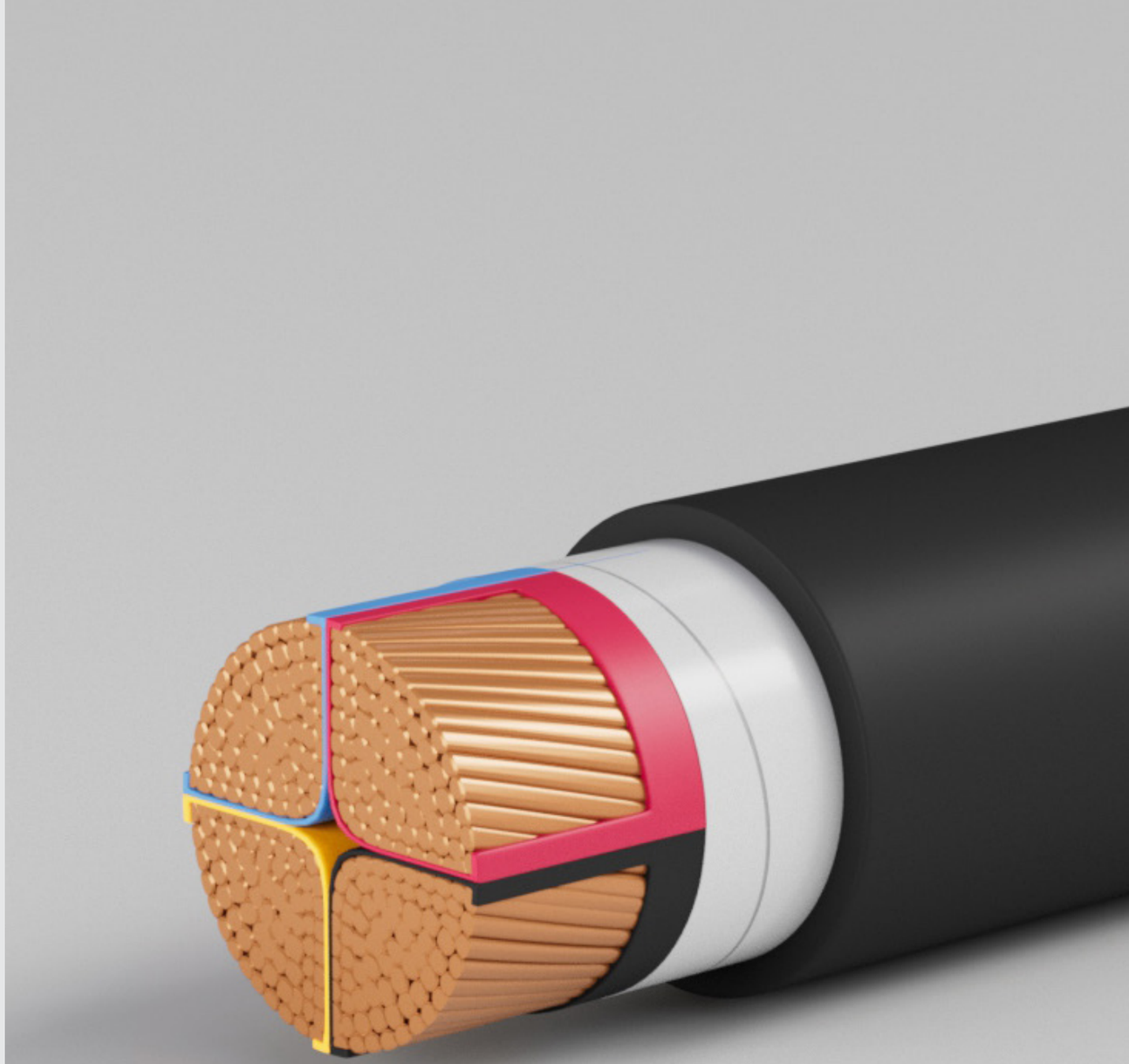
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating			Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Laid in Ground	Laid in Duct	Laid in Free Air	Diameter	Weight
				A	A	A	mm	kg/km
Two Core Cables								
PL-CT04-P3-02-UP	1.5 rm	12.100	14.600	31	23	23	9.4	130.0
PL-CT06-P3-02-UP	2.5 rm	7.4100	8.8700	39	30	32	10.2	165.0
PL-CT08-P3-02-UP	4 rm	4.6100	5.5400	52	38	45	12.0	230.0
PL-CT09-P3-02-UP	6 rm	3.0800	3.6900	65	48	58	13.2	295.0
PL-CT10-P3-02-UP	10 rm	1.8300	2.1900	85	65	76	14.4	395.0
PL-CT11-P3-02-UP	16 rm	1.1500	1.3900	111	77	101	16.4	545.0
PL-CT12-P3-02-UP	25 rm	0.7270	0.8701	145	107	121	19.4	805.0
PL-CT13-P3-02-UP	35 rm	0.5240	0.6273	176	129	149	21.6	1050.0
Three Core Cables								
PL-CT04-P3-03-UP	1.5 rm	12.100	14.600	25	21	20	9.9	155.0
PL-CT06-P3-03-UP	2.5 rm	7.4100	8.8700	32	27	24	10.8	195.0
PL-CT08-P3-03-UP	4 rm	4.6100	5.5400	42	35	34	12.7	280.0
PL-CT09-P3-03-UP	6 rm	3.0800	3.6900	54	42	43	14.0	365.0
PL-CT10-P3-03-UP	10 rm	1.8300	2.1900	71	56	59	15.8	480.0
PL-CT11-P3-03-UP	16 rm	1.1500	1.3900	89	70	79	18.0	665.0
PL-CT12-P3-03-UP	25 rm	0.7270	0.8702	121	89	101	21.2	975.0
PL-CT13-P3-03-UP	35 rm	0.5240	0.6274	145	108	124	23.6	1270.0
PL-CT14-P3-03-UP	50 sm	0.3870	0.4635	180	131	155	24.0	1620.0
PL-CT15-P3-03-UP	70 sm	0.2680	0.3214	220	163	195	27.1	2265.0
PL-CT16-P3-03-UP	95 sm	0.1930	0.2319	262	196	237	31.4	3075.0
PL-CT17-P3-03-UP	120 sm	0.1530	0.1844	304	231	278	33.4	3840.0
PL-CT18-P3-03-UP	150 sm	0.1240	0.1500	342	263	319	37.3	4720.0
PL-CT19-P3-03-UP	185 sm	0.0991	0.1206	386	300	367	41.5	5855.0
PL-CT20-P3-03-UP	240 sm	0.0754	0.0928	447	353	436	46.8	7655.0
PL-CT21-P3-03-UP	300 sm	0.0601	0.0752	504	403	500	51.9	9515.0
PL-CT22-P3-03-UP	400 sm	0.0470	0.0603	573	465	583	59.3	12125.0
PL-CT23-P3-03-UP	500 sm	0.0366	0.0489	647	533	669	65.8	15595.0

Four Core Cables								
PL-CT04-P3-04-UP	1.5 rm	12.100	14.600	25	21	21	10.7	185.0
PL-CT06-P3-04-UP	2.5 rm	7.4100	8.8700	32	27	25	11.7	240.0
PL-CT08-P3-04-UP	4 rm	4.6100	5.5400	42	35	36	13.9	350.0
PL-CT09-P3-04-UP	6 rm	3.0800	3.6900	54	42	45	15.3	455.0
PL-CT10-P3-04-UP	10 rm	1.8300	2.1900	71	56	61	17.3	605.0
PL-CT11-P3-04-UP	16 rm	1.1500	1.3900	89	70	83	19.7	850.0
PL-CT12-P3-04-UP	25 sm	0.7270	0.8702	123	91	107	21.5	1215.0
PL-CT13-P3-04-UP	35 sm	0.5240	0.6274	148	110	132	23.9	1585.0
PL-CT14-P3-04-UP	50 sm	0.3870	0.4635	183	134	164	28.1	2140.0
PL-CT15-P3-04-UP	70 sm	0.2680	0.3214	224	166	207	31.7	3020.0
PL-CT16-P3-04-UP	95 sm	0.1930	0.2319	268	200	252	35.6	4070.0
PL-CT17-P3-04-UP	120 sm	0.1530	0.1844	310	235	296	39.0	5115.0
PL-CT18-P3-04-UP	150 sm	0.1240	0.1500	349	268	339	43.7	6290.0
PL-CT19-P3-04-UP	185 sm	0.0991	0.1206	394	306	390	48.3	7785.0
PL-CT20-P3-04-UP	240 sm	0.0754	0.0928	456	360	463	54.8	10125.0
PL-CT21-P3-04-UP	300 sm	0.0601	0.0752	514	412	531	60.9	12675.0
PL-CT22-P3-04-UP	400 sm	0.0470	0.0603	584	475	619	69.5	16150.0
PL-CT23-P3-04-UP	500 sm	0.0366	0.0489	660	555	710	76.8	20705.0
Four Core Cables with Reduced Neutral								
PL-CT12-P3-R3-UP	25 sm	16 rm	0.7270/1.1500	0.8702 / 1.3900	122	90	105	20.9	1125.0
PL-CT13-P3-R3-UP	35 sm	16 rm	0.5240/1.1500	0.6274 / 1.3900	147	109	129	22.8	1405.0
PL-CT14-P3-R3-UP	50 sm	25 sm	0.3870/0.7270	0.4635 / 0.8702	181	133	161	26.9	1915.0
PL-CT15-P3-R3-UP	70 sm	35 sm	0.2680/0.5240	0.3214 / 0.6274	222	165	203	30.2	2655.0
PL-CT16-P3-R3-UP	95 sm	50 sm	0.1930/03870	0.2319 / 0.4635	265	198	247	33.9	3600.0
PL-CT17-P3-R3-UP	120 sm	70 sm	0.1530/0.2680	0.1844 / 0.6214	307	233	290	37.3	4585.0
PL-CT18-P3-R3-UP	150 sm	70 sm	0.1240/0.2680	0.15 / 0.6214	345	266	332	41.3	5475.0
PL-CT19-P3-R3-UP	185 sm	95 sm	0.0991/0.1930	0.1206 / 0.2319	390	303	383	46.0	6855.0
PL-CT20-P3-R3-UP	240 sm	120 sm	0.0754/0.1530	0.0928 / 0.1844	452	357	455	51.8	8875.0
PL-CT21-P3-R3-UP	300 sm	150 sm	0.0601/0.1240	0.0752 / 0.15	509	407	521	57.6	11090.0
PL-CT22-P3-S3-UP	400 sm	185 sm	0.0470/0.0991	0.0603 / 0.1206	579	470	607	65.5	14045.0
PL-CT22-P3-R3-UP	400 sm	240 sm	0.0470/0.0754	0.0603 / 0.0928	579	470	607	66.4	14650.0
PL-CT23-P3-R3-UP	500 sm	240 sm	0.0366/0.0754	0.0489 / 0.0928	654	538	697	72.7	18115.0

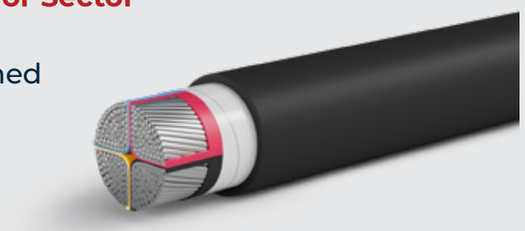
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Aluminum

Conductors, PVC Insulated and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of stranded Aluminum conductors are insulated with PVC compound rated 70° C, assembled together, covered with an overall jacket of PVC compound.

Application

For outdoor and indoor installations in damp and wet locations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

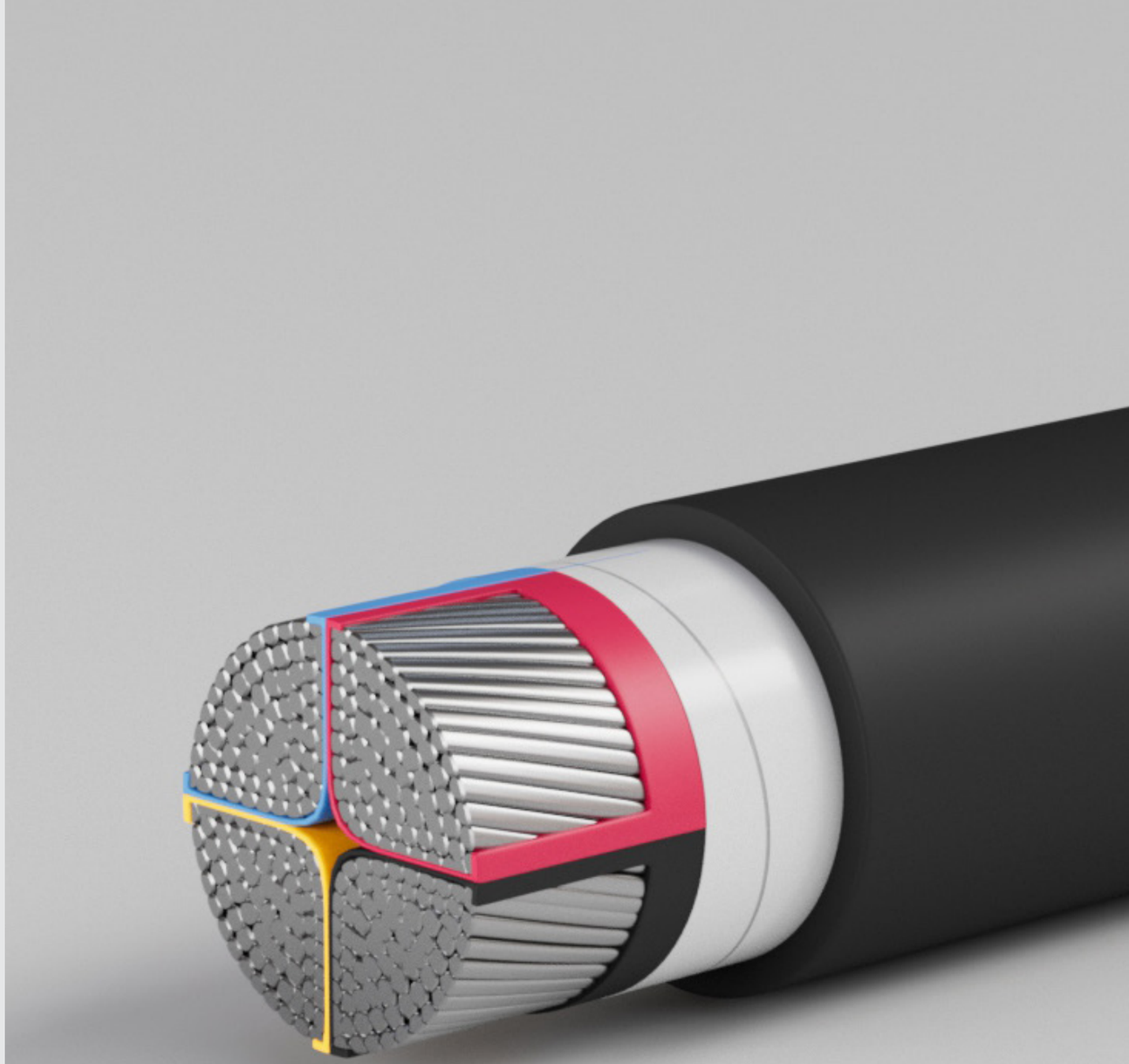
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating			Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Laid in Ground	Laid in Duct	Laid in Free Air	Diameter	Weight
				A	A	A	mm	kg/km
Two Core Cables								
PL-AT11-P3-02-UP	16 rm	1.9100	2.2950	87	66	71	17.0	385.0
PL-AT12-P3-02-UP	25 rm	1.2000	1.4419	113	85	94	20.4	560.0
PL-AT13-P3-02-UP	35 rm	0.8680	1.0431	137	103	116	22.6	695.0
Three Core Cables								
PL-AT11-P3-03-UP	16 rm	1.9100	2.2950	75	56	62	18.6	410.0
PL-AT12-P3-03-UP	25 rm	1.2000	1.4420	95	73	81	22.3	575.0
PL-AT13-P3-03-UP	35 rm	0.8680	1.0432	114	87	100	24.7	700.0
PL-AT14-P3-03-UP	50 sm	0.6410	0.7704	139	106	120	24.0	765.0
PL-AT15-P3-03-UP	70 sm	0.4430	0.5327	170	131	151	27.1	1005.0
PL-AT16-P3-03-UP	95 sm	0.3200	0.3851	203	157	184	31.4	1360.0
PL-AT17-P3-03-UP	120 sm	0.2530	0.3048	237	179	216	33.4	1630.0
PL-AT18-P3-03-UP	150 sm	0.2060	0.2485	266	205	248	37.3	1985.0
PL-AT19-P3-03-UP	185 sm	0.1640	0.1983	301	234	287	41.5	2480.0
PL-AT20-P3-03-UP	240 sm	0.1250	0.1518	349	276	341	46.8	3165.0
PL-AT21-P3-03-UP	300 sm	0.1000	0.1222	395	316	399	51.9	3870.0
PL-AT22-P3-03-UP	400 sm	0.0778	0.0961	455	368	462	59.3	4985.0
PL-AT23-P3-03-UP	500 sm	0.0605	0.0760	518	436	537	65.8	6370.0
Four Core Cables								
PL-AT11-P3-04-UP	16 rm	1.9100	2.2950	76	57	62	20.4	510.0
PL-AT12-P3-04-UP	25 sm	1.2000	1.4420	99	75	83	21.5	610.0
PL-AT13-P3-04-UP	35 sm	0.8680	1.0432	119	90	102	23.9	750.0
PL-AT14-P3-04-UP	50 sm	0.6410	0.7704	146	110	128	28.1	1010.0
PL-AT15-P3-04-UP	70 sm	0.4430	0.5327	179	136	161	31.7	1340.0
PL-AT16-P3-04-UP	95 sm	0.3200	0.3851	214	164	197	35.6	1785.0
PL-AT17-P3-04-UP	120 sm	0.2530	0.3048	244	183	228	39.0	2175.0
PL-AT18-P3-04-UP	150 sm	0.2060	0.2485	274	209	262	43.7	2645.0
PL-AT19-P3-04-UP	185 sm	0.1640	0.1983	311	239	303	48.3	3280.0
PL-AT20-P3-04-UP	240 sm	0.1250	0.1518	360	282	361	54.8	4175.0
PL-AT21-P3-04-UP	300 sm	0.1000	0.1222	407	322	417	60.9	5135.0
PL-AT22-P3-04-UP	400 sm	0.0778	0.0961	468	376	489	69.5	6640.0
PL-AT23-P3-04-UP	500 sm	0.0605	0.0760	534	445	568	76.8	8380.0

Four Core Cables with Reduced Neutral									
PL-AT12-P3-R3-UP	25 sm	16 rm	1.200/1.9100	1.442 / 2.295	95	73	81	20.9	580.0
PL-AT13-P3-R3-UP	35 sm	16 rm	0.8680/1.9100	1.0432 / 2.295	114	87	100	22.8	695.0
PL-AT14-P3-R3-UP	50 sm	25 sm	0.6410/1.2000	0.7704 / 1.442	140	107	125	26.9	915.0
PL-AT15-P3-R3-UP	70 sm	35 sm	0.4430/0.8680	0.5327 / 1.0432	172	132	157	30.2	1180.0
PL-AT16-P3-R3-UP	95 sm	50 sm	0.3200/0.6410	0.3851 / 0.7704	206	159	192	33.9	1595.0
PL-AT17-P3-R3-UP	120 sm	70 sm	0.2530/0.4430	0.3048 / 0.5327	239	181	225	37.3	1950.0
PL-AT18-P3-R3-UP	150 sm	70 sm	0.2060/0.4430	0.2485 / 0.5327	268	207	259	41.3	2315.0
PL-AT19-P3-R3-UP	185 sm	95 sm	0.1640/0.3200	0.1983 / 0.3851	305	237	299	46.0	2895.0
PL-AT20-P3-R3-UP	240 sm	120 sm	0.1250/0.2530	0.1518 / 0.3048	353	279	356	51.8	3680.0
PL-AT21-P3-R3-UP	300 sm	150 sm	0.1000/0.2060	0.1222 / 0.2485	399	319	416	57.6	4515.0
PL-AT22-S3-S3-UP	400 sm	185 sm	0.0778/0.1640	0.0961 / 0.1983	459	372	482	65.5	5770.0
PL-AT22-P3-R3-UP	400 sm	240 sm	0.0778/0.1250	0.0961 / 0.1518	459	372	482	66.4	6020.0
PL-AT23-P3-R3-UP	500 sm	240 sm	0.0605/0.1250	0.076 / 0.1518	524	441	560	72.7	7430.0

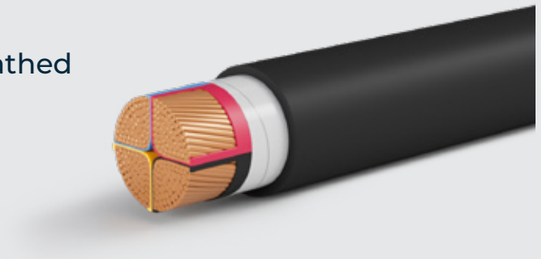
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Copper

Conductors, XLPE Insulated and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Soft annealed Stranded Copper conductors are insulated with XLPE compound rated 90° C, assembled together, covered with an overall jacket of PVC compound.

Application

For outdoor and indoor installations in damp and wet locations.

Technical Data

Relevant Standard	IEC 60502 OR BS 7889
Conductor	Plain copper conductor class 2
Insulation	Extruded XLPE Compound Rated 90° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

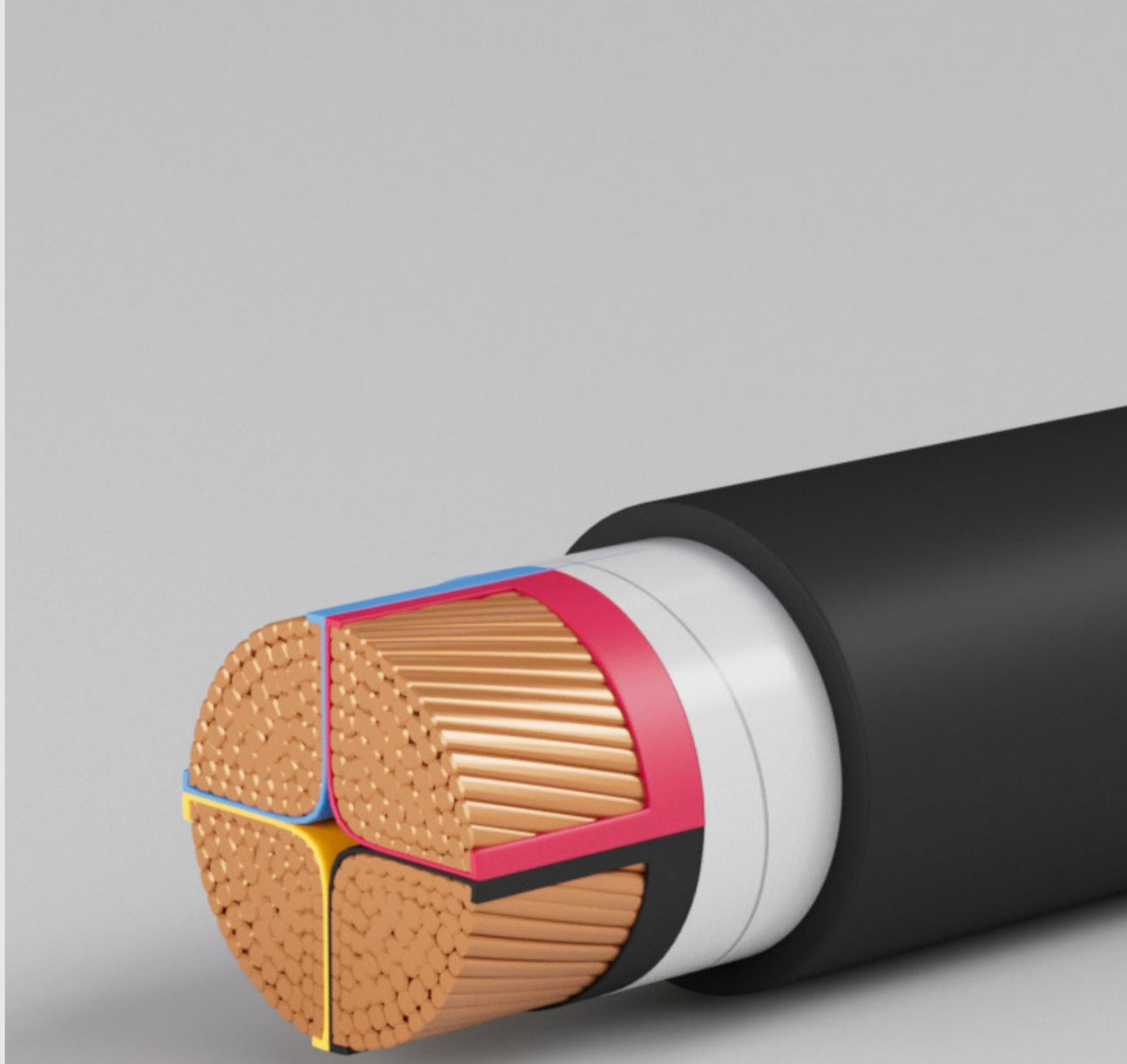
Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating			Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Laid in Ground	Laid in Duct	Laid in Free Air	Diameter	Weight
				A	A	A	mm	kg/km
Two Core Cables								
PL-CT04-X3-02-UP	1.5 rm	12.100	15.400	38	28	28	9.0	115.0
PL-CT06-X3-02-UP	2.5 rm	7.4100	9.4500	46	36	37	9.8	145.0
PL-CT08-X3-02-UP	4 rm	4.6100	5.8800	63	45	51	10.8	190.0
PL-CT09-X3-02-UP	6 rm	3.0800	3.9300	79	59	66	12.0	250.0
PL-CT10-X3-02-UP	10 rm	1.8300	2.3300	103	78	87	13.2	340.0
PL-CT11-X3-02-UP	16 rm	1.1500	1.4700	133	94	116	15.2	485.0
PL-CT12-X3-02-UP	25 rm	0.7270	0.9272	175	125	154	18.2	730.0
PL-CT13-X3-02-UP	35 rm	0.5240	0.6685	211	152	189	20.4	965.0
Three Core Cables								
PL-CT04-X3-03-UP	1.5 rm	12.100	15.400	28	25	23	9.5	135.0
PL-CT06-X3-03-UP	2.5 rm	7.4100	9.4500	38	32	34	10.3	170.0
PL-CT08-X3-03-UP	4 rm	4.6100	5.8800	49	39	43	11.4	230.0
PL-CT09-X3-03-UP	6 rm	3.0800	3.9300	62	49	53	12.7	305.0
PL-CT10-X3-03-UP	10 rm	1.8300	2.3300	82	66	72	14.5	425.0
PL-CT11-X3-03-UP	16 rm	1.1500	1.4700	106	82	94	16.7	605.0
PL-CT12-X3-03-UP	25 rm	0.7270	0.9273	143	106	126	19.9	895.0
PL-CT13-X3-03-UP	35 rm	0.5240	0.6686	171	129	155	22.3	1180.0
PL-CT14-X3-03-UP	50 sm	0.3870	0.4940	207	154	189	22.4	1485.0
PL-CT15-X3-03-UP	70 sm	0.2680	0.3425	254	194	239	25.9	2125.0
PL-CT16-X3-03-UP	95 sm	0.1930	0.2471	304	231	291	29.2	2845.0
PL-CT17-X3-03-UP	120 sm	0.1530	0.1964	351	268	348	32.6	3610.0
PL-CT18-X3-03-UP	150 sm	0.1240	0.1597	395	305	400	35.7	4460.0
PL-CT19-X3-03-UP	185 sm	0.0991	0.1284	446	350	462	39.7	5525.0
PL-CT20-X3-03-UP	240 sm	0.0754	0.0988	517	409	548	44.6	7190.0
PL-CT21-X3-03-UP	300 sm	0.0601	0.0799	583	468	629	49.3	8970.0
PL-CT22-X3-03-UP	400 sm	0.0470	0.0641	663	542	732	56.7	11465.0
PL-CT23-X3-03-UP	500 sm	0.0366	0.0518	748	633	841	63.2	14815.0

Four Core Cables								
PL-CT04-X3-04-UP	1.5 rm	12.100	15.400	29	26	24	10.3	160.0
PL-CT06-X3-04-UP	2.5 rm	7.4100	9.4500	40	33	35	11.2	210.0
PL-CT08-X3-04-UP	4 rm	4.6100	5.8800	51	41	45	12.4	280.0
PL-CT09-X3-04-UP	6 rm	3.0800	3.9300	64	51	55	13.9	380.0
PL-CT10-X3-04-UP	10 rm	1.8300	2.3300	85	68	75	15.8	540.0
PL-CT11-X3-04-UP	16 rm	1.1500	1.4700	110	85	98	18.3	770.0
PL-CT12-X3-04-UP	25 sm	0.7270	0.9273	147	110	134	20.0	1105.0
PL-CT13-X3-04-UP	35 sm	0.5240	0.6686	176	133	164	22.4	1455.0
PL-CT14-X3-04-UP	50 sm	0.3870	0.4940	213	158	201	26.1	1960.0
PL-CT15-X3-04-UP	70 sm	0.2680	0.3425	262	199	254	30.2	2815.0
PL-CT16-X3-04-UP	95 sm	0.1930	0.2471	313	238	309	32.9	3760.0
PL-CT17-X3-04-UP	120 sm	0.1530	0.1964	362	276	373	37.0	4795.0
PL-CT18-X3-04-UP-	150 sm	0.1240	0.1597	407	314	430	41.5	5910.0
PL-CT19-X3-04-UP	185 sm	0.0991	0.1284	460	361	495	46.3	7330.0
PL-CT20-X3-04-UP	240 sm	0.0754	0.0988	533	421	588	52.1	9545.0
PL-CT21-X3-04-UP	300 sm	0.0601	0.0799	601	482	675	57.7	11945.0
PL-CT22-X3-04-UP	400 sm	0.0470	0.0641	683	558	786	66.3	15265.0
PL-CT23-X3-04-UP	500 sm	0.0366	0.0518	771	652	903	73.8	19705.0

Four Core Cables with Reduced Neutral								
PL-CT12-X3-R3-UP	25 sm	16 rm	0.7270/1.1500	0.9273 / 1.4666	146	108	131	19.4	1020.0
PL-CT13-X3-R3-UP	35 sm	16 rm	0.5240/1.1500	0.6686 / 1.4666	175	132	161	21.3	1290.0
PL-CT14-X3-R3-UP	50 sm	25 sm	0.3870/0.7270	0.494 / 0.9273	211	157	197	24.7	1740.0
PL-CT15-X3-R3-UP	70 sm	35 sm	0.2680/0.5240	0.3425 / 0.6686	259	198	249	28.5	2465.0
PL-CT16-X3-R3-UP	95 sm	50 sm	0.1930/03870	0.2471 / 0.494	310	235	303	32.4	3325.0
PL-CT17-X3-R3-UP	120 sm	70 sm	0.1530/0.2680	0.1964 / 0.3425	358	273	362	35.3	4290.0
PL-CT18-X3-R3-UP	150 sm	70 sm	0.1240/0.2680	0.1597 / 0.3425	403	311	417	39.1	5135.0
PL-CT19-X3-R3-UP	185 sm	95 sm	0.0991/0.1930	0.1284 / 0.2471	455	357	481	44.0	6460.0
PL-CT20-X3-R3-UP	240 sm	120 sm	0.0754/0.1530	0.0988 / 0.1964	528	417	570	49.3	8355.0
PL-CT21-X3-R3-UP	300 sm	150 sm	0.0601/0.1240	0.0799 / 0.1597	595	477	655	54.6	10445.0
PL-CT22-X3-S3-UP	400 sm	185 sm	0.0470/0.0991	0.0641 / 0.1284	676	553	763	62.3	13270.0
PL-CT22-X3-R3-UP	400 sm	240 sm	0.0470/0.0754	0.0641 / 0.0988	676	553	763	63.4	13840.0
PL-CT23-X3-R3-UP	500 sm	240 sm	0.0366/0.0754	0.0518 / 0.0988	763	646	876	69.7	17190.0

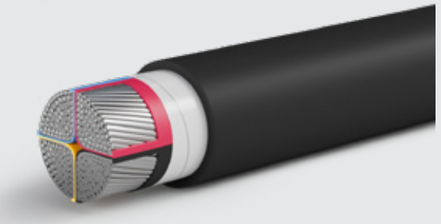
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Aluminum

Conductors, XLPE Insulated and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of stranded Aluminum conductors are insulated with XLPE compound rated 90° C, assembled together, covered with an overall jacket of PVC compound.

Application

For outdoor and indoor installations in damp and wet locations.

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded XLPE Compound Rated 90° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

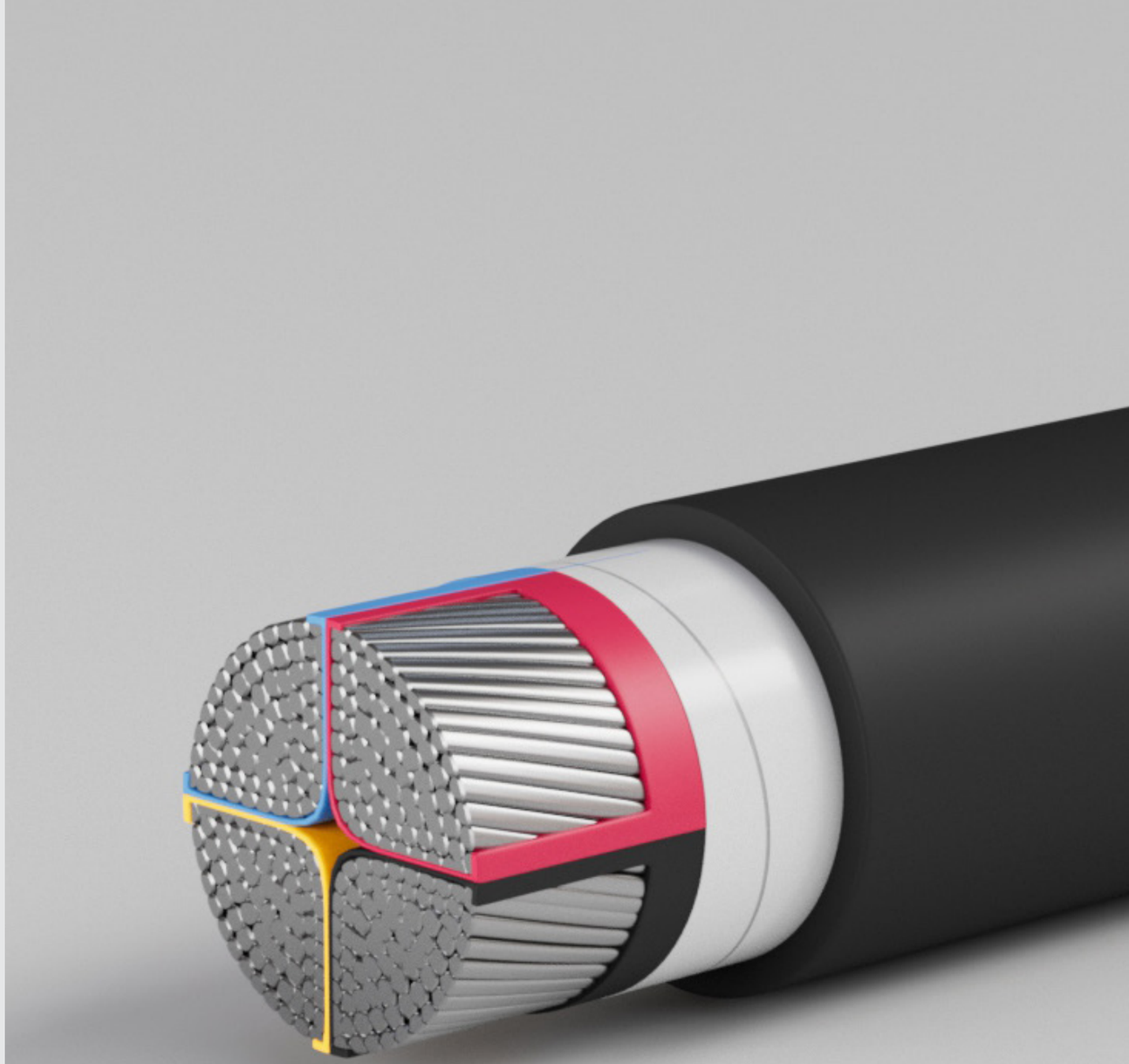
Heat resistant or/and flame retardant PVC insulated or/ and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating			Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Laid in Ground	Laid in Duct	Laid in Free Air	Diameter	Weight
				A	A	A	mm	kg/km
Two Core Cables								
PL-AT11-X3-02-UP	16 rm	1.9100	2.4489	105	74	89	15.8	320.0
PL-AT12-X3-02-UP	25 rm	1.2000	1.5387	136	97	119	19.2	470.0
PL-AT13-X3-02-UP	35 rm	0.8680	1.1131	164	118	147	21.4	590.0
Three Core Cables								
PL-AT11-X3-03-UP	16 rm	1.9100	2.4489	87	64	76	16.8	365.0
PL-AT12-X3-03-UP	25 rm	1.2000	1.5387	110	83	97	20.5	545.0
PL-AT13-X3-03-UP	35 rm	0.8680	1.1131	133	100	120	22.9	695.0
PL-AT14-X3-03-UP	50 sm	0.6410	0.8221	161	120	147	22.4	630.0
PL-AT15-X3-03-UP	70 sm	0.4430	0.5684	198	150	186	25.9	865.0
PL-AT16-X3-03-UP	95 sm	0.3200	0.4109	236	179	226	29.2	1135.0
PL-AT17-X3-03-UP	120 sm	0.2530	0.3252	273	208	271	32.6	1405.0
PL-AT18-X3-03-UP	150 sm	0.2060	0.2651	307	236	310	35.7	1725.0
PL-AT19-X3-03-UP	185 sm	0.1640	0.2115	347	272	360	39.7	2145.0
PL-AT20-X3-03-UP	240 sm	0.1250	0.1619	404	320	427	44.6	2730.0
PL-AT21-X3-03-UP	300 sm	0.1000	0.1302	456	366	492	49.3	3320.0
PL-AT22-X3-03-UP	400 sm	0.0778	0.1023	524	429	579	56.7	4330.0
PL-AT23-X3-03-UP	500 sm	0.0605	0.0809	599	506	673	63.2	5575.0
Four Core Cables								
PL-AT11-X3-04-UP	16 rm	1.9100	2.4489	88	65	78	19.0	420.0
PL-AT12-X3-04-UP	25 sm	1.2000	1.5387	114	85	103	20.0	495.0
PL-AT13-X3-04-UP	35 sm	0.8680	1.1131	137	103	128	22.4	620.0
PL-AT14-X3-04-UP	50 sm	0.6410	0.8221	166	123	156	26.1	825.0
PL-AT15-X3-04-UP	70 sm	0.4430	0.5684	204	155	198	30.2	1125.0
PL-AT16-X3-04-UP	95 sm	0.3200	0.4109	243	185	240	32.9	1475.0
PL-AT17-X3-04-UP	120 sm	0.2530	0.3252	282	214	288	37.0	1850.0
PL-AT18-X3-04-UP	150 sm	0.2060	0.2651	316	243	330	41.5	2265.0
PL-AT19-X3-04-UP	185 sm	0.1640	0.2115	358	281	382	46.3	2825.0
PL-AT20-X3-04-UP	240 sm	0.1250	0.1619	416	330	454	52.1	3600.0
PL-AT21-X3-04-UP	300 sm	0.1000	0.1302	470	377	523	57.7	4410.0
PL-AT22-X3-04-UP	400 sm	0.0778	0.1023	540	442	615	66.3	5755.0
PL-AT23-X3-04-UP	500 sm	0.0605	0.0809	617	521	715	73.8	7380.0

Four Core Cables with Reduced Neutral									
PL-AT12-X3-R3-UP	25 sm	16 rm	1.200/1.9100	1.5387 / 2.4489	113	84	101	19.4	475.0
PL-AT13-X3-R3-UP	35 sm	16 rm	0.8680/1.9100	1.1131 / 2.4489	135	102	125	21.3	575.0
PL-AT14-X3-R3-UP	50 sm	25 sm	0.6410/1.2000	0.8221 / 1.5387	164	122	153	24.7	735.0
PL-AT15-X3-R3-UP	70 sm	35 sm	0.4430/0.8680	0.5684 / 1.1131	202	153	194	28.5	995.0
PL-AT16-X3-R3-UP	95 sm	50 sm	0.3200/0.6410	0.4109 / 0.8221	240	183	235	32.4	1325.0
PL-AT17-X3-R3-UP	120 sm	70 sm	0.2530/0.4430	0.3252 / 0.5684	279	212	282	35.3	1660.0
PL-AT18-X3-R3-UP	150 sm	70 sm	0.2060/0.4430	0.2651 / 0.5684	313	241	323	39.1	1975.0
PL-AT19-X3-R3-UP	185 sm	95 sm	0.1640/0.3200	0.2115 / 0.4109	354	278	375	44.0	2500.0
PL-AT20-X3-R3-UP	240 sm	120 sm	0.1250/0.2530	0.1619 / 0.3252	412	326	445	49.3	3170.0
PL-AT21-X3-R3-UP	300 sm	150 sm	0.1000/0.2060	0.1302 / 0.2651	466	374	513	54.6	3875.0
PL-AT22-X3-S3-UP	400 sm	185 sm	0.0778/0.1640	0.1023 / 0.2115	535	438	603	62.3	5000.0
PL-AT22-X3-R3-UP	400 sm	240 sm	0.0778/0.1250	0.1023 / 0.1619	535	438	603	63.4	5220.0
PL-AT23-X3-R3-UP	500 sm	240 sm	0.0605/0.1250	0.0809 / 0.1619	611	516	701	69.7	6480.0

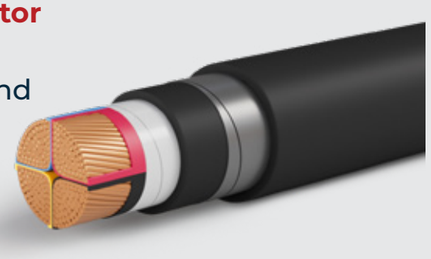
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Copper

Conductors, PVC Insulated, Steel Tape Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Soft annealed Stranded Copper conductors are insulated with PVC compound rated 70° C, assembled together, armored with steel tape

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Galvanized Steel Tapes is available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Laid in Ground A	Laid in Free Air A	Diameter mm	Weight kg/km
Two Core Cables							
PL-CT09-P3-02-TP	6 rm	3.0800	3.6900	65	58	16.0	455
PL-CT10-P3-02-TP	10 rm	1.8300	2.1900	85	76	17.2	565
PL-CT11-P3-02-TP	16 rm	1.1500	1.3900	111	101	19.2	735
PL-CT12-P3-02-TP	25 rm	0.7270	0.8700	142	120	22.2	1030
PL-CT13-P3-02-TP	35 rm	0.5240	0.6280	172	148	24.4	1300
Three Core Cables							
PL-CT08-P3-03-TP	4 rm	4.6100	5.5400	41	34	15.5	430
PL-CT09-P3-03-TP	6 rm	3.0800	3.6900	52	43	16.8	530
PL-CT10-P3-03-TP	10 rm	1.8300	2.1900	70	59	18.6	635
PL-CT11-P3-03-TP	16 rm	1.1500	1.3900	87	79	20.8	840
PL-CT12-P3-03-TP	25 rm	0.7270	0.8701	117	100	24.0	1180
PL-CT13-P3-03-TP	35 rm	0.5240	0.6273	141	123	26.4	1500
PL-CT14-P3-03-TP	50 sm	0.3870	0.4635	174	154	27.0	1905
PL-CT15-P3-03-TP	70 sm	0.2680	0.3214	213	194	30.1	2585
PL-CT16-P3-03-TP	95 sm	0.1930	0.2319	255	236	35.6	3760
PL-CT17-P3-03-TP	120 sm	0.1530	0.1844	295	274	37.6	4560
PL-CT18-P3-03-TP	150 sm	0.1240	0.1500	332	314	41.9	5575
PL-CT19-P3-03-TP	185 sm	0.0991	0.1206	374	362	45.9	6775
PL-CT20-P3-03-TP	240 sm	0.0754	0.0928	434	430	51.6	8720
PL-CT21-P3-03-TP	300 sm	0.0601	0.0752	484	493	56.7	10710
PL-CT22-P3-03-TP	400 sm	0.0470	0.0603	544	574	64.1	13480
PL-CT23-P3-03-TP	500 sm	0.0366	0.0489	612	659	71.0	17165
Four Core Cables							
PL-CT08-P3-04-TP	4 rm	4.6100	5.5400	42	36	16.7	515
PL-CT09-P3-04-TP	6 rm	3.0800	3.6900	54	45	18.1	635
PL-CT10-P3-04-TP	10 rm	1.8300	2.1900	71	61	20.1	775
PL-CT11-P3-04-TP	16 rm	1.1500	1.3900	89	83	22.5	1040
PL-CT12-P3-04-TP	25 sm	0.7270	0.8702	122	108	24.3	1465
PL-CT13-P3-04-TP	35 sm	0.5240	0.6274	147	132	26.7	1860
PL-CT14-P3-04-TP	50 sm	0.3870	0.4635	181	165	31.1	2480
PL-CT15-P3-04-TP	70 sm	0.2680	0.3214	222	208	35.9	3705

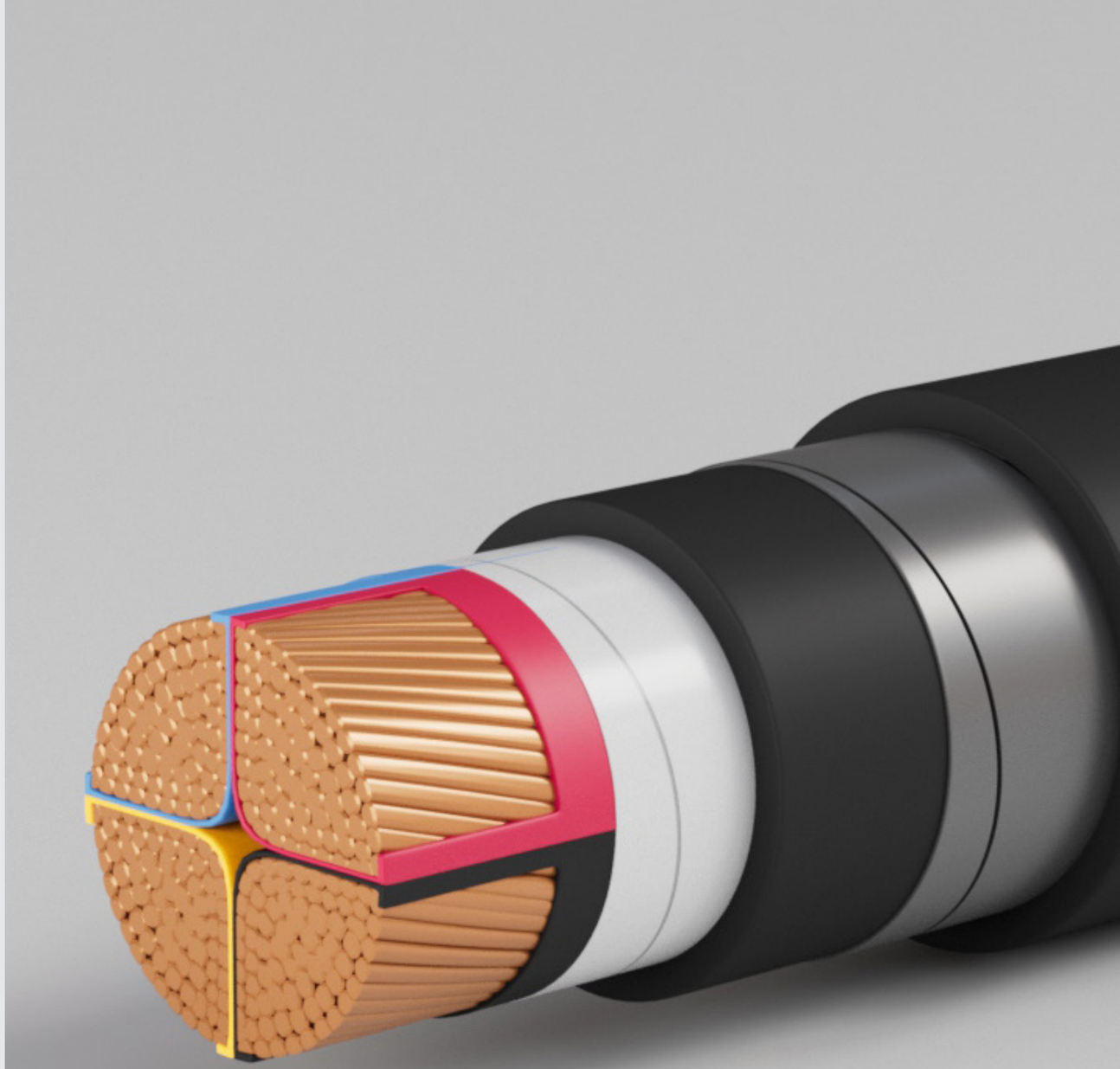
PL-CT16-P3-04-TP	95 sm	0.1930	0.2319	265	251	39.8	4850
PL-CT17-P3-04-TP	120 sm	0.1530	0.1844	307	294	43.6	5995
PL-CT18-P3-04-TP	150 sm	0.1240	0.1500	345	337	48.1	7270
PL-CT19-P3-04-TP	185 sm	0.0991	0.1206	390	388	53.1	8895
PL-CT20-P3-04-TP	240 sm	0.0754	0.0928	449	461	59.6	11400
PL-CT21-P3-04-TP	300 sm	0.0601	0.0752	504	529	65.7	14085
PL-CT22-P3-04-TP	400 sm	0.0470	0.0603	567	616	74.7	17825
PL-CT23-P3-04-TP	500 sm	0.0366	0.0489	637	707	83.3	23295

Four Core Cables with Reduced Neutral

PL-CT12-P3-R3-TP	25 sm	16 rm	0.7270/1.1500	0.8702 / 1.3762	119	104	23.7	1380.0
PL-CT13-P3-R3-TP	35 sm	16 rm	0.5240/1.1500	0.6274 / 1.3762	144	128	25.6	1685.0
PL-CT14-P3-R3-TP	50 sm	25 sm	0.3870/0.7270	0.4635 / 0.8702	178	159	29.7	2225.0
PL-CT15-P3-R3-TP	70 sm	35 sm	0.2680/0.5240	0.3214 / 0.6274	218	201	33.0	3000.0
PL-CT16-P3-R3-TP	95 sm	50 sm	0.1930/03870	0.2319 / 0.4635	260	245	38.1	4330.0
PL-CT17-P3-R3-TP	120 sm	70 sm	0.1530/0.2680	0.1844 / 0.3214	301	287	41.9	5430.0
PL-CT18-P3-R3-TP	150 sm	70 sm	0.1240/0.2680	0.15 / 0.3214	338	329	45.9	6420.0
PL-CT19-P3-R3-TP	185 sm	95 sm	0.0991/0.1930	0.1206 / 0.2319	382	379	50.4	7880.0
PL-CT20-P3-R3-TP	240 sm	120 sm	0.0754/0.1530	0.0928 / 0.1844	443	450	56.6	10060.0
PL-CT21-P3-R3-TP	300 sm	150 sm	0.0601/0.1240	0.0752 / 0.15	494	516	62.4	13000.0
PL-CT22-P3-S3-TP	400 sm	185 sm	0.0470/0.0991	0.0603 / 0.1206	556	601	70.7	15630.0
PL-CT22-P3-R3-TP	400 sm	240 sm	0.0470/0.0754	0.0603 / 0.0928	556	601	71.6	16225.0
PL-CT23-P3-R3-TP	500 sm	240 sm	0.0366/0.0754	0.0489 / 0.0928	624	690	79.0	20500.0

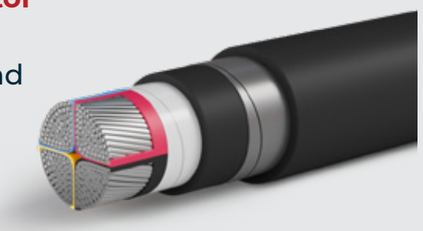
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Aluminum

Conductors, PVC Insulated, Steel Tape Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Stranded Aluminum conductors are insulated with PVC compound rated 70° C, assembled together, armored with steel tape and covered with overall jacket of PVC compound.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

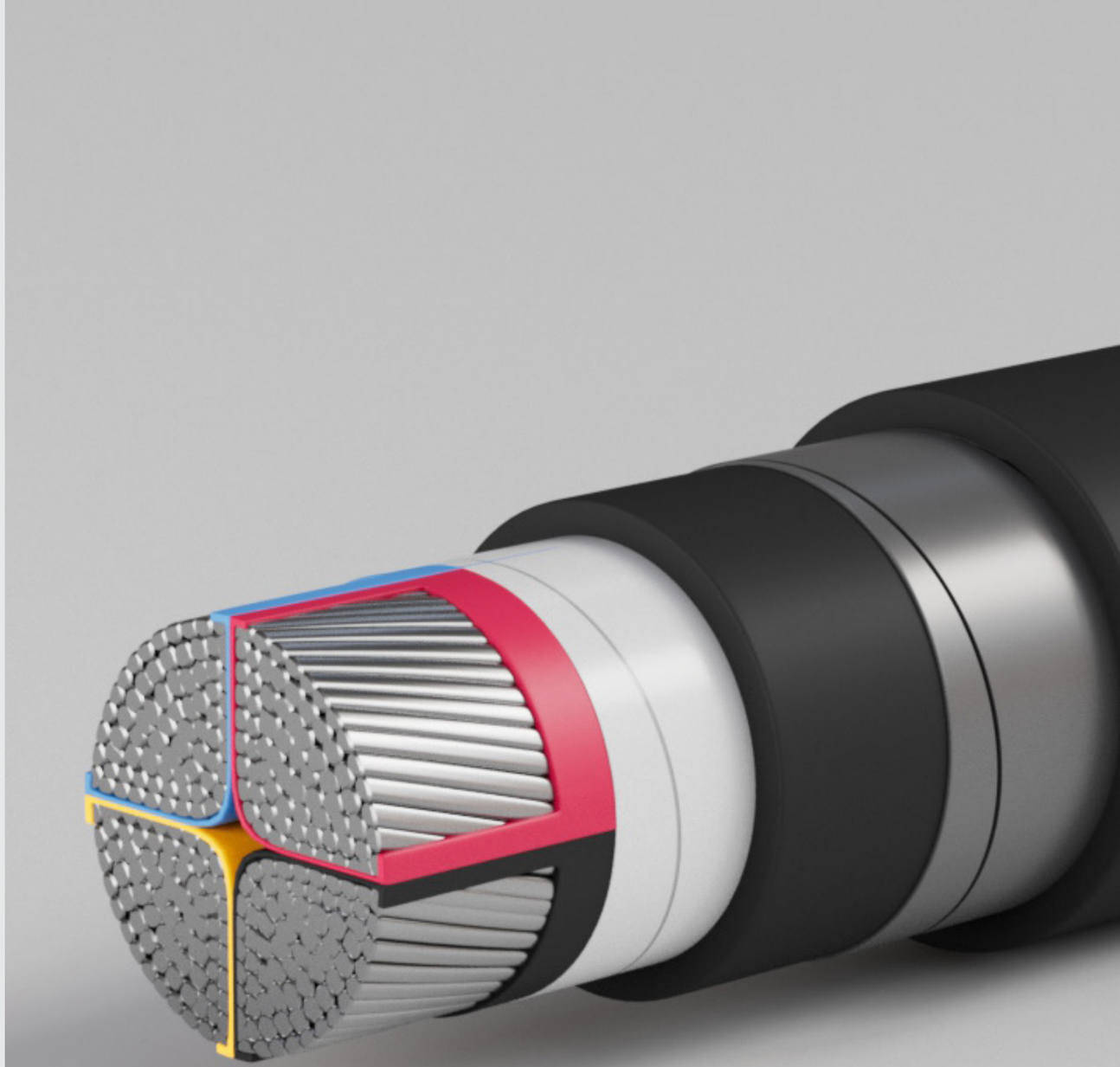
Galvanized Steel Tapes is available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Laid in Ground	Laid in Free Air	Diameter	Weight
				A	A	mm	kg/km
Two Core Cables							
PL-AT11-P3-02-TP	16 rm	1.9100	2.2950	86	70	19.8	585.0
PL-AT12-P3-02-TP	25 rm	1.2000	1.4419	110	93	23.2	795.0
PL-AT13-P3-02-TP	35 rm	0.8680	1.0431	134	115	25.4	955.0
Three Core Cables							
PL-AT11-P3-03-TP	16 rm	1.9100	2.2950	73	61	20.9	660.0
PL-AT12-P3-03-TP	25 rm	1.2000	1.4420	91	77	24.6	915.0
PL-AT13-P3-03-TP	35 rm	0.8680	1.0432	110	96	27.0	1105.0
PL-AT14-P3-03-TP	50 sm	0.6410	0.7704	135	119	27.0	1050.0
PL-AT15-P3-03-TP	70 sm	0.4430	0.5327	165	150	30.1	1325.0
PL-AT16-P3-03-TP	95 sm	0.3200	0.3851	197	183	35.6	2045.0
PL-AT17-P3-03-TP	120 sm	0.2530	0.3048	230	215	37.6	2355.0
PL-AT18-P3-03-TP	150 sm	0.2060	0.2485	258	247	41.9	2840.0
PL-AT19-P3-03-TP	185 sm	0.1640	0.1983	292	286	45.9	3395.0
PL-AT20-P3-03-TP	240 sm	0.1250	0.1518	339	340	51.6	4250.0
PL-AT21-P3-03-TP	300 sm	0.1000	0.1222	380	397	56.7	5070.0
PL-AT22-P3-03-TP	400 sm	0.0778	0.0961	432	460	64.1	6340.0
PL-AT23-P3-03-TP	500 sm	0.0605	0.0760	490	535	71.0	7945.0
Four Core Cables							
PL-AT11-P3-04-TP	16 rm	1.9100	2.2950	75	63	23.2	705.0
PL-AT12-P3-04-TP	25 sm	1.2000	1.4420	97	84	24.3	860.0
PL-AT13-P3-04-TP	35 sm	0.8680	1.0432	117	103	26.7	1025.0
PL-AT14-P3-04-TP	50 sm	0.6410	0.7704	143	129	31.1	1350.0
PL-AT15-P3-04-TP	70 sm	0.4430	0.5327	175	162	35.9	2025.0
PL-AT16-P3-04-TP	95 sm	0.3200	0.3851	210	199	39.8	2565.0
PL-AT17-P3-04-TP	120 sm	0.2530	0.3048	239	231	43.6	3055.0
PL-AT18-P3-04-TP	150 sm	0.2060	0.2485	268	265	48.1	3620.0
PL-AT19-P3-04-TP	185 sm	0.1640	0.1983	304	306	53.1	4390.0
PL-AT20-P3-04-TP	240 sm	0.1250	0.1518	351	364	59.6	5450.0
PL-AT21-P3-04-TP	300 sm	0.1000	0.1222	395	421	65.7	6545.0
PL-AT22-P3-04-TP	400 sm	0.0778	0.0961	450	494	74.7	8315.0
PL-AT23-P3-04-TP	500 sm	0.0605	0.0760	510	573	83.3	10980.0

Four Core Cables with Reduced Neutral								
PL-AT12-P3-R3-TP	25 sm	16 rm	1.200/1.9100	1.442 / 2.295	93	80	23.7	835.0
PL-AT13-P3-R3-TP	35 sm	16 rm	0.8680/1.9100	1.0432 / 2.295	112	99	25.6	975.0
PL-AT14-P3-R3-TP	50 sm	25 sm	0.6410/1.2000	0.7704 / 1.442	138	124	29.7	1225.0
PL-AT15-P3-R3-TP	70 sm	35 sm	0.4430/0.8680	0.5327 / 1.0432	169	155	33.0	1525.0
PL-AT16-P3-R3-TP	95 sm	50 sm	0.3200/0.6410	0.3851 / 0.7704	201	190	38.1	2325.0
PL-AT17-P3-R3-TP	120 sm	70 sm	0.2530/0.4430	0.3048 / 0.5327	234	223	41.9	2795.0
PL-AT18-P3-R3-TP	150 sm	70 sm	0.2060/0.4430	0.2485 / 0.5327	263	256	45.9	3260.0
PL-CT15-P3-R3-TP	185 sm	95 sm	0.1640/0.3200	0.1983 / 0.3851	298	296	50.4	3920.0
PL-AT20-P3-R3-TP	240 sm	120 sm	0.1250/0.2530	0.1518 / 0.3048	346	352	56.6	4865.0
PL-AT21-P3-R3-TP	300 sm	150 sm	0.1000/0.2060	0.1222 / 0.2485	387	412	62.4	5825.0
PL-AT22-P3-S3-TP	400 sm	185 sm	0.0778/0.1640	0.0961 / 0.1983	441	477	70.7	7355.0
PL-AT22-P3-R3-TP	400 sm	240 sm	0.0778/0.1250	0.0961 / 0.1518	441	477	71.6	7595.0
PL-AT23-P3-R3-TP	500 sm	240 sm	0.0605/0.1250	0.076 / 0.1518	500	554	79.0	9810.0

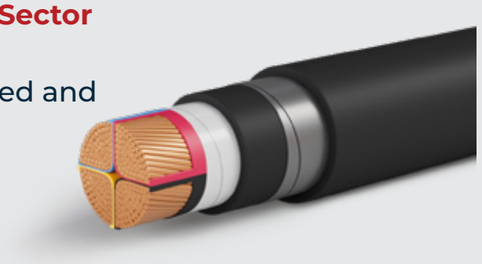
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Copper

Conductors, XLPE Insulated, Steel Tape Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Soft annealed Stranded Copper conductors are insulated with XLPE compound rated 90° C, assembled together, armored with steel tape and covered with overall jacket of PVC compound.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded XLPE Compound Rated 90° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

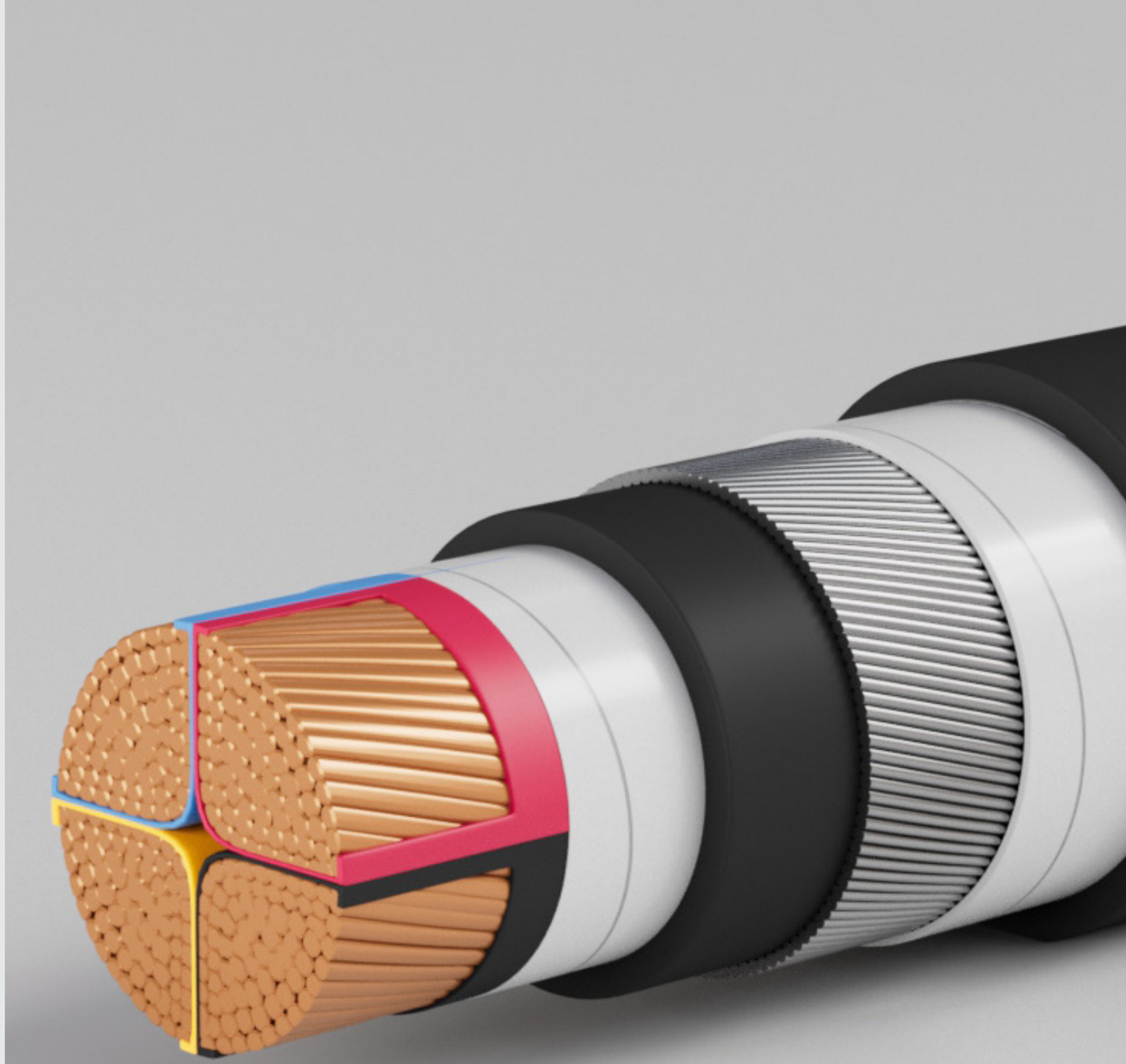
Galvanized Steel Tapes is available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Laid in Ground	Laid in Free Air	Diameter	Weight
				A	A	mm	kg/km
Two Core Cables							
PL-CT09-X3-02-TP	6 rm	3.0800	3.9300	77	65	14.8	390.0
PL-CT10-X3-02-TP	10 rm	1.8300	2.3378	100	86	16.0	495.0
PL-CT11-X3-02-TP	16 rm	1.1500	1.4692	130	113	18.0	665.0
PL-CT12-X3-02-TP	25 rm	0.7270	0.9272	171	149	21.0	940.0
PL-CT13-X3-02-TP	35 rm	0.5240	0.6685	207	183	23.2	1200.0
Three Core Cables							
PL-CT09-X3-03-TP	6 rm	3.0800	3.9350	62	52	15.5	455.0
PL-CT10-X3-03-TP	10 rm	1.8300	2.3382	82	71	17.3	570.0
PL-CT11-X3-03-TP	16 rm	1.1500	1.4700	106	93	19.5	770.0
PL-CT12-X3-03-TP	25 rm	0.7270	0.9273	140	123	22.2	1175.0
PL-CT13-X3-03-TP	35 rm	0.5240	0.6686	168	151	24.6	1520.0
PL-CT14-X3-03-TP	50 sm	0.3870	0.4940	203	187	25.2	1740.0
PL-CT15-X3-03-TP	70 sm	0.2680	0.3425	249	237	28.7	2420.0
PL-CT16-X3-03-TP	95 sm	0.1930	0.2471	298	288	32.2	3190.0
PL-CT17-X3-03-TP	120 sm	0.1530	0.1964	344	344	36.8	4320.0
PL-CT18-X3-03-TP	150 sm	0.1240	0.1597	387	396	40.3	5275.0
PL-CT19-X3-03-TP	185 sm	0.0991	0.1284	437	457	44.3	6425.0
PL-CT20-X3-03-TP	240 sm	0.0754	0.0988	504	542	49.4	8225.0
PL-CT21-X3-03-TP	300 sm	0.0601	0.0799	565	622	54.3	10135.0
PL-CT22-X3-03-TP	400 sm	0.0470	0.0641	636	725	61.5	12770.0
PL-CT23-X3-03-TP	500 sm	0.0366	0.0518	715	850	68.4	16330.0
Four Core Cables							
PL-CT09-X3-04-TP	6 rm	3.0800	3.9358	63	54	16.7	545.0
PL-CT10-X3-04-TP	10 rm	1.8300	2.3387	84	74	18.6	695.0
PL-CT11-X3-04-TP	16 rm	1.1500	1.4700	108	97	21.1	945.0
PL-CT12-X3-04-TP	25 sm	0.7270	0.9273	144	132	22.8	1340.0
PL-CT13-X3-04-TP	35 sm	0.5240	0.6686	173	163	25.2	1715.0
PL-CT14-X3-04-TP	50 sm	0.3870	0.4940	209	199	28.9	2265.0
PL-CT15-X3-04-TP	70 sm	0.2680	0.3425	257	251	33.0	3160.0
PL-CT16-X3-04-TP	95 sm	0.1930	0.2471	307	306	37.1	4485.0

Four Core Cables								
PL-CT17-X3-04-TP	120 sm		0.1530	0.1964	355	366	41.6	5645.0
PL-CT18-X3-04-TP	150 sm		0.1240	0.1597	399	421	46.1	6860.0
PL-CT19-X3-04-TP	185 sm		0.0991	0.1284	450	485	50.9	8385.0
PL-CT20-X3-04-TP	240 sm		0.0754	0.0988	520	576	56.9	10755.0
PL-CT21-X3-04-TP	300 sm		0.0601	0.0799	583	661	62.5	13285.0
PL-CT22-X3-04-TP	400 sm		0.0470	0.0641	656	770	71.5	16865.0
PL-CT23-X3-04-TP	500 sm		0.0366	0.0518	736	885	80.1	22155.0
Four Core Cables with Reduced Neutral								
PL-CT12-X3-R3-TP	25 sm	16 rm	0.7270/1.1500	0.9273 / 1.4666	143	130	22.2	1260.0
PL-CT13-X3-R3-TP	35 sm	16 rm	0.5240/1.1500	0.6686 / 1.4666	171	159	24.1	1555.0
PL-CT14-X3-R3-TP	50 sm	25 sm	0.3870/0.7270	0.494 / 0.9273	207	195	27.5	2025.0
PL-CT15-X3-R3-TP	70 sm	35 sm	0.2680/0.5240	0.3425 / 0.6686	254	247	31.5	2810.0
PL-CT16-X3-R3-TP	95 sm	50 sm	0.1930/03870	0.2471 / 0.494	304	300	36.4	4020.0
PL-CT17-X3-R3-TP	120 sm	70 sm	0.1530/0.2680	0.1964 / 0.3425	351	359	39.5	5065.0
PL-CT18-X3-R3-TP	150 sm	70 sm	0.1240/0.2680	0.1597 / 0.3425	395	413	43.7	6035.0
PL-CT19-X3-R3-TP	185 sm	95 sm	0.0991/0.1930	0.1284 / 0.2471	446	476	48.4	7440.0
PL-CT20-X3-R3-TP	240 sm	120 sm	0.0754/0.1530	0.0988 / 0.1964	515	565	54.1	9505.0
PL-CT21-X3-R3-TP	300 sm	150 sm	0.0601/0.1240	0.0799 / 0.1597	577	648	59.2	11685.0
PL-CT22-X3-S3-TP	400 sm	185 sm	0.0470/0.0991	0.0641 / 0.1284	649	755	67.1	14710.0
PL-CT22-X3-R3-TP	400 sm	240 sm	0.0470/0.0754	0.0641 / 0.0988	649	755	68.4	15345.0
PL-CT23-X3-R3-TP	500 sm	240 sm	0.0366/0.0754	0.0518 / 0.0988	729	867	74.7	18835.0

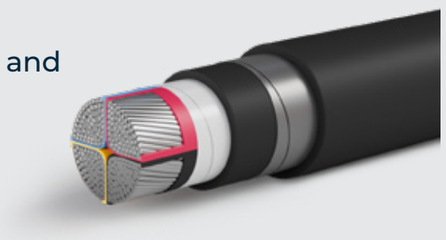
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Aluminum

Conductors, XLPE Insulated, Steel Tape Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Stranded Aluminum conductors are insulated with XLPE compound rated 90° C, assembled together, armored with steel tape and covered with overall jacket of PVC compound.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded XLPE Compound Rated 90° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

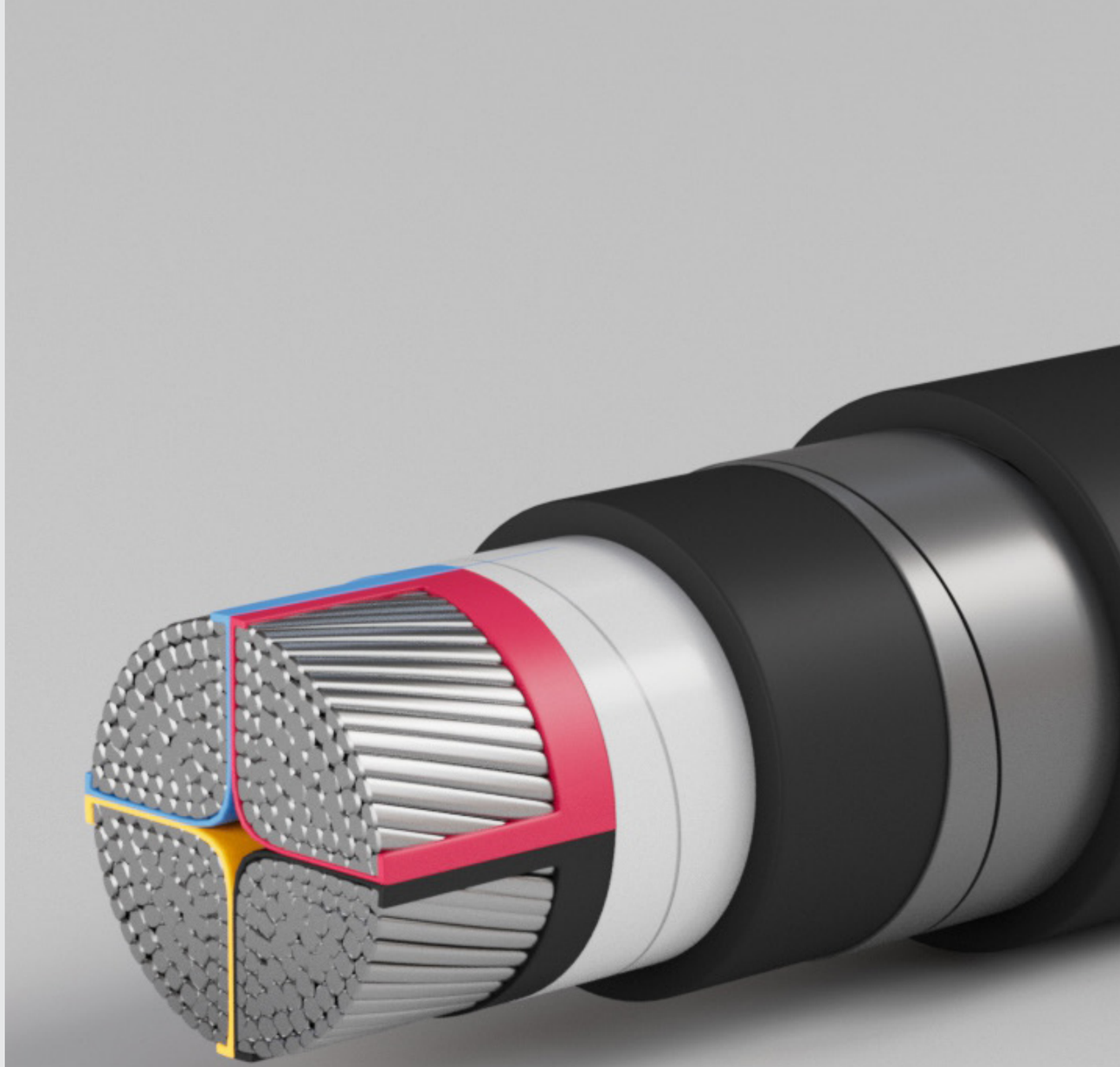
Galvanized Steel Tapes is available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Laid in Ground A	Laid in Free Air A	Diameter mm	Weight kg/km
Two Core Cables							
PL-AT11-X3-02-TP	16 rm	1.9100	2.4489	103	86	18.6	505.0
PL-AT12-X3-02-TP	25 rm	1.2000	1.5387	133	115	22.0	695.0
PL-AT13-X3-02-TP	35 rm	0.8680	1.1131	160	143	24.2	840.0
Three Core Cables							
PL-AT11-X3-03-TP	16 rm	1.9100	2.4489	84	71	20.1	510.0
PL-AT12-X3-03-TP	25 rm	1.2000	1.5387	108	94	23.8	685.0
PL-AT13-X3-03-TP	35 rm	0.8680	1.1131	130	117	26.2	820.0
PL-AT14-X3-03-TP	50 sm	0.6410	0.8221	158	146	25.2	905.0
PL-AT15-X3-03-TP	70 sm	0.4430	0.5684	194	185	28.7	1175.0
PL-AT16-X3-03-TP	95 sm	0.3200	0.4109	231	224	32.2	1495.0
PL-AT17-X3-03-TP	120 sm	0.2530	0.3252	268	268	36.8	2130.0
PL-AT18-X3-03-TP	150 sm	0.2060	0.2651	301	307	40.3	2555.0
PL-AT19-X3-03-TP	185 sm	0.1640	0.2115	340	356	44.3	3065.0
PL-AT20-X3-03-TP	240 sm	0.1250	0.1619	394	423	49.4	3780.0
PL-AT21-X3-03-TP	300 sm	0.1000	0.1302	443	487	54.3	4505.0
PL-AT22-X3-03-TP	400 sm	0.0778	0.1023	503	573	61.5	5645.0
PL-AT23-X3-03-TP	500 sm	0.0605	0.0809	572	666	68.4	7110.0
Four Core Cables							
PL-AT11-X3-04-TP	16 rm	1.9100	2.4489	86	77	21.8	600.0
PL-AT12-X3-04-TP	25 sm	1.2000	1.5387	112	102	22.8	730.0
PL-AT13-X3-04-TP	35 sm	0.8680	1.1131	134	126	25.2	880.0
PL-AT14-X3-04-TP	50 sm	0.6410	0.8221	163	154	28.9	1125.0
PL-AT15-X3-04-TP	70 sm	0.4430	0.5684	200	196	33.0	1480.0
PL-AT16-X3-04-TP	95 sm	0.3200	0.4109	238	237	37.1	2200.0
PL-AT17-X3-04-TP	120 sm	0.2530	0.3252	276	285	41.6	2705.0
PL-AT18-X3-04-TP	150 sm	0.2060	0.2651	310	326	46.1	3215.0
PL-AT19-X3-04-TP	185 sm	0.1640	0.2115	351	378	50.9	3880.0
PL-AT20-X3-04-TP	240 sm	0.1250	0.1619	406	449	56.9	4815.0
PL-AT21-X3-04-TP	300 sm	0.1000	0.1302	456	518	62.5	5745.0
PL-AT22-X3-04-TP	400 sm	0.0778	0.1023	518	609	71.5	7355.0
PL-AT23-X3-04-TP	500 sm	0.0605	0.0809	589	708	80.1	9830.0

Four Core Cables with Reduced Neutral								
PL-AT12-X3-R3-TP	25 sm	16 rm	1.200/1.9100	1.5387 / 2.4489	110	100	22.2	710.0
PL-AT13-X3-R3-TP	35 sm	16 rm	0.8680/1.9100	1.1131 / 2.4489	133	124	24.1	840.0
PL-AT14-X3-R3-TP	50 sm	25 sm	0.6410/1.2000	0.8221 / 1.5387	161	152	27.5	1020.0
PL-AT15-X3-R3-TP	70 sm	35 sm	0.4430/0.8680	0.5684 / 1.1131	198	193	31.5	1335.0
PL-AT16-X3-R3-TP	95 sm	50 sm	0.3200/0.6410	0.4109 / 0.8221	236	234	36.4	2020.0
PL-AT17-X3-R3-TP	120 sm	70 sm	0.2530/0.4430	0.3252 / 0.5684	273	279	39.5	2435.0
PL-AT18-X3-R3-TP	150 sm	70 sm	0.2060/0.4430	0.2651 / 0.5684	307	320	43.7	2875.0
PL-AT19-X3-R3-TP	185 sm	95 sm	0.1640/0.3200	0.2115 / 0.4109	347	371	48.4	3485.0
PL-AT20-X3-R3-TP	240 sm	120 sm	0.1250/0.2530	0.1619 / 0.3252	402	440	54.1	4320.0
PL-AT21-X3-R3-TP	300 sm	150 sm	0.1000/0.2060	0.1302 / 0.2651	452	508	59.2	5115.0
PL-AT22-X3-S3-TP	400 sm	185 sm	0.0778/0.1640	0.1023 / 0.2115	513	597	67.1	6445.0
PL-AT22-X3-R3-TP	400 sm	240 sm	0.0778/0.1250	0.1023 / 0.1619	513	597	68.4	6720.0
PL-AT23-X3-R3-TP	500 sm	240 sm	0.0605/0.1250	0.0809 / 0.1619	584	694	74.7	8125.0

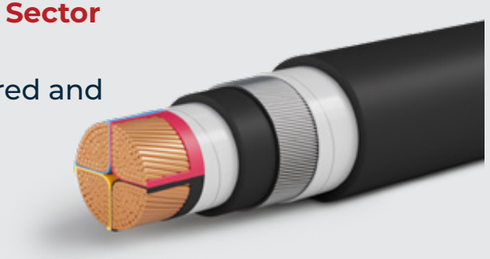
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Copper

Conductors, PVC Insulated, Steel Wires Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Soft annealed Stranded Copper conductors are insulated with PVC compound rated 70° C, assembled together, armored with Steel Wires and covered with overall jacket of PVC compound.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanized Steel Wires applied over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

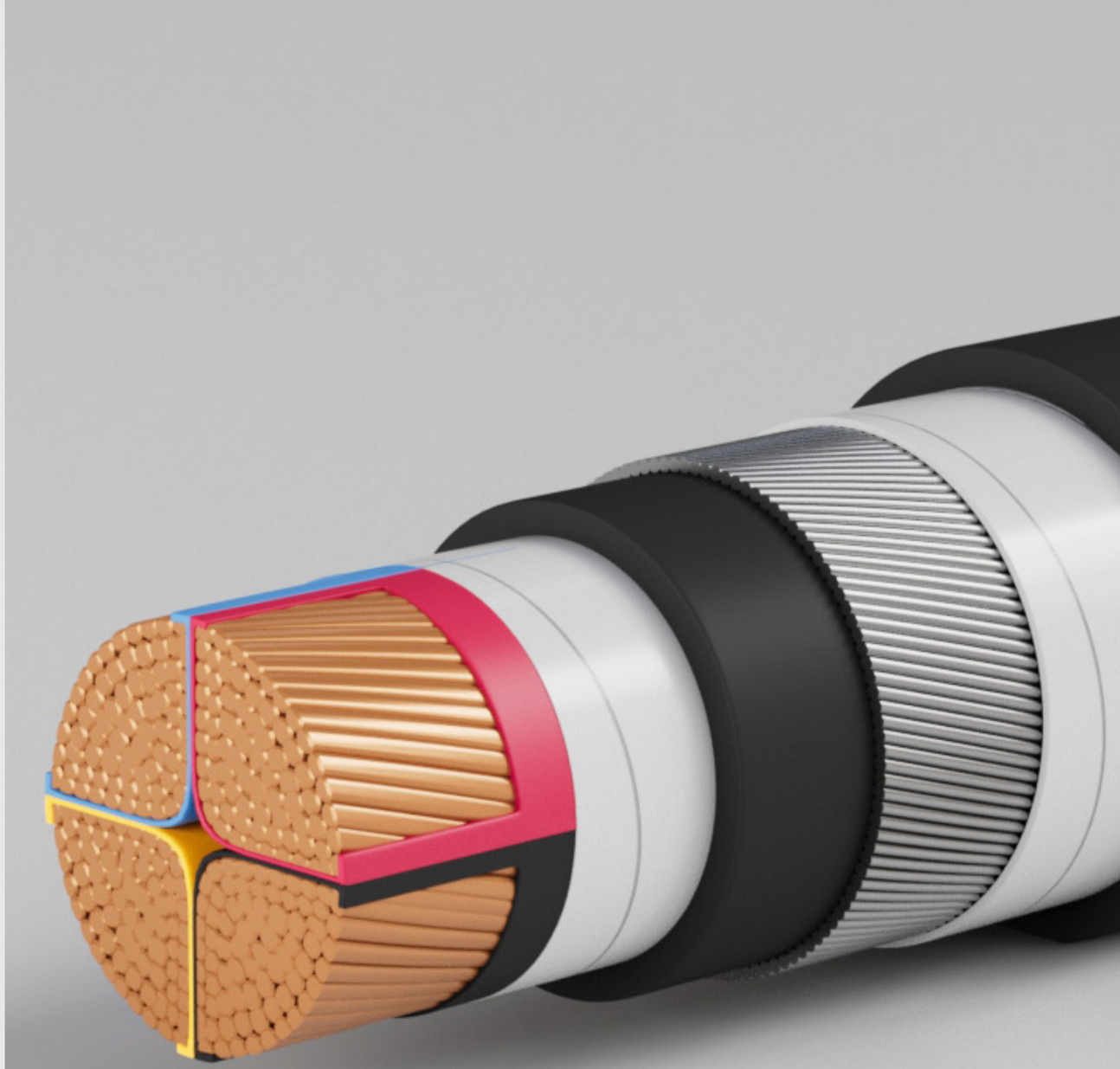
Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Laid in Ground	Laid in Free Air	Diameter	Weight
				A	A	mm	kg/km
Two Core Cables							
PL-CT08-P3-02-WP	4 rm	4.6100	5.5400	52	45	17.5	595.0
PL-CT09-P3-02-WP	6 rm	3.0800	3.6900	65	58	18.7	695.0
PL-CT10-P3-02-WP	10 rm	1.8300	2.1900	85	76	19.8	825.0
PL-CT11-P3-02-WP	16 rm	1.1500	1.3900	111	101	21.8	1040.0
PL-CT12-P3-02-WP	25 rm	0.7270	0.8701	142	120	25.5	1500.0
PL-CT13-P3-02-WP	35 rm	0.5240	0.6273	172	148	27.7	1820.0
Three Core Cables							
PL-CT08-P3-03-WP	4 rm	4.6100	5.5400	41	36	18.2	655.0
PL-CT09-P3-03-WP	6 rm	3.0800	3.6900	52	45	19.5	780.0
PL-CT10-P3-03-WP	10 rm	1.8300	2.1900	70	61	21.2	945.0
PL-CT11-P3-03-WP	16 rm	1.1500	1.3900	87	84	23.4	1190.0
PL-CT12-P3-03-WP	25 rm	0.7270	0.8700	117	105	27.3	1725.0
PL-CT13-P3-03-WP	35 rm	0.5240	0.6280	141	126	29.7	2095.0
PL-CT14-P3-03-WP	50 sm	0.3870	0.4635	174	158	30.5	2500.0
PL-CT15-P3-03-WP	70 sm	0.2680	0.3214	213	199	34.4	2455.0
PL-CT16-P3-03-WP	95 sm	0.1930	0.2319	255	242	38.5	4420.0
PL-CT17-P3-03-WP	120 sm	0.1530	0.1844	295	278	40.5	5270.0
PL-CT18-P3-03-WP	150 sm	0.1240	0.1500	332	319	45.9	6735.0
PL-CT19-P3-03-WP	185 sm	0.0991	0.1206	374	367	49.9	8025.0
PL-CT20-P3-03-WP	240 sm	0.0754	0.0928	434	436	55.6	10115.0
PL-CT21-P3-03-WP	300 sm	0.0601	0.0752	484	500	60.9	12290.0
PL-CT22-P3-03-WP	400 sm	0.0470	0.0603	544	583	69.6	15955.0
PL-CT23-P3-03-WP	500 sm	0.0366	0.0489	612	669	76.3	19865.0
Four Core Cables							
PL-CT08-P3-04-WP	4 rm	4.6100	5.5400	42	33	19.4	760.0
PL-CT09-P3-04-WP	6 rm	3.0800	3.6900	54	43	20.8	905.0
PL-CT10-P3-04-WP	10 rm	1.8300	2.1900	71	58	22.7	1115.0
PL-CT11-P3-04-WP	16 rm	1.1500	1.3900	89	78	25.8	1555.0
PL-CT12-P3-04-WP	25 sm	0.7270	0.8702	121	108	27.6	2010.0

Four Core Cables							
PL-CT13-P3-04-WP	35 sm	0.5240	0.6274	145	132	30.2	2480.0
PL-CT14-P3-04-WP	50 sm	0.3870	0.4635	179	165	35.4	3390.0
PL-CT15-P3-04-WP	70 sm	0.2680	0.3214	220	208	39.0	4400.0
PL-CT16-P3-04-WP	95 sm	0.1930	0.2319	262	253	43.8	5930.0
PL-CT17-P3-04-WP	120 sm	0.1530	0.1844	304	297	47.6	7200.0
PL-CT18-P3-04-WP	150 sm	0.1240	0.1500	342	340	52.1	8600.0
PL-CT19-P3-04-WP	185 sm	0.0991	0.1206	386	392	57.3	10365.0
PL-CT20-P3-04-WP	240 sm	0.0754	0.0928	445	466	63.6	13020.0
PL-CT21-P3-04-WP	300 sm	0.0601	0.0752	499	534	69.7	15890.0
PL-CT22-P3-04-WP	400 sm	0.0470	0.0603	561	622	79.8	20610.0
PL-CT23-P3-04-WP	500 sm	0.0366	0.0489	630	714	87.5	25725.0

Four Core Cables with Reduced Neutral								
PL-CT12-P3-R3-WP	25 sm	16 rm	0.7270/1.1500	0.8702 / 1.3762	119	106	27.0	1880.0
PL-CT13-P3-R3-WP	35 sm	16 rm	0.5240/1.1500	0.6274 / 1.3762	144	130	29.1	2245.0
PL-CT14-P3-R3-WP	50 sm	25 sm	0.3870/0.7270	0.4635 / 0.8702	178	163	34.0	3090.0
PL-CT15-P3-R3-WP	70 sm	35 sm	0.2680/0.5240	0.3214 / 0.6274	218	205	37.3	3970.0
PL-CT16-P3-R3-WP	95 sm	50 sm	0.1930/03870	0.2319 / 0.4635	260	249	41.2	5060.0
PL-CT17-P3-R3-WP	120 sm	70 sm	0.1530/0.2680	0.1844 / 0.3214	301	290	46.1	6600.0
PL-CT18-P3-R3-WP	150 sm	70 sm	0.1240/0.2680	0.15 / 0.3214	338	332	49.7	7640.0
PL-CT19-P3-R3-WP	185 sm	95 sm	0.0991/0.1930	0.1206 / 0.2319	382	383	54.4	9240.0
PL-CT20-P3-R3-WP	240 sm	120 sm	0.0754/0.1530	0.0928 / 0.1844	443	454	60.6	11590.0
PL-CT21-P3-R3-WP	300 sm	150 sm	0.0601/0.1240	0.0752 / 0.15	494	521	66.4	14075.0
PL-CT22-P3-S3-WP	400 sm	185 sm	0.0470/0.0991	0.0603 / 0.1206	556	607	76.0	18315.0
PL-CT22-P3-R3-WP	400 sm	240 sm	0.0470/0.0754	0.0603 / 0.0928	556	607	77.1	18985.0
PL-CT23-P3-R3-WP	500 sm	240 sm	0.0366/0.0754	0.0489 / 0.0928	624	697	83.2	22765.0

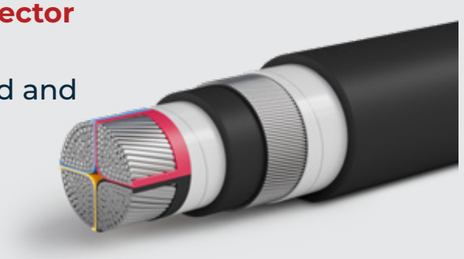
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Aluminum

Conductors, PVC Insulated, Steel Wires Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Stranded Aluminum conductors are insulated with PVC compound rated 70° C, assembled together, armored with steel wires and covered with overall jacket of PVC compound.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded PVC Compound type PVC / A Rated 70° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanized Steel Wires applied over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	70° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

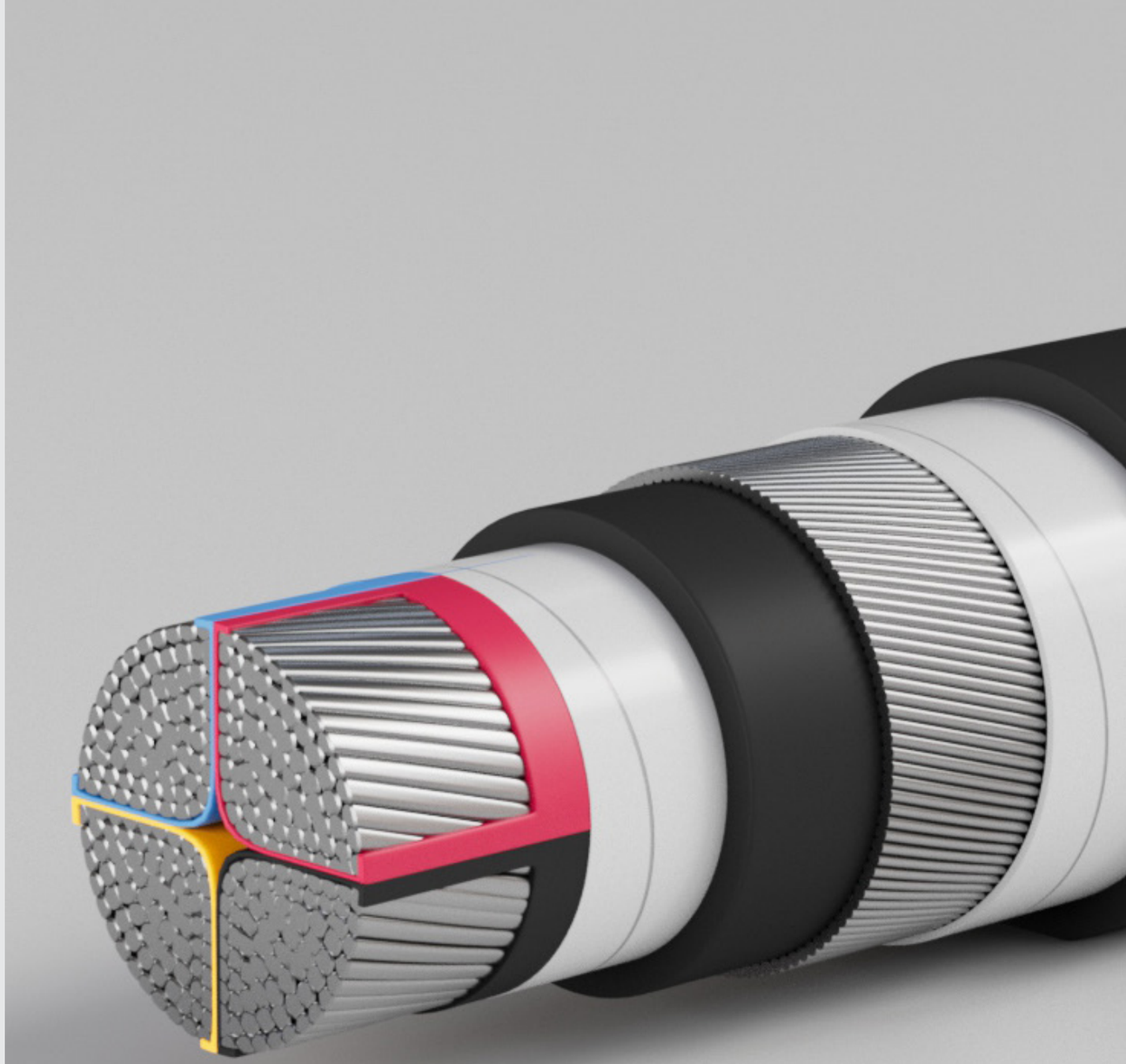
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 70 °C Ω/km	Laid in Ground	Laid in Free Air	Diameter	Weight
				A	A	mm	kg/km
Two Core Cables							
PL-AT11-P3-02-WP	16 rm	1.9100	2.2950	86	70	22.4	890.0
PL-AT12-P3-02-WP	25 rm	1.2000	1.4419	110	93	26.5	1290.0
PL-AT13-P3-02-WP	35 rm	0.8680	1.0431	134	115	28.7	1500.0
Three Core Cables							
PL-AT11-P3-03-WP	16 rm	1.9100	2.2950	73	61	24.0	955.0
PL-AT12-P3-03-WP	25 rm	1.2000	1.4420	91	80	28.4	1360.0
PL-AT13-P3-03-WP	35 rm	0.8680	1.0432	110	99	30.8	1560.0
PL-AT14-P3-03-WP	50 sm	0.6410	0.7704	135	121	30.5	1650.0
PL-AT15-P3-03-WP	70 sm	0.4430	0.5327	165	151	34.4	2195.0
PL-AT16-P3-03-WP	95 sm	0.3200	0.3851	197	185	38.5	2705.0
PL-AT17-P3-03-WP	120 sm	0.2530	0.3048	230	217	40.5	3060.0
PL-AT18-P3-03-WP	150 sm	0.2060	0.2485	258	249	45.9	4000.0
PL-AT19-P3-03-WP	185 sm	0.1640	0.1983	292	288	49.9	4650.0
PL-AT20-P3-03-WP	240 sm	0.1250	0.1518	339	343	55.6	5645.0
PL-AT21-P3-03-WP	300 sm	0.1000	0.1222	380	401	60.9	6645.0
PL-AT22-P3-03-WP	400 sm	0.0778	0.0961	432	465	69.6	8815.0
PL-AT23-P3-03-WP	500 sm	0.0605	0.0760	490	540	76.3	10645.0
Four Core Cables							
PL-AT11-P3-04-WP	16 rm	1.9100	2.2950	75	63	26.5	1235.0
PL-AT12-P3-04-WP	25 sm	1.2000	1.4420	97	84	27.6	1400.0
PL-AT13-P3-04-WP	35 sm	0.8680	1.0432	117	103	30.2	1645.0
PL-AT14-P3-04-WP	50 sm	0.6410	0.7704	143	129	35.4	2260.0
PL-AT15-P3-04-WP	70 sm	0.4430	0.5327	175	162	39.0	2720.0
PL-AT16-P3-04-WP	95 sm	0.3200	0.3851	210	199	43.8	3645.0
PL-AT17-P3-04-WP	120 sm	0.2530	0.3048	239	231	47.6	4260.0
PL-AT18-P3-04-WP	150 sm	0.2060	0.2485	268	265	52.1	4955.0
PL-AT19-P3-04-WP	185 sm	0.1640	0.1983	304	306	57.3	5860.0
PL-AT20-P3-04-WP	240 sm	0.1250	0.1518	351	364	63.6	7070.0
PL-AT21-P3-04-WP	300 sm	0.1000	0.1222	395	421	69.7	8330.0
PL-AT22-P3-04-WP	400 sm	0.0778	0.0961	450	494	79.8	11090.0
PL-AT23-P3-04-WP	500 sm	0.0605	0.0760	510	573	87.5	13395.0

Four Core Cables with Reduced Neutral								
PL-AT12-P3-R3-WP	25 sm	16 rm	1.200/1.9100	1.442 / 2.295	93	81	27.0	1340.0
PL-AT13-P3-R3-WP	35 sm	16 rm	0.8680/1.9100	1.0432 / 2.295	112	100	29.1	1530.0
PL-AT14-P3-R3-WP	50 sm	25 sm	0.6410/1.2000	0.7704 / 1.442	138	126	34.0	2090.0
PL-AT15-P3-R3-WP	70 sm	35 sm	0.4430/0.8680	0.5327 / 1.0432	169	158	37.3	2495.0
PL-AT16-P3-R3-WP	95 sm	50 sm	0.3200/0.6410	0.3851 / 0.7704	201	193	41.2	3060.0
PL-AT17-P3-R3-WP	120 sm	70 sm	0.2530/0.4430	0.3048 / 0.5327	234	226	46.1	3970.0
PL-AT18-P3-R3-WP	150 sm	70 sm	0.2060/0.4430	0.2485 / 0.5327	263	260	49.7	4490.0
PL-CT15-P3-R3-WP	185 sm	95 sm	0.1640/0.3200	0.1983 / 0.3851	298	300	54.4	5290.0
PL-AT20-P3-R3-WP	240 sm	120 sm	0.1250/0.2530	0.1518 / 0.3048	346	357	60.6	6410.0
PL-AT21-P3-R3-WP	300 sm	150 sm	0.1000/0.2060	0.1222 / 0.2485	387	418	66.4	7505.0
PL-AT22-P3-S3-WP	400 sm	185 sm	0.0778/0.1640	0.0961 / 0.1983	441	484	76.0	10070.0
PL-AT22-P3-R3-WP	400 sm	240 sm	0.0778/0.1250	0.0961 / 0.1518	441	484	77.1	10380.0
PL-AT23-P3-R3-WP	500 sm	240 sm	0.0605/0.1250	0.076 / 0.1518	500	562	83.2	12050.0

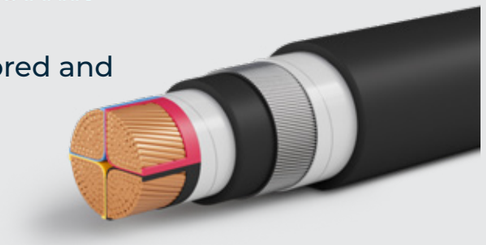
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Copper

Conductors, XLPE Insulated, Steel Wires Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Soft annealed Stranded Copper conductors are insulated with XLPE compound rated 90° C, assembled together, armored with Steel Wires and covered with overall jacket of PVC compound.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 5467
Conductor	Plain copper conductor class 2
Insulation	Extruded XLPE Compound Rated 90° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanized Steel Wires applied over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

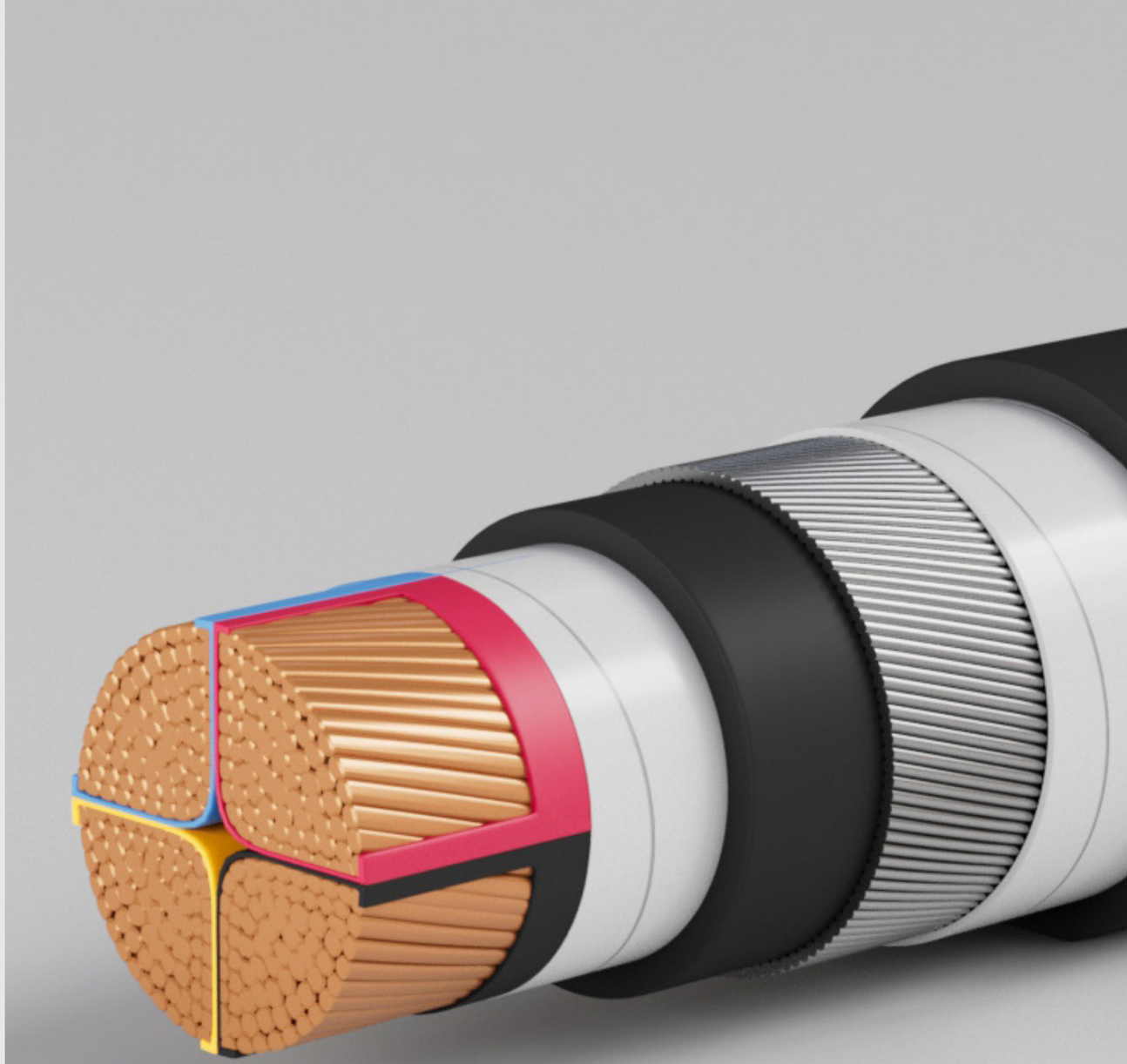
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Laid in Ground	Laid in Free Air	Diameter	Weight
				A	A	mm	kg/km
Two Core Cables							
PL-CT08-X3-02-WP	4 rm	4.6100	5.8892	63	55	16.3	515.0
PL-CT09-X3-02-WP	6 rm	3.0800	3.9300	79	71	17.5	610.0
PL-CT10-X3-02-WP	10 rm	1.8300	2.3378	101	92	18.6	735.0
PL-CT11-X3-02-WP	16 rm	1.1500	1.4692	130	122	20.6	945.0
PL-CT12-X3-02-WP	25 rm	0.7270	0.9272	171	161	24.3	1385.0
PL-CT13-X3-02-WP	35 rm	0.5240	0.6685	207	198	26.5	1695.0
Three Core Cables							
PL-CT08-X3-03-WP	4 rm	4.6100	5.8900	51	46	16.9	580.0
PL-CT09-X3-03-WP	6 rm	3.0800	3.9350	66	56	18.2	680.0
PL-CT10-X3-03-WP	10 rm	1.8300	2.3382	83	75	19.9	855.0
PL-CT11-X3-03-WP	16 rm	1.1500	1.4700	107	98	22.1	1095.0
PL-CT12-X3-03-WP	25 rm	0.7270	0.9273	140	132	26.0	1595.0
PL-CT13-X3-03-WP	35 rm	0.5240	0.6686	168	162	28.4	1970.0
PL-CT14-X3-03-WP	50 sm	0.3870	0.4940	203	196	28.7	2300.0
PL-CT15-X3-03-WP	70 sm	0.2680	0.3425	249	247	33.0	3265.0
PL-CT16-X3-03-WP	95 sm	0.1930	0.2471	298	301	36.5	4120.0
PL-CT17-X3-03-WP	120 sm	0.1530	0.1964	344	341	39.9	5030.0
PL-CT18-X3-03-WP	150 sm	0.1240	0.1597	387	392	44.3	6385.0
PL-CT19-X3-03-WP	185 sm	0.0991	0.1284	437	452	48.1	7605.0
PL-CT20-X3-03-WP	240 sm	0.0754	0.0988	504	536	53.4	9575.0
PL-CT21-X3-03-WP	300 sm	0.0601	0.0799	565	616	58.3	11610.0
PL-CT22-X3-03-WP	400 sm	0.0470	0.0641	636	718	65.5	14440.0
PL-CT23-X3-03-WP	500 sm	0.0366	0.0518	715	824	73.9	18880.0
Four Core Cables							
PL-CT08-X3-04-WP	4 rm	4.6100	5.8900	52	47	17.9	655.0
PL-CT09-X3-04-WP	6 rm	3.0800	3.9358	66	57	19.4	795.0
PL-CT10-X3-04-WP	10 rm	1.8300	2.3387	85	76	21.2	1005.0
PL-CT11-X3-04-WP	16 rm	1.1500	1.4700	110	100	24.4	1425.0
PL-CT12-X3-04-WP	25 sm	0.7270	0.9273	144	135	26.1	1840.0
PL-CT13-X3-04-WP	35 sm	0.5240	0.6686	173	166	28.7	2300.0
PL-CT14-X3-04-WP	50 sm	0.3870	0.4940	209	203	32.4	2895.0

Four Core Cables								
PL-CT15-X3-04-WP	70 sm		0.2680	0.3425	257	256	37.5	4150.0
PL-CT16-X3-04-WP	95 sm		0.1930	0.2471	307	312	40.2	5190.0
PL-CT17-X3-04-WP	120 sm		0.1530	0.1964	355	366	45.6	6775.0
PL-CT18-X3-04-WP	150 sm		0.1240	0.1597	399	421	49.9	8090.0
PL-CT19-X3-04-WP	185 sm		0.0991	0.1284	450	486	54.9	9790.0
PL-CT20-X3-04-WP	240 sm		0.0754	0.0988	520	576	60.9	12300.0
PL-CT21-X3-04-WP	300 sm		0.0601	0.0799	583	661	66.5	14975.0
PL-CT22-X3-04-WP	400 sm		0.0470	0.0641	656	770	76.8	19615.0
PL-CT23-X3-04-WP	500 sm		0.0366	0.0518	736	885	84.3	24480.0
Four Core Cables with Reduced Neutral								
PL-CT12-X3-R3-WP	25 sm	16 rm	0.7270/1.1500	0.9273 / 1.4666	143	135	25.5	1720.0
PL-CT13-X3-R3-WP	35 sm	16 rm	0.5240/1.1500	0.6686 / 1.4666	171	166	27.4	2060.0
PL-CT14-X3-R3-WP	50 sm	25 sm	0.3870/0.7270	0.494 / 0.9273	207	203	31.0	2630.0
PL-CT15-X3-R3-WP	70 sm	35 sm	0.2680/0.5240	0.3425 / 0.6686	254	256	35.8	3715.0
PL-CT16-X3-R3-WP	95 sm	50 sm	0.1930/03870	0.2471 / 0.494	304	312	39.5	4705.0
PL-CT17-X3-R3-WP	120 sm	70 sm	0.1530/0.2680	0.1964 / 0.3425	351	359	42.6	5805.0
PL-CT18-X3-R3-WP	150 sm	70 sm	0.1240/0.2680	0.1597 / 0.3425	395	413	47.7	7235.0
PL-CT19-X3-R3-WP	185 sm	95 sm	0.0991/0.1930	0.1284 / 0.2471	446	476	52.4	8760.0
PL-CT20-X3-R3-WP	240 sm	120 sm	0.0754/0.1530	0.0988 / 0.1964	515	565	58.1	10970.0
PL-CT21-X3-R3-WP	300 sm	150 sm	0.0601/0.1240	0.0799 / 0.1597	577	648	63.2	13290.0
PL-CT22-X3-S3-WP	400 sm	185 sm	0.0470/0.0991	0.0641 / 0.1284	649	755	72.4	17265.0
PL-CT22-X3-R3-WP	400 sm	240 sm	0.0470/0.0754	0.0641 / 0.0988	649	755	73.9	17970.0
PL-CT23-X3-R3-WP	500 sm	240 sm	0.0366/0.0754	0.0518 / 0.0988	729	867	80.0	21695.0

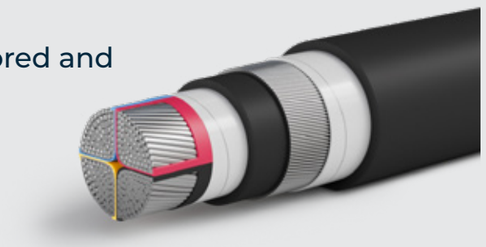
rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances



Multi Core Cables, with Stranded Circular or Sector Aluminum

Conductors, XLPE Insulated, Steel Wires Armored and PVC Sheathed



Voltage Grade

0.6 / 1 (1.2) KV

Description

Multicore cables of Stranded Aluminum conductors are insulated with XLPE compound rated 90° C, assembled together, armored with steel wires and covered with overall jacket of PVC compound.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Aluminum conductor H12 class 2
Insulation	Extruded XLPE Compound Rated 90° C
Assembly	The insulated cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanized Steel Wires applied over the inner sheath.
Insulation Color	**Two Cores:** Red & Black **Three Cores:** Red, Yellow & Black **Four Cores:** Red, Yellow, Blue & Black, or any other color according to customer request
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	10 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

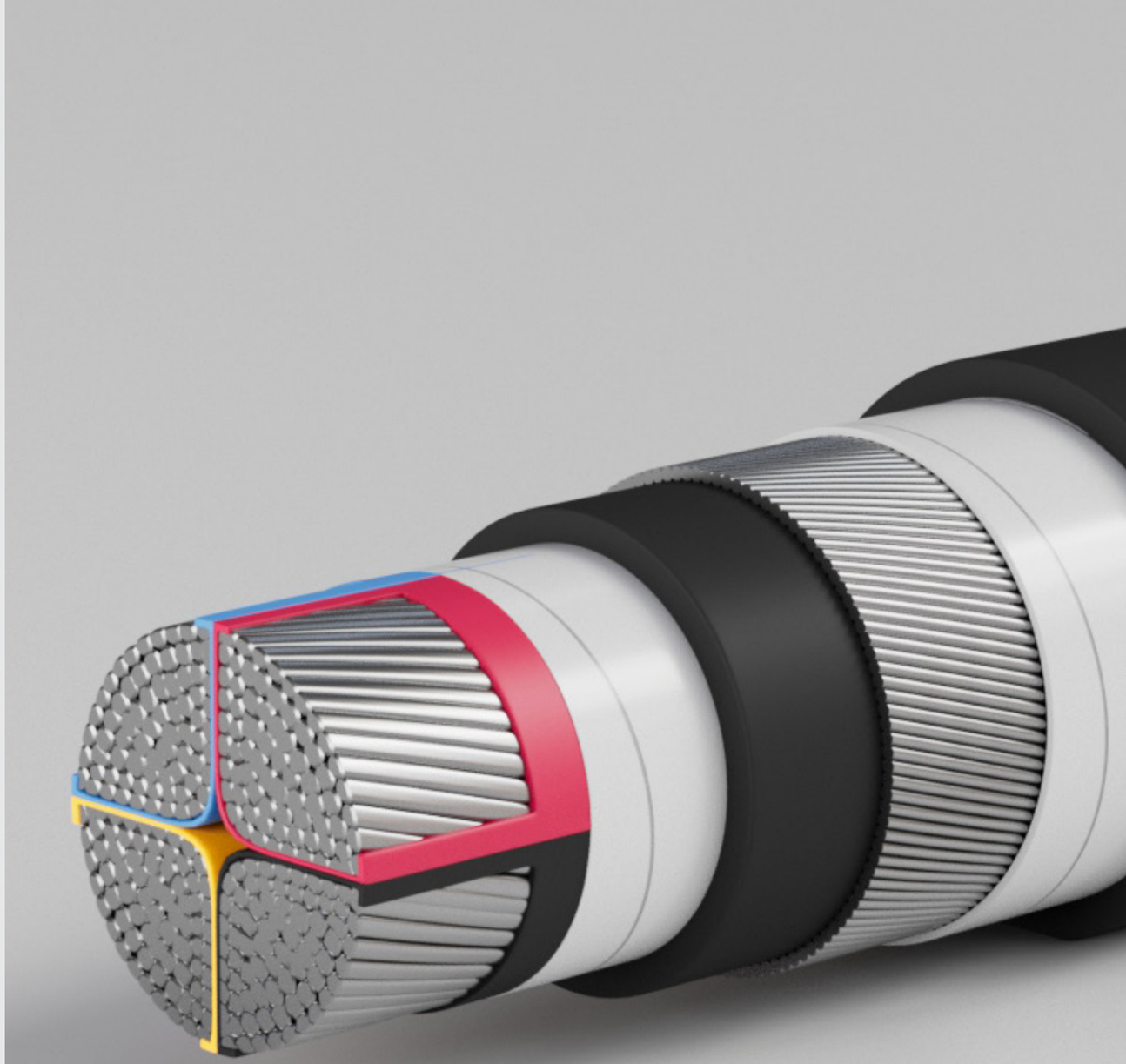
Heat resistant or/and flame retardant PVC insulated or/and PVC sheathed are available according to customer request

Product Code	Nominal Cross Sectional Area mm²	Max. Conductor Resistance		Current Rating		Approx. Overall	Approx.
		DC at 20 °C Ω/km	AC at 90 °C Ω/km	Laid in Ground	Laid in Free Air	Diameter	Weight
				A	A	mm	kg/km
Two Core Cables							
PL-AT11-X3-02-WP	16 rm	1.9100	2.4489	103	94	21.2	790.0
PL-AT12-X3-02-WP	25 rm	1.2000	1.5387	133	125	25.3	1165.0
PL-AT13-X3-02-WP	35 rm	0.8680	1.1131	160	153	27.5	1360.0
Three Core Cables							
PL-AT11-X3-03-WP	16 rm	1.9100	2.4489	85	77	22.7	855.0
PL-AT12-X3-03-WP	25 rm	1.2000	1.5387	109	102	27.1	1215.0
PL-AT13-X3-03-WP	35 rm	0.8680	1.1131	131	124	29.5	1415.0
PL-AT14-X3-03-WP	50 sm	0.6410	0.8221	159	150	28.7	1445.0
PL-AT15-X3-03-WP	70 sm	0.4430	0.5684	196	190	33.0	2005.0
PL-AT16-X3-03-WP	95 sm	0.3200	0.4109	233	232	36.5	2410.0
PL-AT17-X3-03-WP	120 sm	0.2530	0.3252	270	272	39.9	2820.0
PL-AT18-X3-03-WP	150 sm	0.2060	0.2651	304	312	44.3	3650.0
PL-AT19-X3-03-WP	185 sm	0.1640	0.2115	344	362	48.1	4225.0
PL-AT20-X3-03-WP	240 sm	0.1250	0.1619	398	429	53.4	5115.0
PL-AT21-X3-03-WP	300 sm	0.1000	0.1302	447	495	58.3	5960.0
PL-AT22-X3-03-WP	400 sm	0.0778	0.1023	508	582	65.5	7300.0
PL-AT23-X3-03-WP	500 sm	0.0605	0.0809	578	677	73.9	9745.0
Four Core Cables							
PL-AT11-X3-04-WP	16 rm	1.9100	2.4489	86	80	25.1	1105.0
PL-AT12-X3-04-WP	25 sm	1.2000	1.5387	112	105	26.1	1230.0
PL-AT13-X3-04-WP	35 sm	0.8680	1.1131	134	129	28.7	1460.0
PL-AT14-X3-04-WP	50 sm	0.6410	0.8221	163	158	32.4	1760.0
PL-AT15-X3-04-WP	70 sm	0.4430	0.5684	200	200	37.5	2465.0
PL-AT16-X3-04-WP	95 sm	0.3200	0.4109	238	242	40.2	2905.0
PL-AT17-X3-04-WP	120 sm	0.2530	0.3252	276	288	45.6	3830.0
PL-AT18-X3-04-WP	150 sm	0.2060	0.2651	310	330	49.9	4440.0
PL-AT19-X3-04-WP	185 sm	0.1640	0.2115	351	382	54.9	5285.0
PL-AT20-X3-04-WP	240 sm	0.1250	0.1619	406	454	60.9	6360.0
PL-AT21-X3-04-WP	300 sm	0.1000	0.1302	456	523	66.5	7430.0
PL-AT22-X3-04-WP	400 sm	0.0778	0.1023	518	615	76.8	10095.0
PL-AT23-X3-04-WP	500 sm	0.0605	0.0809	589	715	84.3	12145.0

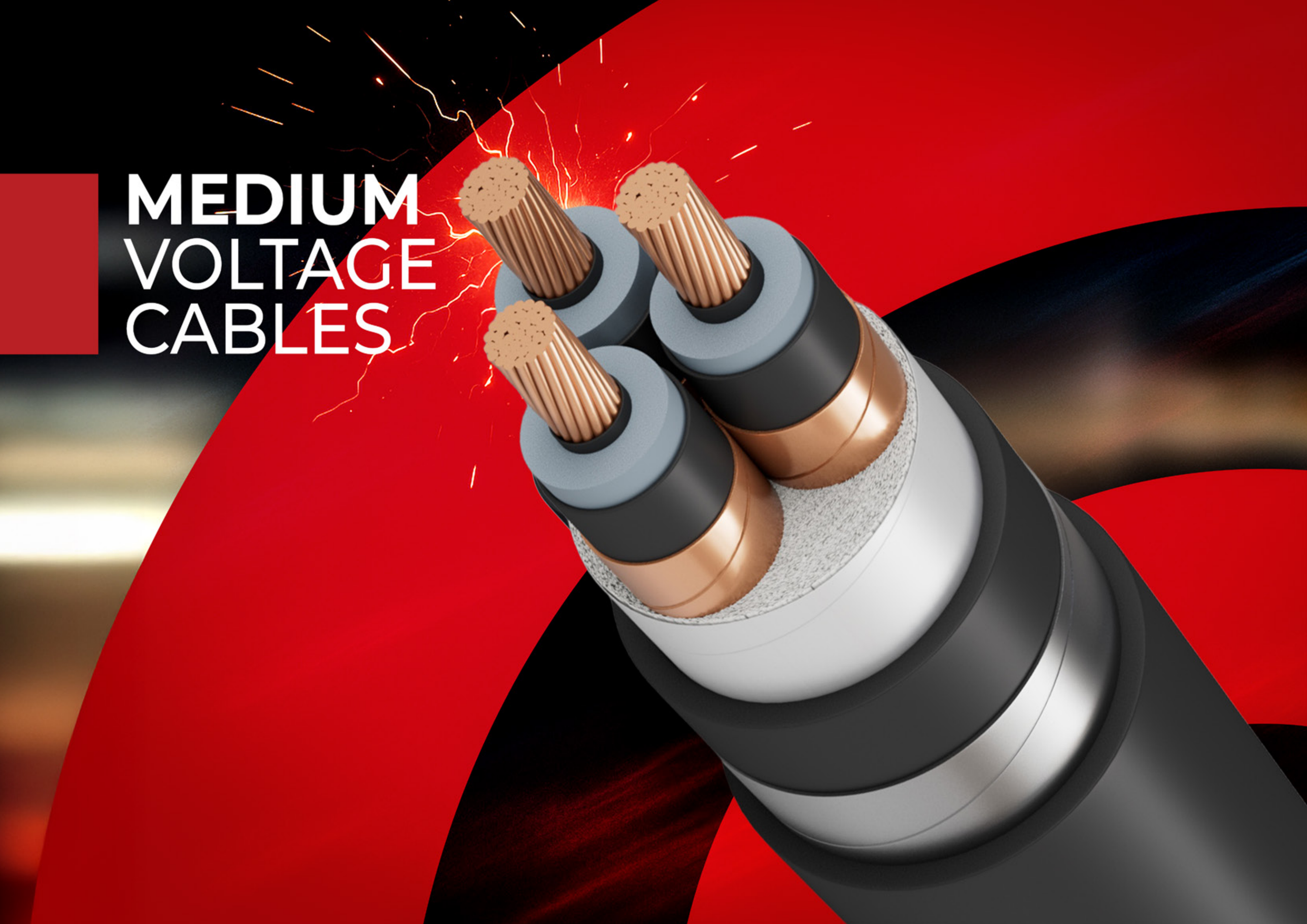
Four Core Cables with Reduced Neutral								
PL-AT12-X3-R3-WP	25 sm	16 rm	1.200/1.9100	1.5387 / 2.4489	110	104	25.5	1175.0
PL-AT13-X3-R3-WP	35 sm	16 rm	0.8680/1.9100	1.1131 / 2.4489	133	127	27.4	1345.0
PL-AT14-X3-R3-WP	50 sm	25 sm	0.6410/1.2000	0.8221 / 1.5387	161	156	31.0	1625.0
PL-AT15-X3-R3-WP	70 sm	35 sm	0.4430/0.8680	0.5684 / 1.1131	198	198	35.8	2245.0
PL-AT16-X3-R3-WP	95 sm	50 sm	0.3200/0.6410	0.4109 / 0.8221	236	240	39.5	2705.0
PL-AT17-X3-R3-WP	120 sm	70 sm	0.2530/0.4430	0.3252 / 0.5684	273	282	42.6	3180.0
PL-AT18-X3-R3-WP	150 sm	70 sm	0.2060/0.4430	0.2651 / 0.5684	307	323	47.7	4085.0
PL-CT15-X3-R3-WP	185 sm	95 sm	0.1640/0.3200	0.2115 / 0.4109	347	375	52.4	4810.0
PL-AT20-X3-R3-WP	240 sm	120 sm	0.1250/0.2530	0.1619 / 0.3252	402	445	58.1	5790.0
PL-AT21-X3-R3-WP	300 sm	150 sm	0.1000/0.2060	0.1302 / 0.2651	452	513	63.2	6730.0
PL-AT22-X3-S3-WP	400 sm	185 sm	0.0778/0.1640	0.1023 / 0.2115	513	603	72.4	9020.0
PL-AT22-X3-R3-WP	400 sm	240 sm	0.0778/0.1250	0.1023 / 0.1619	513	603	73.9	9365.0
PL-AT23-X3-R3-WP	500 sm	240 sm	0.0605/0.1250	0.0809 / 0.1619	584	701	80.0	10975.0

rm : round, Stranded
sm : Sector, Stranded

The above data is approximate and subject to manufacturing tolerances

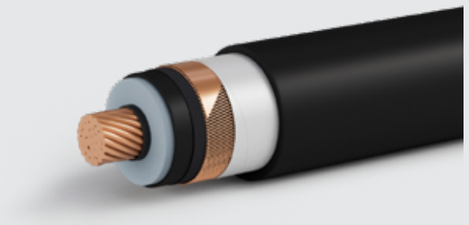


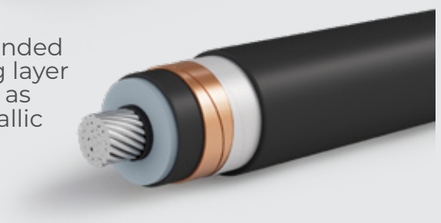
MEDIUM VOLTAGE CABLES



Single core Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed





Voltage Grade

3.6 / 6 (7.2) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

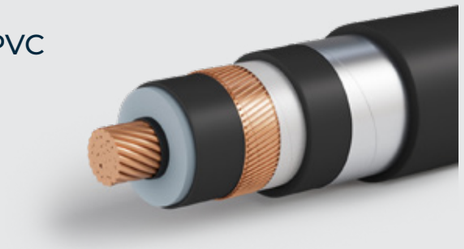
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 3.8 / 6.6 (7.2) KV

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating					Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground			Laid in Free Air			
			Flat	Trefoil		Flat	Trefoil	Flat	Trefoil	Duct	Flat Touched	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	A	mm	kg/km
A - Copper Conductors														
PM-CT14-X5-01-UP	50	0.3870	0.4937	0.4938	0.3425	0.4235	0.3773	225	218	183	241	236	20.0	815
PM-CT15-X5-01-UP	70	0.2680	0.3421	0.3422	0.3975	0.4012	0.3550	277	267	225	302	295	21.8	1035
PM-CT16-X5-01-UP	95	0.1930	0.2466	0.2468	0.4432	0.3867	0.3405	330	316	269	366	358	23.5	1295
PM-CT17-X5-01-UP	120	0.1530	0.1958	0.1960	0.4858	0.3739	0.3277	373	361	307	420	412	25.1	1540
PM-CT18-X5-01-UP	150	0.1240	0.1590	0.1593	0.5314	0.3632	0.3170	412	404	343	474	469	26.6	1895
PM-CT19-X5-01-UP	185	0.0991	0.1276	0.1279	0.5860	0.3538	0.3076	463	456	390	545	540	28.6	2265
PM-CT20-X5-01-UP	240	0.0754	0.0977	0.0982	0.6311	0.3423	0.2961	532	528	454	642	636	31.1	2815
PM-CT21-X5-01-UP	300	0.0601	0.0787	0.0793	0.6466	0.3357	0.2894	597	591	511	733	728	33.7	3425
PM-CT22-X5-01-UP	400	0.0470	0.0626	0.0634	0.6722	0.3307	0.2845	663	665	582	835	842	37.2	4380
PM-CT23-X5-01-UP	500	0.0366	0.0502	0.0512	0.7084	0.3240	0.2778	742	749	662	964	969	41.1	5480
PM-CT24-X5-01-UP	630	0.0283	0.0405	0.0418	0.8036	0.3184	0.2722	829	833	747	1104	1097	45.4	6810
PM-CT25-X5-01-UP	800	0.0221	0.0336	0.0353	0.9056	0.3097	0.2634	908	924	855	1246	1237	49.8	8605
B - Aluminum Conductors														
PM-AT14-X5-01-UP	50	0.6410	0.8219	0.8220	0.3548	0.4177	0.3715	174	169	141	185	184	20.4	545
PM-AT15-X5-01-UP	70	0.4430	0.5682	0.5683	0.4006	0.3990	0.3528	213	207	174	232	232	21.9	625
PM-AT16-X5-01-UP	95	0.3200	0.4106	0.4107	0.4493	0.3849	0.3387	255	247	209	281	278	23.7	735
PM-AT17-X5-01-UP	120	0.2530	0.3248	0.3249	0.4889	0.3731	0.3269	290	281	238	324	324	25.2	835
PM-AT18-X5-01-UP	150	0.2060	0.2647	0.2648	0.5405	0.3612	0.3150	321	315	268	366	366	26.9	1020
PM-AT19-X5-01-UP	185	0.1640	0.2110	0.2112	0.5951	0.3522	0.3060	363	358	306	422	426	28.9	1165
PM-AT20-X5-01-UP	240	0.1250	0.1613	0.1616	0.6311	0.3423	0.2961	419	414	355	506	498	31.1	1360
PM-AT21-X5-01-UP	300	0.1000	0.1295	0.1299	0.6466	0.3357	0.2894	463	465	401	581	574	33.7	1580
PM-AT22-X5-01-UP	400	0.0778	0.1014	0.1019	0.6722	0.3307	0.2845	533	530	463	672	670	37.2	2015
PM-AT23-X5-01-UP	500	0.0605	0.0798	0.0805	0.7084	0.3240	0.2778	602	605	534	782	781	41.1	2425
PM-AT24-X5-01-UP	630	0.0469	0.0630	0.0639	0.8059	0.3182	0.2720	686	686	618	911	907	45.5	2940
PM-AT25-X5-01-UP	800	0.0367	0.0508	0.0521	0.9056	0.3097	0.2634	775	775	714	1051	1038	49.8	3535

The above data is approximate and subject to manufacturing tolerances

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Tape armored and PVC Sheathed

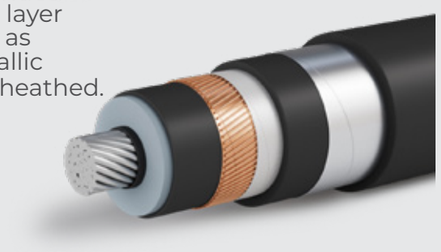


Voltage Grade

3.6 / 6 (7.2) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compactedAluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum tape and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Double Aluminum Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X5-01-DP	50	0.3870	0.4937	0.4937	0.3425	0.4633	0.4171	224	218	241	236	24.4	1065
PM-CT15-X5-01-DP	70	0.2680	0.3420	0.3421	0.3975	0.4380	0.3917	276	267	302	295	26.2	1300
PM-CT16-X5-01-DP	95	0.1930	0.2466	0.2467	0.4432	0.4210	0.3748	328	316	366	358	27.9	1580
PM-CT17-X5-01-DP	120	0.1530	0.1957	0.1959	0.4858	0.4048	0.3586	372	361	420	412	29.3	1830
PM-CT18-X5-01-DP	150	0.1240	0.1589	0.1591	0.5314	0.3925	0.3463	410	402	474	469	30.8	2200
PM-CT19-X5-01-DP	185	0.0991	0.1275	0.1277	0.5860	0.3800	0.3338	461	454	545	540	32.6	2575
PM-CT20-X5-01-DP	240	0.0754	0.0976	0.0979	0.6311	0.3676	0.3214	530	528	642	636	35.3	3170
PM-CT21-X5-01-DP	300	0.0601	0.0785	0.0790	0.6466	0.3602	0.3140	588	588	733	728	38.1	3825
PM-CT22-X5-01-DP	400	0.0470	0.0623	0.0630	0.6722	0.3530	0.3068	655	662	835	842	41.6	4820
PM-CT23-X5-01-DP	500	0.0366	0.0498	0.0507	0.7084	0.3444	0.2981	720	737	964	969	45.5	5960
PM-CT24-X5-01-DP	630	0.0283	0.0401	0.0412	0.8036	0.3369	0.2907	804	825	1073	1086	49.8	7340
PM-CT25-X5-01-DP	800	0.0221	0.0331	0.0345	0.9056	0.3281	0.2818	879	908	1210	1225	54.6	9235
B - Aluminum Conductors													
PM-AT14-X5-01-DP	50	0.6410	0.8219	0.8220	0.3548	0.4608	0.4145	171	170	185	184	24.8	795
PM-AT15-X5-01-DP	70	0.4430	0.5682	0.5682	0.4006	0.4394	0.3932	210	208	232	232	26.3	895
PM-AT16-X5-01-DP	95	0.3200	0.4106	0.4106	0.4493	0.4225	0.3762	251	248	281	278	28.1	1025
PM-AT17-X5-01-DP	120	0.2530	0.3248	0.3249	0.4889	0.4073	0.3611	285	282	324	324	29.4	1130
PM-AT18-X5-01-DP	150	0.2060	0.2646	0.2647	0.5405	0.3935	0.3472	317	315	366	366	31.1	1330
PM-AT19-X5-01-DP	185	0.1640	0.2110	0.2111	0.5951	0.3811	0.3349	357	358	422	426	32.9	1480
PM-AT20-X5-01-DP	240	0.1250	0.1612	0.1614	0.6311	0.3676	0.3214	417	414	506	498	35.3	1715
PM-AT21-X5-01-DP	300	0.1000	0.1293	0.1296	0.6466	0.3602	0.3140	459	463	581	574	38.1	1980
PM-AT22-X5-01-DP	400	0.0778	0.1012	0.1016	0.6722	0.3530	0.3068	517	527	672	670	41.6	2455
PM-AT23-X5-01-DP	500	0.0605	0.0796	0.0802	0.7084	0.3444	0.2981	595	602	782	781	45.5	2910
PL-AT24-X5-01-DP	630	0.0469	0.0627	0.0635	0.8059	0.3367	0.2905	670	679	894	895	49.9	3475
PL-AT25-X5-01-DP	800	0.0367	0.0505	0.0515	0.9056	0.3281	0.2818	749	761	1025	1025	54.6	4170

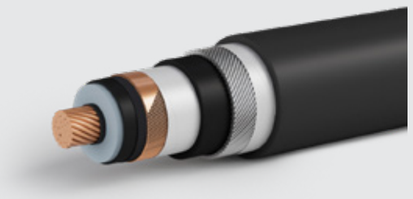
The above data is approximate and subject to manufacturing tolerances

Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 3.8 / 6.6 (7.2) KV

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Wire armored and PVC Sheathed

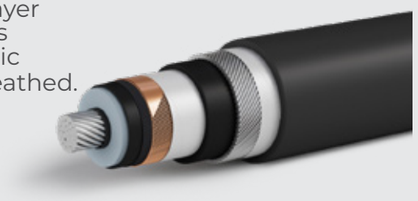


Voltage Grade

3.6 / 6 (7.2) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compactedAluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum wire and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum Wires applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X5-01-RP	50	0.3870	0.4937	0.4937	0.3425	0.4768	0.4305	228	220	241	236	26.1	1180
PM-CT15-X5-01-RP	70	0.2680	0.3420	0.3421	0.3975	0.4505	0.4043	275	268	301	295	27.9	1425
PM-CT16-X5-01-RP	95	0.1930	0.2466	0.2466	0.4432	0.4328	0.3866	323	318	364	358	29.6	1715
PM-CT17-X5-01-RP	120	0.1530	0.1957	0.1958	0.4858	0.4161	0.3699	360	358	417	412	31.0	1970
PM-CT18-X5-01-RP	150	0.1240	0.1589	0.1590	0.5314	0.4069	0.3607	394	398	471	468	33.1	2405
PM-CT19-X5-01-RP	185	0.0991	0.1274	0.1276	0.5860	0.3948	0.3486	443	445	536	530	35.1	2815
PM-CT20-X5-01-RP	240	0.0754	0.0975	0.0978	0.6311	0.3840	0.3377	501	503	627	623	37.8	3420
PM-CT21-X5-01-RP	300	0.0601	0.0784	0.0788	0.6466	0.3813	0.3351	545	556	708	689	40.4	4075
PM-CT22-X5-01-RP	400	0.0470	0.0622	0.0627	0.6722	0.3719	0.3257	592	614	804	768	45.1	5250
PM-CT23-X5-01-RP	500	0.0366	0.0497	0.0504	0.7084	0.3604	0.3142	646	675	909	851	48.8	6405
PM-CT24-X5-01-RP	630	0.0283	0.0399	0.0408	0.8036	0.3505	0.3043	691	735	964	990	53.3	7850
PM-CT25-X5-01-RP	800	0.0221	0.0329	0.0341	0.9056	0.3405	0.2943	743	785	1057	1093	58.1	9800
B - Aluminum Conductors													
PM-AT14-X5-01-RP	50	0.6410	0.8219	0.8219	0.3548	0.4700	0.4238	180	171	185	184	26.5	915
PM-AT15-X5-01-RP	70	0.4430	0.5682	0.5682	0.4006	0.4482	0.4020	218	209	232	232	28.0	1015
PM-AT16-X5-01-RP	95	0.3200	0.4106	0.4106	0.4493	0.4307	0.3845	258	249	281	278	29.8	1155
PM-AT17-X5-01-RP	120	0.2530	0.3248	0.3248	0.4889	0.4152	0.3690	289	282	324	324	31.1	1270
PM-AT18-X5-01-RP	150	0.2060	0.2646	0.2647	0.5405	0.4045	0.3583	320	313	366	366	33.4	1535
PM-AT19-X5-01-RP	185	0.1640	0.2109	0.2111	0.5951	0.3928	0.3465	357	353	422	424	35.4	1720
PM-AT20-X5-01-RP	240	0.1250	0.1611	0.1613	0.6311	0.3840	0.3377	402	404	506	498	37.8	1965
PM-AT21-X5-01-RP	300	0.1000	0.1293	0.1296	0.6466	0.3813	0.3351	442	450	574	561	40.4	2230
PM-AT22-X5-01-RP	400	0.0778	0.1011	0.1015	0.6722	0.3719	0.3257	489	505	661	639	45.1	2885
PM-AT23-X5-01-RP	500	0.0605	0.0795	0.0800	0.7084	0.3604	0.3142	539	565	760	722	48.8	3350
PM-AT24-X5-01-RP	630	0.0469	0.0626	0.0632	0.8059	0.3502	0.3040	600	623	833	840	53.4	3995
PM-AT25-X5-01-RP	800	0.0367	0.0503	0.0512	0.9056	0.3405	0.2943	663	689	936	953	58.1	4735

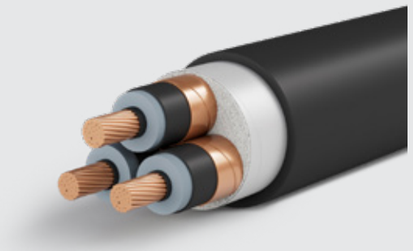
The above data is approximate and subject to manufacturing tolerances

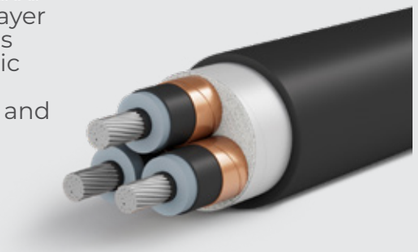
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 3.8 / 6.6 (7.2) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed





Voltage Grade

3.6 / 6 (7.2) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polyprobylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating			Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Duct	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	A	mm	kg/km
A - Copper Conductors										
PM-CT14-X5-03-UP	50	0.3870	0.4956	0.3425	0.3287	207	166	215	38.0	2370
PM-CT15-X5-03-UP	70	0.2680	0.3435	0.3975	0.3110	254	205	269	42.1	3145
PM-CT16-X5-03-UP	95	0.1930	0.2479	0.4432	0.2980	304	247	324	45.3	3950
PM-CT17-X5-03-UP	120	0.1530	0.1970	0.4858	0.2843	344	281	370	48.1	4730
PM-CT18-X5-03-UP	150	0.1240	0.1602	0.5314	0.2782	385	320	420	52.0	5720
PM-CT19-X5-03-UP	185	0.0991	0.1289	0.5860	0.2702	434	365	480	56.1	6890
PM-CT20-X5-03-UP	240	0.0754	0.0992	0.6311	0.2620	500	428	561	61.7	8700
PM-CT21-X5-03-UP	300	0.0601	0.0803	0.6466	0.2583	559	484	639	67.7	10755
PM-CT22-X5-03-UP	400	0.0470	0.0646	0.6722	0.2541	633	558	731	74.8	13555
PM-CT23-X5-03-UP	500	0.0366	0.0524	0.7084	0.2495	708	637	834	83.2	17105
B - Aluminum Conductors										
PM-AT14-X5-03-UP	50	0.6410	0.8248	0.3548	0.3240	162	130	167	38.9	1555
PM-AT15-X5-03-UP	70	0.4430	0.5704	0.4006	0.3091	197	162	208	42.3	1915
PM-AT16-X5-03-UP	95	0.3200	0.4123	0.4493	0.2945	236	194	252	45.3	2260
PM-AT17-X5-03-UP	120	0.2530	0.3263	0.4889	0.2837	268	222	289	48.3	2605
PM-AT18-X5-03-UP	150	0.2060	0.2660	0.5405	0.2767	301	252	328	52.6	3075
PM-AT19-X5-03-UP	185	0.1640	0.2123	0.5951	0.2690	340	288	376	56.7	3585
PM-AT20-X5-03-UP	240	0.1250	0.1625	0.6311	0.2620	393	334	441	61.7	4330
PM-AT21-X5-03-UP	300	0.1000	0.1308	0.6466	0.2583	443	380	505	67.7	5205
PM-AT22-X5-03-UP	400	0.0778	0.1028	0.6722	0.2541	508	444	586	74.8	6440
PM-AT23-X5-03-UP	500	0.0605	0.2495	0.7084	0.2495	578	520	680	83.2	7920

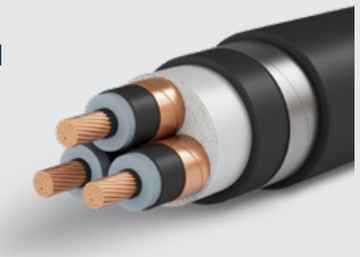
The above data is approximate and subject to manufacturing tolerances

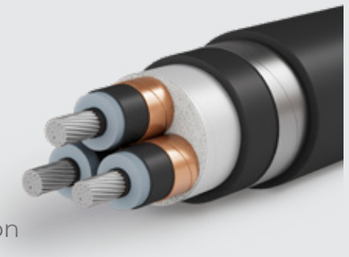
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 3.8 / 6.6 (7.2) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Tape armored and PVC Sheathed





Voltage Grade

3.6 / 6 (7.2) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compactedAluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape, armored with steel tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polyprobylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X5-03-TP	50	0.3870	0.4957	0.3425	0.3287	206	208	40.4	3070
PM-CT15-X5-03-TP	70	0.2680	0.3438	0.3975	0.3110	253	260	44.7	3940
PM-CT16-X5-03-TP	95	0.1930	0.2483	0.4432	0.2980	302	313	48.1	4830
PM-CT17-X5-03-TP	120	0.1530	0.1976	0.4858	0.2843	342	358	50.9	5660
PM-CT18-X5-03-TP	150	0.1240	0.1609	0.5314	0.2782	383	406	55.0	6750
PM-CT19-X5-03-TP	185	0.0991	0.1299	0.5860	0.2702	432	464	59.1	8000
PM-CT20-X5-03-TP	240	0.0754	0.1005	0.6311	0.2620	498	542	65.1	9980
PM-CT21-X5-03-TP	300	0.0601	0.0820	0.6466	0.2583	556	617	71.3	12175
PM-CT22-X5-03-TP	400	0.0470	0.0667	0.6722	0.2541	627	707	79.5	15760
PM-CT23-X5-03-TP	500	0.0366	0.0552	0.7084	0.2495	701	806	88.1	19585
B - Aluminum Conductors									
PM-AT14-X5-03-TP	50	0.6410	0.8249	0.3548	0.3240	161	162	41.3	2270
PM-AT15-X5-03-TP	70	0.4430	0.5705	0.4006	0.3091	196	201	44.9	2715
PM-AT16-X5-03-TP	95	0.3200	0.4126	0.4493	0.2945	235	243	48.1	3145
PM-AT17-X5-03-TP	120	0.2530	0.3267	0.4889	0.2837	267	279	51.1	3540
PM-AT18-X5-03-TP	150	0.2060	0.2665	0.5405	0.2767	299	317	55.6	4120
PM-AT19-X5-03-TP	185	0.1640	0.2129	0.5951	0.2690	339	364	59.7	4705
PM-AT20-X5-03-TP	240	0.1250	0.1634	0.6311	0.2620	392	426	65.1	5605
PM-AT21-X5-03-TP	300	0.1000	0.1318	0.6466	0.2583	441	488	71.3	6625
PM-AT22-X5-03-TP	400	0.0778	0.1042	0.6722	0.2541	503	566	79.5	8650
PM-AT23-X5-03-TP	500	0.0605	0.0833	0.7084	0.2495	572	657	88.1	10400

The above data is approximate and subject to manufacturing tolerances

Note:-

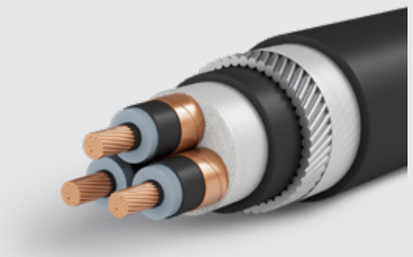
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
Galvanized Steel Tapes is available according to customer request
the below data are applicable for cables with rated voltage 3.8 / 6.6 (7.2) KV

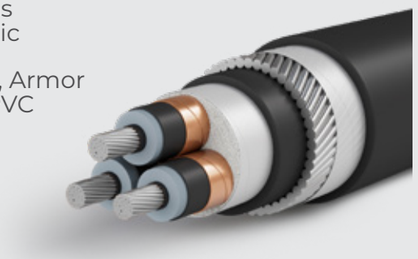
Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Wires armored and PVC Sheathed

Voltage Grade

3.6 / 6 (7.2) KV





Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape, Armor with Galvanized steel wires, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polyprobylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanized Steel Wires over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 3.8 / 6.6 (7.2) KV

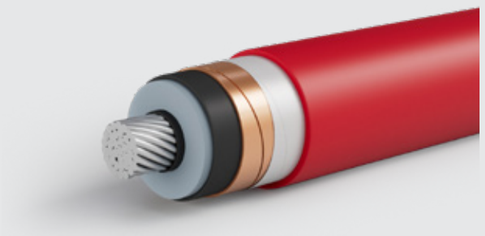
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X5-03-WP	50	0.3870	0.4957	0.3425	0.3287	208	214	44.4	4220
PM-CT15-X5-03-WP	70	0.2680	0.3438	0.3975	0.3110	256	266	48.7	5225
PM-CT16-X5-03-WP	95	0.1930	0.2483	0.4432	0.2980	304	321	52.1	6220
PM-CT17-X5-03-WP	120	0.1530	0.1976	0.4858	0.2843	344	366	54.9	7130
PM-CT18-X5-03-WP	150	0.1240	0.1609	0.5314	0.2782	385	415	58.8	8290
PM-CT19-X5-03-WP	185	0.0991	0.1299	0.5860	0.2702	433	473	63.1	9705
PM-CT20-X5-03-WP	240	0.0754	0.1005	0.6311	0.2620	497	555	70.6	12645
PM-CT21-X5-03-WP	300	0.0601	0.0820	0.6466	0.2583	553	629	76.6	15035
PM-CT22-X5-03-WP	400	0.0470	0.0667	0.6722	0.2541	617	710	83.7	18235
PM-CT23-X5-03-WP	500	0.0366	0.0552	0.7084	0.2495	682	800	92.3	22355
B - Aluminum Conductors									
PM-AT14-X5-03-WP	50	0.6410	0.8249	0.3548	0.3240	162	166	45.3	3445
PM-AT15-X5-03-WP	70	0.4430	0.5705	0.4006	0.3091	198	206	48.9	3995
PM-AT16-X5-03-WP	95	0.3200	0.4126	0.4493	0.2945	236	249	52.1	4535
PM-AT17-X5-03-WP	120	0.2530	0.3267	0.4889	0.2837	269	286	55.1	5005
PM-AT18-X5-03-WP	150	0.2060	0.2665	0.5405	0.2767	300	324	59.4	5685
PM-AT19-X5-03-WP	185	0.1640	0.2129	0.5951	0.2690	339	371	63.7	6435
PM-AT20-X5-03-WP	240	0.1250	0.1634	0.6311	0.2620	392	439	70.6	8270
PM-AT21-X5-03-WP	300	0.1000	0.1318	0.6466	0.2583	441	499	76.6	9485
PM-AT22-X5-03-WP	400	0.0778	0.1042	0.6722	0.2541	498	572	83.7	11120
PM-AT23-X5-03-WP	500	0.0605	0.0833	0.7084	0.2495	563	658	92.3	13175

The above data is approximate and subject to manufacturing tolerances

Single core Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed

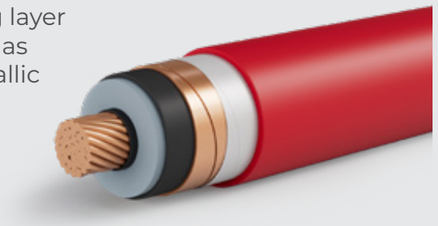


Voltage Grade

6 / 10 (12) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 6.35/11 (12) KV

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating					Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground			Laid in Free Air			
			Flat	Trefoil		Flat	Trefoil	Flat	Trefoil	Duct	Flat Touched	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	A	mm	kg/km
A - Copper Conductors														
PM-CT14-X6-01-UP	50	0.3870	0.4937	0.4938	0.2630	0.4426	0.3963	225	218	183	241	236	22.0	885
PM-CT15-X6-01-UP	70	0.2680	0.3421	0.3421	0.3029	0.4187	0.3725	277	267	225	302	295	23.8	1105
PM-CT16-X6-01-UP	95	0.1930	0.2466	0.2467	0.3359	0.4030	0.3568	330	316	269	366	358	25.5	1370
PM-CT17-X6-01-UP	120	0.1530	0.1958	0.1959	0.3667	0.3878	0.3415	373	361	307	420	412	26.9	1610
PM-CT18-X6-01-UP	150	0.1240	0.1590	0.1592	0.3996	0.3777	0.3315	412	404	343	474	469	28.6	1985
PM-CT19-X6-01-UP	185	0.0991	0.1275	0.1278	0.4391	0.3660	0.3198	463	456	390	545	540	30.4	2345
PM-CT20-X6-01-UP	240	0.0754	0.0977	0.0981	0.4893	0.3523	0.3061	532	528	454	642	636	32.7	2890
PM-CT21-X6-01-UP	300	0.0601	0.0786	0.0792	0.5374	0.3438	0.2976	594	591	511	733	728	35.1	3505
PM-CT22-X6-01-UP	400	0.0470	0.0625	0.0633	0.5963	0.3349	0.2887	663	665	582	835	842	38.0	4425
PM-CT23-X6-01-UP	500	0.0366	0.0501	0.0512	0.6682	0.3260	0.2797	742	749	662	964	969	41.5	5505
PM-CT24-X6-01-UP	630	0.0283	0.0404	0.0417	0.7574	0.3202	0.2740	829	833	747	1104	1097	45.8	6835
PM-CT25-X6-01-UP	800	0.0221	0.0335	0.0351	0.8532	0.3113	0.2650	908	924	855	1246	1237	50.2	8630
B - Aluminum Conductors														
PM-AT14-X6-01-UP	50	0.6410	0.8219	0.8220	0.2719	0.4364	0.3902	174	169	141	185	184	22.4	610
PM-AT15-X6-01-UP	70	0.4430	0.5682	0.5683	0.3051	0.4165	0.3703	213	207	174	232	232	23.9	695
PM-AT16-X6-01-UP	95	0.3200	0.4106	0.4107	0.3403	0.4011	0.3549	255	247	209	281	278	25.7	810
PM-AT17-X6-01-UP	120	0.2530	0.3248	0.3249	0.3689	0.3869	0.3407	290	281	238	324	324	27.0	905
PM-AT18-X6-01-UP	150	0.2060	0.2646	0.2648	0.4062	0.3756	0.3294	321	315	268	366	366	28.9	1110
PM-AT19-X6-01-UP	185	0.1640	0.2110	0.2112	0.4456	0.3643	0.3180	363	358	306	422	426	30.7	1245
PM-AT20-X6-01-UP	240	0.1250	0.1612	0.1615	0.4893	0.3523	0.3061	419	414	355	506	498	32.7	1435
PM-AT21-X6-01-UP	300	0.1000	0.1294	0.1298	0.5374	0.3438	0.2976	463	465	401	581	574	35.1	1655
PM-AT22-X6-01-UP	400	0.0778	0.1013	0.1018	0.5963	0.3349	0.2887	533	530	463	672	670	38.0	2060
PM-AT23-X6-01-UP	500	0.0605	0.0798	0.0805	0.6682	0.3260	0.2797	602	605	534	782	781	41.5	2450
PM-AT24-X6-01-UP	630	0.0469	0.0630	0.0639	0.7596	0.3200	0.2738	686	686	618	911	907	45.9	2970
PM-AT25-X6-01-UP	800	0.0367	0.0508	0.0520	0.8532	0.3113	0.2650	775	775	714	1051	1038	50.2	3565

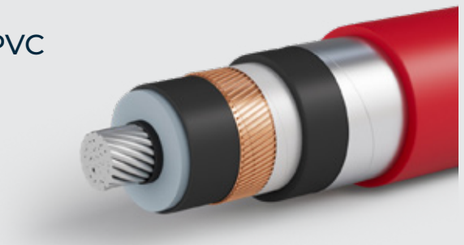
The above data is approximate and subject to manufacturing tolerances

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Tape armored and PVC Sheathed

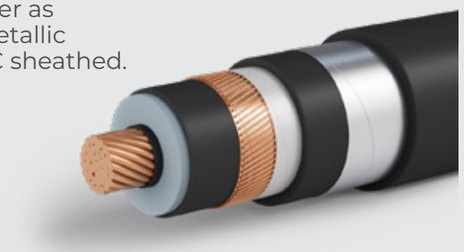
Voltage Grade

6 / 10 (12) KV



Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum tape and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Double Aluminum Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X6-01-DP	50	0.3870	0.4937	0.4937	0.2630	0.4775	0.4313	224	218	241	236	26.2	1140
PM-CT15-X6-01-DP	70	0.2680	0.3420	0.3421	0.3029	0.4572	0.4064	276	267	302	295	28.2	1395
PM-CT16-X6-01-DP	95	0.1930	0.2466	0.2466	0.3359	0.4335	0.3873	328	316	366	358	29.7	1665
PM-CT17-X6-01-DP	120	0.1530	0.1957	0.1958	0.3667	0.4168	0.3706	372	361	420	412	31.1	1920
PM-CT18-X6-01-DP	150	0.1240	0.1589	0.1590	0.3996	0.4039	0.3576	410	402	474	469	32.6	2295
PM-CT19-X6-01-DP	185	0.0991	0.1274	0.1277	0.4391	0.3919	0.3457	461	454	545	540	34.6	2690
PM-CT20-X6-01-DP	240	0.0754	0.0975	0.0978	0.4893	0.3776	0.3314	530	528	642	636	37.1	3280
PM-CT21-X6-01-DP	300	0.0601	0.0784	0.0789	0.5374	0.3664	0.3202	588	588	733	728	39.3	3900
PM-CT22-X6-01-DP	400	0.0470	0.0623	0.0629	0.5963	0.3569	0.3106	655	662	835	842	42.4	4875
PM-CT23-X6-01-DP	500	0.0366	0.0498	0.0507	0.6682	0.3461	0.2999	720	737	964	969	45.9	5990
PM-CT24-X6-01-DP	630	0.0283	0.0400	0.0411	0.7574	0.3393	0.2931	804	825	1073	1086	50.4	7395
PM-CT25-X6-01-DP	800	0.0221	0.0331	0.0344	0.8532	0.3295	0.2833	879	908	1210	1225	55.0	9300
B - Aluminum Conductors													
PM-AT14-X6-01-DP	50	0.6410	0.8219	0.8219	0.2719	0.4708	0.4246	171	170	185	184	26.6	870
PM-AT15-X6-01-DP	70	0.4430	0.5682	0.5682	0.3051	0.4503	0.4041	210	208	232	232	28.3	985
PM-AT16-X6-01-DP	95	0.3200	0.4106	0.4106	0.3403	0.4314	0.3851	251	248	281	278	29.9	1110
PM-AT17-X6-01-DP	120	0.2530	0.3248	0.3248	0.3689	0.4158	0.3696	285	282	324	324	31.2	1215
PM-AT18-X6-01-DP	150	0.2060	0.2646	0.2647	0.4062	0.4015	0.3553	317	315	366	366	32.9	1420
PM-AT19-X6-01-DP	185	0.1640	0.2109	0.2111	0.4456	0.3899	0.3437	357	358	422	426	34.9	1595
PM-AT20-X6-01-DP	240	0.1250	0.1611	0.1614	0.4893	0.3776	0.3314	417	414	506	498	37.1	1825
PM-AT21-X6-01-DP	300	0.1000	0.1293	0.1296	0.5374	0.3664	0.3202	459	463	581	574	39.3	2055
PM-AT22-X6-01-DP	400	0.0778	0.1012	0.1016	0.5963	0.3569	0.3106	517	527	672	670	42.4	2510
PM-AT23-X6-01-DP	500	0.0605	0.0796	0.0801	0.6682	0.3461	0.2999	595	602	782	781	45.9	2940
PM-AT24-X6-01-DP	630	0.0469	0.0627	0.0634	0.7596	0.3391	0.2929	670	679	894	895	50.5	3530
PM-AT25-X6-01-DP	800	0.0367	0.0504	0.0515	0.8532	0.3295	0.2833	749	761	1025	1025	55.0	4200

The above data is approximate and subject to manufacturing tolerances

Note:-

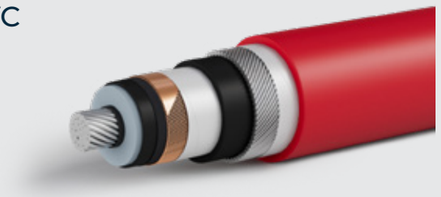
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 6.35/11 (12) KV

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Wire armored and PVC Sheathed

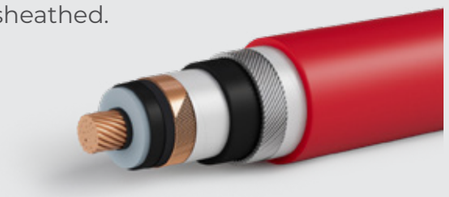
Voltage Grade

6 / 10 (12) KV



Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum wire and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum Wires applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X6-01-RP	50	0.3870	0.4937	0.4937	0.2630	0.4915	0.4453	228	220	241	236	28.1	1280
PM-CT15-X6-01-RP	70	0.2680	0.3420	0.3421	0.3029	0.4644	0.4181	275	268	301	295	29.9	1530
PM-CT16-X6-01-RP	95	0.1930	0.2466	0.2466	0.3359	0.4446	0.3984	323	318	364	358	31.4	1810
PM-CT17-X6-01-RP	120	0.1530	0.1957	0.1958	0.3667	0.4310	0.3848	360	358	417	412	33.4	2125
PM-CT18-X6-01-RP	150	0.1240	0.1588	0.1590	0.3996	0.4186	0.3724	394	398	471	468	35.1	2535
PM-CT19-X6-01-RP	185	0.0991	0.1274	0.1276	0.4391	0.4048	0.3586	443	445	536	530	36.9	2920
PM-CT20-X6-01-RP	240	0.0754	0.0974	0.0977	0.4893	0.3896	0.3434	501	503	627	623	39.4	3530
PM-CT21-X6-01-RP	300	0.0601	0.0783	0.0787	0.5374	0.3787	0.3325	545	556	708	689	41.8	4180
PM-CT22-X6-01-RP	400	0.0470	0.0621	0.0627	0.5963	0.3727	0.3265	592	614	804	768	45.9	5315
PM-CT23-X6-01-RP	500	0.0366	0.0496	0.0504	0.6682	0.3600	0.3138	646	675	909	851	49.2	6445
PM-CT24-X6-01-RP	630	0.0283	0.0398	0.0408	0.7574	0.3520	0.3058	691	735	964	990	53.7	7890
PM-CT25-X6-01-RP	800	0.0221	0.0328	0.0340	0.8532	0.3419	0.2956	743	785	1057	1093	58.5	9835
B - Aluminum Conductors													
PM-AT14-X6-01-RP	50	0.6410	0.8219	0.8219	0.2719	0.4846	0.4384	180	171	185	184	28.5	1010
PM-AT15-X6-01-RP	70	0.4430	0.5682	0.5682	0.3051	0.4620	0.4158	218	209	232	232	30.0	1125
PM-AT16-X6-01-RP	95	0.3200	0.4106	0.4106	0.3403	0.4424	0.3962	258	249	281	278	31.6	1250
PM-AT17-X6-01-RP	120	0.2530	0.3248	0.3248	0.3689	0.4301	0.3838	289	282	324	324	33.5	1430
PM-AT18-X6-01-RP	150	0.2060	0.2646	0.2646	0.4062	0.4162	0.3699	320	313	366	366	35.4	1660
PM-AT19-X6-01-RP	185	0.1640	0.2109	0.2110	0.4456	0.4027	0.3565	357	353	422	424	37.2	1830
PM-AT20-X6-01-RP	240	0.1250	0.1611	0.1613	0.4893	0.3896	0.3434	402	404	506	498	39.4	2075
PM-AT21-X6-01-RP	300	0.1000	0.1292	0.1295	0.5374	0.3787	0.3325	442	450	574	561	41.8	2335
PM-AT22-X6-01-RP	400	0.0778	0.1011	0.1014	0.5963	0.3727	0.3265	489	505	661	639	45.9	2950
PM-AT23-X6-01-RP	500	0.0605	0.0795	0.0799	0.6682	0.3600	0.3138	539	565	760	722	49.2	3390
PM-AT24-X6-01-RP	630	0.0469	0.0625	0.0632	0.7596	0.3517	0.3055	600	623	833	840	53.8	4025
PM-AT25-X6-01-RP	800	0.0367	0.0502	0.0511	0.8532	0.3419	0.2956	663	689	936	953	58.5	4765

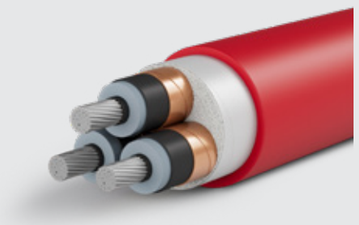
The above data is approximate and subject to manufacturing tolerances

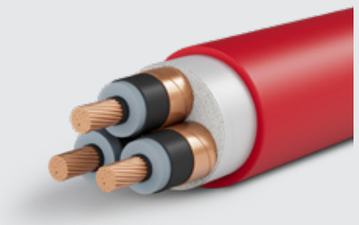
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 6.35/11 (12) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed





Voltage Grade

6 / 10 (12) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polyprobylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating			Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Duct	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	A	mm	kg/km
A - Copper Conductors										
PM-CT14-X6-03-UP	50	0.3870	0.4955	0.2630	0.3507	207	166	217	42.1	2655
PM-CT15-X6-03-UP	70	0.2680	0.3435	0.3029	0.3287	254	205	270	45.5	3345
PM-CT16-X6-03-UP	95	0.1930	0.2478	0.3359	0.3143	304	247	326	49.0	4215
PM-CT17-X6-03-UP	120	0.1530	0.1968	0.3667	0.3015	345	281	373	52.2	4995
PM-CT18-X6-03-UP	150	0.1240	0.1601	0.3996	0.2941	386	320	423	56.3	6060
PM-CT19-X6-03-UP	185	0.0991	0.1287	0.4391	0.2849	434	365	482	60.2	7220
PM-CT20-X6-03-UP	240	0.0754	0.0990	0.4893	0.2740	500	428	564	65.3	9020
PM-CT21-X6-03-UP	300	0.0601	0.0801	0.5374	0.2652	559	484	641	70.1	10955
PM-CT22-X6-03-UP	400	0.0470	0.0644	0.5963	0.2591	634	558	734	76.5	13680
PM-CT23-X6-03-UP	500	0.0366	0.0524	0.6682	0.2517	708	637	834	84.0	17130
B - Aluminum Conductors										
PM-AT14-X6-03-UP	50	0.6410	0.8249	0.2719	0.3454	162	130	168	42.9	1840
PM-AT15-X6-03-UP	70	0.4430	0.5704	0.3051	0.3267	197	162	209	45.8	2115
PM-AT16-X6-03-UP	95	0.3200	0.4123	0.3403	0.3128	236	194	253	49.4	2535
PM-AT17-X6-03-UP	120	0.2530	0.3262	0.3689	0.3009	269	222	291	52.4	2870
PM-AT18-X6-03-UP	150	0.2060	0.2659	0.4062	0.2925	301	252	331	56.9	3420
PM-AT19-X6-03-UP	185	0.1640	0.2122	0.4456	0.2836	340	288	377	60.8	3925
PM-AT20-X6-03-UP	240	0.1250	0.1624	0.4893	0.2740	393	334	443	65.3	4645
PM-AT21-X6-03-UP	300	0.1000	0.1307	0.5374	0.2652	443	380	506	70.1	5405
PM-AT22-X6-03-UP	400	0.0778	0.1027	0.5963	0.2591	508	444	588	76.5	6565
PM-AT23-X6-03-UP	500	0.0605	0.0814	0.6682	0.2517	578	520	680	84.0	7950

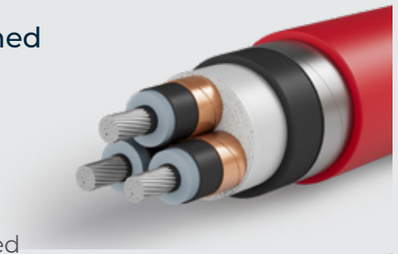
The above data is approximate and subject to manufacturing tolerances

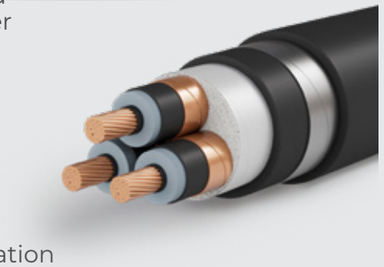
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 6.35/11 (12) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Tape armored and PVC Sheathed





Voltage Grade

6 / 10 (12) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape, armored with steel tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polyprobylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X6-03-TP	50	0.3870	0.4957	0.2630	0.3507	206	210	42.1	3455
PM-CT15-X6-03-TP	70	0.2680	0.3438	0.3029	0.3287	253	261	48.3	4235
PM-CT16-X6-03-TP	95	0.1930	0.2482	0.3359	0.3143	302	315	51.8	5170
PM-CT17-X6-03-TP	120	0.1530	0.1974	0.3667	0.3015	343	361	55.2	6025
PM-CT18-X6-03-TP	150	0.1240	0.1607	0.3996	0.2941	384	409	59.3	7165
PM-CT19-X6-03-TP	185	0.0991	0.1296	0.4391	0.2849	432	466	63.4	8430
PM-CT20-X6-03-TP	240	0.0754	0.1002	0.4893	0.2740	498	545	68.7	10360
PM-CT21-X6-03-TP	300	0.0601	0.0818	0.5374	0.2652	556	619	73.5	12385
PM-CT22-X6-03-TP	400	0.0470	0.0665	0.5963	0.2591	628	710	81.4	15975
PM-CT23-X6-03-TP	500	0.0366	0.0551	0.6682	0.2517	701	806	89.1	19680
B - Aluminum Conductors									
PM-AT14-X6-03-TP	50	0.6410	0.8250	0.2719	0.3454	161	163	45.5	2655
PM-AT15-X6-03-TP	70	0.4430	0.5706	0.3051	0.3267	196	202	48.6	3010
PM-AT16-X6-03-TP	95	0.3200	0.4125	0.3403	0.3128	235	244	52.2	3490
PM-AT17-X6-03-TP	120	0.2530	0.3266	0.3689	0.3009	268	281	55.4	3910
PM-AT18-X6-03-TP	150	0.2060	0.2663	0.4062	0.2925	299	319	59.9	4535
PM-AT19-X6-03-TP	185	0.1640	0.2127	0.4456	0.2836	339	365	64.0	5150
PM-AT20-X6-03-TP	240	0.1250	0.1632	0.4893	0.2740	392	428	68.7	5990
PM-AT21-X6-03-TP	300	0.1000	0.1317	0.5374	0.2652	441	489	73.5	6835
PM-AT22-X6-03-TP	400	0.0778	0.1041	0.5963	0.2591	503	568	81.4	8865
PM-AT23-X6-03-TP	500	0.0605	0.0832	0.6682	0.2517	572	657	89.1	10500

The above data is approximate and subject to manufacturing tolerances

Note:-

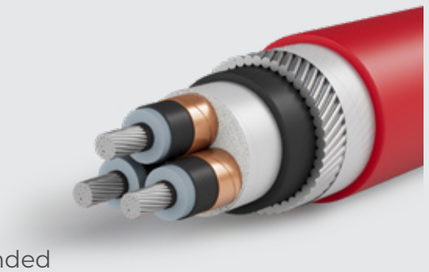
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
Galvanized Steel Tapes is available according to customer request
the below data are applicable for cables with rated voltage 6.35/11 (12) KV

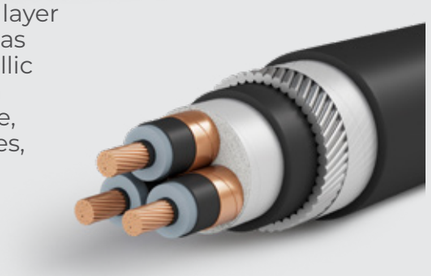
Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Wires armored and PVC Sheathed

Voltage Grade

6 / 10 (12) KV





Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape, armored with steel tape, armored with Galvanized steel wires, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polyprobylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanized Steel Wires over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X6-03-WP	50	0.3870	0.4957	0.2630	0.3507	208	215	48.7	4735
PM-CT15-X6-03-WP	70	0.2680	0.3438	0.3029	0.3287	256	268	52.3	5620
PM-CT16-X6-03-WP	95	0.1930	0.2482	0.3359	0.3143	304	323	55.8	6660
PM-CT17-X6-03-WP	120	0.1530	0.1974	0.3667	0.3015	344	369	59.0	7565
PM-CT18-X6-03-WP	150	0.1240	0.1607	0.3996	0.2941	386	419	63.3	8870
PM-CT19-X6-03-WP	185	0.0991	0.1296	0.4391	0.2849	432	475	67.4	10235
PM-CT20-X6-03-WP	240	0.0754	0.1002	0.4893	0.2740	496	555	74.0	13130
PM-CT21-X6-03-WP	300	0.0601	0.0818	0.5374	0.2652	552	629	78.8	15330
PM-CT22-X6-03-WP	400	0.0470	0.0665	0.5963	0.2591	617	711	85.6	18530
PM-CT23-X6-03-WP	500	0.0366	0.0551	0.6682	0.2517	682	800	93.3	22500
B - Aluminum Conductors									
PM-AT14-X6-03-WP	50	0.6410	0.8250	0.2719	0.3454	162	167	49.5	3960
PM-AT15-X6-03-WP	70	0.4430	0.5706	0.3051	0.3267	198	207	52.6	4390
PM-AT16-X6-03-WP	95	0.3200	0.4125	0.3403	0.3128	236	250	56.2	4980
PM-AT17-X6-03-WP	120	0.2530	0.3266	0.3689	0.3009	269	288	59.2	5480
PM-AT18-X6-03-WP	150	0.2060	0.2663	0.4062	0.2925	301	327	63.9	6270
PM-AT19-X6-03-WP	185	0.1640	0.2127	0.4456	0.2836	339	372	68.0	6980
PM-AT20-X6-03-WP	240	0.1250	0.1632	0.4893	0.2740	392	439	74.0	8755
PM-AT21-X6-03-WP	300	0.1000	0.1317	0.5374	0.2652	440	499	78.8	9780
PM-AT22-X6-03-WP	400	0.0778	0.1041	0.5963	0.2591	498	573	85.6	11420
PM-AT23-X6-03-WP	500	0.0605	0.0832	0.6682	0.2517	563	657	93.3	13330

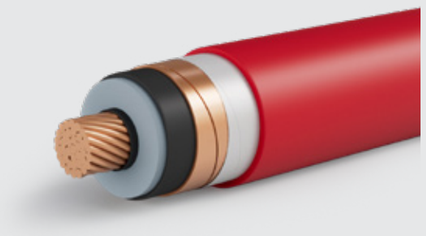
The above data is approximate and subject to manufacturing tolerances

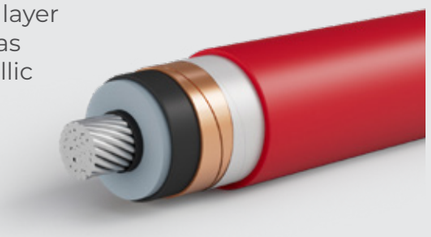
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 6.35/11 (12) KV

Single core Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed





Voltage Grade

8.7 / 15 (17.5) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

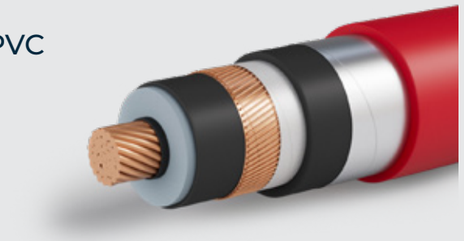
Longitudinal or radial Water tightness layers are also available according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating					Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground			Laid in Free Air			
			Flat	Trefoil		Flat	Trefoil	Flat	Trefoil	Duct	Flat Touched	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	A	mm	kg/km
A - Copper Conductors														
PM-CT14-X7-01-UP	50	0.3870	0.4937	0.4937	0.2141	0.4600	0.4138	225	218	183	241	236	24.0	950
PM-CT15-X7-01-UP	70	0.2680	0.3420	0.3421	0.2448	0.4364	0.3902	277	267	225	302	295	26.0	1195
PM-CT16-X7-01-UP	95	0.1930	0.2466	0.2467	0.2702	0.4181	0.3719	330	316	269	366	358	27.5	1450
PM-CT17-X7-01-UP	120	0.1530	0.1957	0.1959	0.2938	0.4035	0.3573	373	361	307	420	412	29.1	1710
PM-CT18-X7-01-UP	150	0.1240	0.1589	0.1591	0.3191	0.3912	0.3450	412	404	343	474	469	30.6	2070
PM-CT19-X7-01-UP	185	0.0991	0.1275	0.1278	0.3492	0.3693	0.3231	463	456	390	545	540	30.9	2265
PM-CT20-X7-01-UP	240	0.0754	0.0976	0.0980	0.3877	0.3654	0.3191	532	528	454	642	636	34.9	3005
PM-CT21-X7-01-UP	300	0.0601	0.0785	0.0790	0.4245	0.3549	0.3087	594	591	511	733	728	37.1	3610
PM-CT22-X7-01-UP	400	0.0470	0.0624	0.0631	0.4695	0.3462	0.3000	663	665	582	835	842	40.2	4565
PM-CT23-X7-01-UP	500	0.0366	0.0500	0.0509	0.5244	0.3363	0.2901	742	749	662	964	969	43.7	5655
PM-CT24-X7-01-UP	630	0.0283	0.0402	0.0414	0.5925	0.3288	0.2825	829	833	747	1104	1097	47.8	6975
PM-CT25-X7-01-UP	800	0.0221	0.0333	0.0348	0.6656	0.3198	0.2736	908	924	855	1246	1237	52.4	8810
B - Aluminum Conductors														
PM-AT14-X7-01-UP	50	0.6410	0.8219	0.8220	0.2209	0.4535	0.4073	174	169	141	185	184	24.4	680
PM-AT15-X7-01-UP	70	0.4430	0.5682	0.5682	0.2465	0.4341	0.3879	213	207	174	232	232	26.1	780
PM-AT16-X7-01-UP	95	0.3200	0.4106	0.4107	0.2736	0.4161	0.3698	255	247	209	281	278	27.7	895
PM-AT17-X7-01-UP	120	0.2530	0.3248	0.3249	0.2955	0.4026	0.3564	290	281	238	324	324	29.2	1005
PM-AT18-X7-01-UP	150	0.2060	0.2646	0.2647	0.3241	0.3890	0.3428	321	315	268	366	366	30.9	1195
PM-AT19-X7-01-UP	185	0.1640	0.2110	0.2111	0.3543	0.3769	0.3307	363	358	306	422	426	32.7	1340
PM-AT20-X7-01-UP	240	0.1250	0.1612	0.1614	0.3877	0.3654	0.3191	419	414	355	506	498	34.9	1550
PM-AT21-X7-01-UP	300	0.1000	0.1294	0.1297	0.4245	0.3549	0.3087	463	465	401	581	574	37.1	1765
PM-AT22-X7-01-UP	400	0.0778	0.1013	0.1017	0.4695	0.3462	0.3000	533	530	463	672	670	40.2	2200
PM-AT23-X7-01-UP	500	0.0605	0.0797	0.0803	0.5244	0.3363	0.2901	602	605	534	782	781	43.7	2600
PM-AT24-X7-01-UP	630	0.0469	0.0628	0.0637	0.5942	0.3285	0.2823	686	686	618	911	907	47.9	3110
PM-AT25-X7-01-UP	800	0.0367	0.0506	0.0517	0.6656	0.3198	0.2736	775	775	714	1051	1038	52.4	3745

The above data is approximate and subject to manufacturing tolerances

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Tape armored and PVC Sheathed

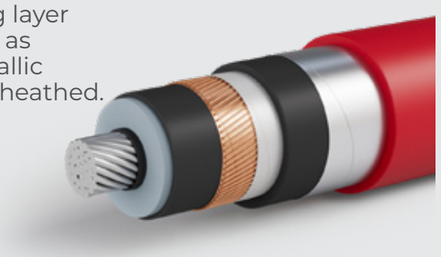


Voltage Grade

8.7 / 15 (17.5) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum tape and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Double Aluminum Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X7-01-DP	50	0.3870	0.4937	0.4937	0.2141	0.4936	0.4474	224	218	241	236	28.4	1245
PM-CT15-X7-01-DP	70	0.2680	0.3420	0.3421	0.2448	0.4664	0.4201	276	267	302	295	30.2	1490
PM-CT16-X7-01-DP	95	0.1930	0.2466	0.2466	0.2702	0.4466	0.4003	328	316	366	358	31.7	1765
PM-CT17-X7-01-DP	120	0.1530	0.1957	0.1958	0.2938	0.4292	0.3830	372	361	420	412	33.1	2025
PM-CT18-X7-01-DP	150	0.1240	0.1589	0.1590	0.3191	0.4169	0.3707	410	402	474	469	34.8	2420
PM-CT19-X7-01-DP	185	0.0991	0.1274	0.1276	0.3492	0.4042	0.3580	461	454	545	540	36.8	2825
PM-CT20-X7-01-DP	240	0.0754	0.0975	0.0978	0.3877	0.3881	0.3419	530	528	642	636	39.1	3400
PM-CT21-X7-01-DP	300	0.0601	0.0783	0.0787	0.4245	0.3783	0.3320	588	588	733	728	41.7	4070
PM-CT22-X7-01-DP	400	0.0470	0.0622	0.0628	0.4695	0.3670	0.3207	655	662	835	842	44.6	5035
PM-CT23-X7-01-DP	500	0.0366	0.0497	0.0505	0.5244	0.3555	0.3093	720	737	964	969	48.1	6165
PM-CT24-X7-01-DP	630	0.0283	0.0399	0.0409	0.5925	0.3471	0.3009	804	825	1073	1086	52.4	7560
PM-CT25-X7-01-DP	800	0.0221	0.0329	0.0342	0.6656	0.3374	0.2911	879	908	1210	1225	57.2	9475
B - Aluminum Conductors													
PM-AT14-X7-01-DP	50	0.6410	0.8219	0.8219	0.2209	0.4867	0.4405	171	170	185	184	28.8	975
PM-AT15-X7-01-DP	70	0.4430	0.5682	0.5682	0.2465	0.4640	0.4178	210	208	232	232	30.3	1085
PM-AT16-X7-01-DP	95	0.3200	0.4106	0.4106	0.2736	0.4443	0.3981	251	248	281	278	31.9	1210
PM-AT17-X7-01-DP	120	0.2530	0.3248	0.3248	0.2955	0.4405	0.3933	285	282	324	324	33.8	1360
PM-AT18-X7-01-DP	150	0.2060	0.2646	0.2646	0.3241	0.4145	0.3682	317	315	366	366	35.1	1550
PM-AT19-X7-01-DP	185	0.1640	0.2109	0.2111	0.3543	0.4021	0.3559	357	358	422	426	37.1	1730
PM-AT20-X7-01-DP	240	0.1250	0.1611	0.1613	0.3877	0.3881	0.3419	417	414	506	498	39.1	1945
PM-AT21-X7-01-DP	300	0.1000	0.1293	0.1295	0.4245	0.3783	0.3320	459	463	581	574	41.7	2220
PM-AT22-X7-01-DP	400	0.0778	0.1011	0.1015	0.4695	0.3670	0.3207	517	527	672	670	44.6	2670
PM-AT23-X7-01-DP	500	0.0605	0.0795	0.0800	0.5244	0.3555	0.3093	595	602	782	781	48.1	3110
PM-AT24-X7-01-DP	630	0.0469	0.0626	0.0633	0.5942	0.3468	0.3006	670	679	894	895	52.5	3695
PM-AT25-X7-01-DP	800	0.0367	0.0503	0.0512	0.6656	0.3374	0.2911	749	761	1025	1025	57.2	4405

The above data is approximate and subject to manufacturing tolerances

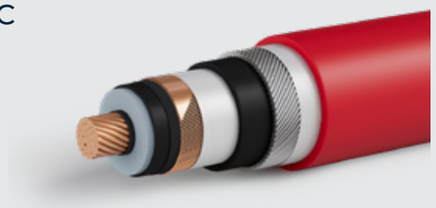
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

Longitudinal or radial Water tightness layers are also available according to customer request

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Wire armored and PVC Sheathed

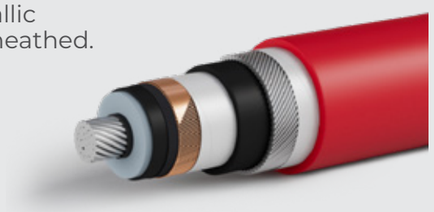


Voltage Grade

8.7 / 15 (17.5) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum wire and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum Wires applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X7-01-RP	50	0.3870	0.4937	0.4937	0.2141	0.5053	0.4590	228	220	241	236	30.1	1380
PM-CT15-X7-01-RP	70	0.2680	0.3420	0.3421	0.2448	0.4773	0.4311	275	268	301	295	31.9	1635
PM-CT16-X7-01-RP	95	0.1930	0.2465	0.2466	0.2702	0.4617	0.4155	323	318	364	358	34.2	1995
PM-CT17-X7-01-RP	120	0.1530	0.1957	0.1958	0.2938	0.4438	0.3976	360	358	417	412	35.6	2260
PM-CT18-X7-01-RP	150	0.1240	0.1588	0.1589	0.3191	0.4308	0.3846	394	398	471	468	37.3	2675
PM-CT19-X7-01-RP	185	0.0991	0.1273	0.1275	0.3492	0.4164	0.3701	443	445	536	530	39.1	3065
PM-CT20-X7-01-RP	240	0.0754	0.0974	0.0977	0.3877	0.4005	0.3543	501	503	627	623	41.6	3685
PM-CT21-X7-01-RP	300	0.0601	0.0782	0.0786	0.4245	0.3944	0.3482	545	556	708	689	45.2	4500
PM-CT22-X7-01-RP	400	0.0470	0.0621	0.0625	0.4695	0.3812	0.3350	592	614	804	768	47.9	5470
PM-CT23-X7-01-RP	500	0.0366	0.0495	0.0502	0.5244	0.3695	0.3233	646	675	909	851	51.6	6655
PM-CT24-X7-01-RP	630	0.0283	0.0397	0.0406	0.5925	0.3601	0.3138	691	735	964	990	55.9	8095
PM-CT25-X7-01-RP	800	0.0221	0.0327	0.0338	0.6656	0.3492	0.3030	743	785	1057	1093	60.7	10055
B - Aluminum Conductors													
PM-AT14-X7-01-RP	50	0.6410	0.8219	0.8219	0.2209	0.4982	0.4519	180	171	185	184	30.5	1115
PM-AT15-X7-01-RP	70	0.4430	0.5682	0.5682	0.2465	0.4749	0.4287	218	209	232	232	32.0	1230
PM-AT16-X7-01-RP	95	0.3200	0.4106	0.4106	0.2736	0.4594	0.4132	258	249	281	278	34.4	1445
PM-AT17-X7-01-RP	120	0.2530	0.3247	0.3248	0.2955	0.4428	0.3966	289	282	324	324	35.7	1555
PM-AT18-X7-01-RP	150	0.2060	0.2645	0.2646	0.3241	0.4282	0.3820	320	313	366	366	37.6	1800
PM-AT19-X7-01-RP	185	0.1640	0.2109	0.2110	0.3543	0.4142	0.3679	357	353	422	424	39.4	1980
PM-AT20-X7-01-RP	240	0.1250	0.1611	0.1612	0.3877	0.4005	0.3543	402	404	506	498	41.6	2230
PM-AT21-X7-01-RP	300	0.1000	0.1292	0.1294	0.4245	0.3944	0.3482	442	450	574	561	45.2	2655
PM-AT22-X7-01-RP	400	0.0778	0.1010	0.1013	0.4695	0.3812	0.3350	489	505	661	639	47.9	3105
PM-AT23-X7-01-RP	500	0.0605	0.0794	0.0798	0.5244	0.3695	0.3233	539	565	760	722	51.6	3600
PM-AT24-X7-01-RP	630	0.0469	0.0624	0.0631	0.5942	0.3598	0.3135	600	623	833	840	56.0	4230
PM-AT25-X7-01-RP	800	0.0367	0.0501	0.0510	0.6656	0.3492	0.3030	663	689	936	953	60.7	4990

The above data is approximate and subject to manufacturing tolerances

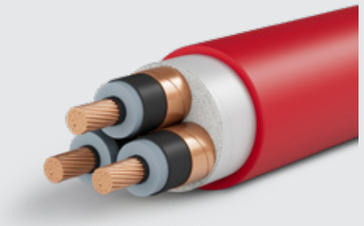
Note:-

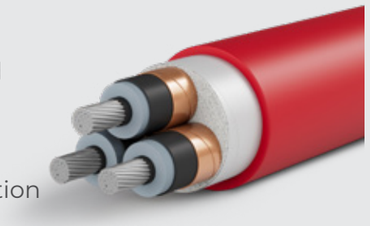
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

Longitudinal or radial Water tightness layers are also available according to customer request

Multicores Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed





Voltage Grade

8.7 / 15 (17.5) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating			Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Duct	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	A	mm	kg/km
A - Copper Conductors										
PM-CT14-X7-03-UP	50	0.3870	0.4956	0.2141	0.3705	208	170	220	46.2	2910
PM-CT15-X7-03-UP	70	0.2680	0.3435	0.2448	0.3488	256	210	275	50.3	3700
PM-CT16-X7-03-UP	95	0.1930	0.2477	0.2702	0.3330	304	252	330	53.7	4505
PM-CT17-X7-03-UP	120	0.1530	0.1968	0.2938	0.3191	345	289	377	56.9	5315
PM-CT18-X7-03-UP	150	0.1240	0.1599	0.3191	0.3105	385	325	427	60.6	6440
PM-CT19-X7-03-UP	185	0.0991	0.1285	0.3492	0.3002	434	371	486	64.7	7650
PM-CT20-X7-03-UP	240	0.0754	0.0988	0.3877	0.2866	500	434	567	69.6	9465
PM-CT21-X7-03-UP	300	0.0601	0.0799	0.4245	0.2783	561	498	645	74.6	11440
PM-CT22-X7-03-UP	400	0.0470	0.0641	0.4695	0.2710	634	568	739	81.2	14270
PM-CT23-X7-03-UP	500	0.0366	0.0520	0.5244	0.2626	708	648	839	88.8	17795
B - Aluminum Conductors										
PM-AT14-X7-03-UP	50	0.6410	0.8251	0.2209	0.3648	162	132	170	47.0	2085
PM-AT15-X7-03-UP	70	0.4430	0.5704	0.2465	0.3467	198	163	212	50.5	2470
PM-AT16-X7-03-UP	95	0.3200	0.4123	0.2736	0.3313	236	196	257	54.1	2825
PM-AT17-X7-03-UP	120	0.2530	0.3262	0.2955	0.3184	269	224	294	57.1	3195
PM-AT18-X7-03-UP	150	0.2060	0.2658	0.3241	0.3086	301	253	333	61.2	3815
PM-AT19-X7-03-UP	185	0.1640	0.2121	0.3543	0.2986	340	289	380	65.3	4360
PM-AT20-X7-03-UP	240	0.1250	0.1623	0.3877	0.2866	393	339	446	69.6	5090
PM-AT21-X7-03-UP	300	0.1000	0.1305	0.4245	0.2783	445	387	511	74.6	5890
PM-AT22-X7-03-UP	400	0.0778	0.1025	0.4695	0.2710	508	448	590	81.2	7155
PM-AT23-X7-03-UP	500	0.0605	0.0812	0.5244	0.2626	578	526	683	88.8	8610

The above data is approximate and subject to manufacturing tolerances

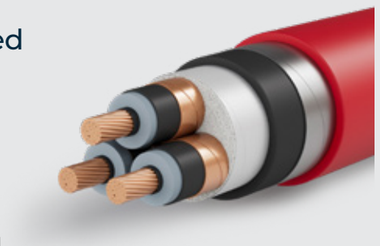
Note:-

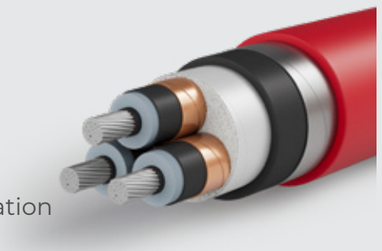
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

Longitudinal or radial Water tightness layers are also available according to customer request

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Tape armored and PVC Sheathed





Voltage Grade

8.7 / 15 (17.5) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape armored with steel tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X7-03-TP	50	0.3870	0.4957	0.2141	0.3705	207	213	48.8	3780
PM-CT15-X7-03-TP	70	0.2680	0.3437	0.2448	0.3488	255	266	53.3	4695
PM-CT16-X7-03-TP	95	0.1930	0.2481	0.2702	0.3330	302	319	56.5	5530
PM-CT17-X7-03-TP	120	0.1530	0.1973	0.2938	0.3191	343	365	59.9	6430
PM-CT18-X7-03-TP	150	0.1240	0.1605	0.3191	0.3105	383	413	64.0	7695
PM-CT19-X7-03-TP	185	0.0991	0.1293	0.3492	0.3002	432	469	68.1	8980
PM-CT20-X7-03-TP	240	0.0754	0.0999	0.3877	0.2866	498	548	73.0	10880
PM-CT21-X7-03-TP	300	0.0601	0.0813	0.4245	0.2783	558	623	79.3	13640
PM-CT22-X7-03-TP	400	0.0470	0.0660	0.4695	0.2710	628	714	86.1	16685
PM-CT23-X7-03-TP	500	0.0366	0.0545	0.5244	0.2626	701	810	94.1	20510
B - Aluminum Conductors									
PM-AT14-X7-03-TP	50	0.6410	0.8252	0.2209	0.3648	161	165	49.6	2970
PM-AT15-X7-03-TP	70	0.4430	0.5705	0.2465	0.3467	197	205	53.5	3470
PM-AT16-X7-03-TP	95	0.3200	0.4125	0.2736	0.3313	235	248	56.9	3860
PM-AT17-X7-03-TP	120	0.2530	0.3265	0.2955	0.3184	268	284	60.1	4315
PM-AT18-X7-03-TP	150	0.2060	0.2662	0.3241	0.3086	299	321	64.6	5080
PM-AT19-X7-03-TP	185	0.1640	0.2126	0.3543	0.2986	339	368	68.7	5705
PM-AT20-X7-03-TP	240	0.1250	0.1630	0.3877	0.2866	392	431	73.0	6510
PM-AT21-X7-03-TP	300	0.1000	0.1314	0.4245	0.2783	443	494	79.3	8090
PM-AT22-X7-03-TP	400	0.0778	0.1038	0.4695	0.2710	503	570	86.1	9575
PM-AT23-X7-03-TP	500	0.0605	0.0828	0.5244	0.2626	572	660	94.1	11330

The above data is approximate and subject to manufacturing tolerances

Note:-

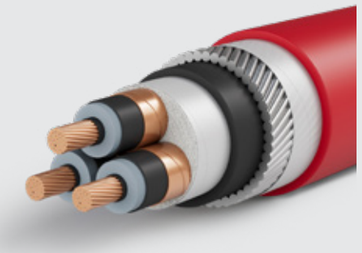
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

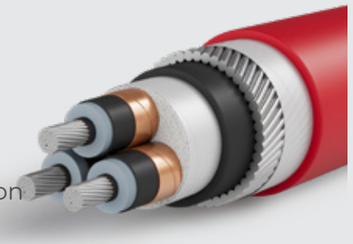
Longitudinal or radial Water tightness layers are also available according to customer request

Galvanized Steel Tapes is available according to customer request

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Wires armored and PVC Sheathed





Voltage Grade

8.7 / 15 (17.5) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape banded with suitable tape, armored with Galvanized steel wires, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X7-03-WP	50	0.3870	0.4957	0.2141	0.3705	208	218	52.8	5160
PM-CT15-X7-03-WP	70	0.2680	0.3437	0.2448	0.3488	256	272	57.1	6185
PM-CT16-X7-03-WP	95	0.1930	0.2481	0.2702	0.3330	304	326	60.5	7155
PM-CT17-X7-03-WP	120	0.1530	0.1973	0.2938	0.3191	344	372	63.9	8165
PM-CT18-X7-03-WP	150	0.1240	0.1605	0.3191	0.3105	386	424	69.5	10255
PM-CT19-X7-03-WP	185	0.0991	0.1293	0.3492	0.3002	432	479	73.4	11695
PM-CT20-X7-03-WP	240	0.0754	0.0999	0.3877	0.2866	496	558	78.3	13780
PM-CT21-X7-03-WP	300	0.0601	0.0813	0.4245	0.2783	552	632	83.5	16115
PM-CT22-X7-03-WP	400	0.0470	0.0660	0.4695	0.2710	617	714	90.3	19385
PM-CT23-X7-03-WP	500	0.0366	0.0545	0.5244	0.2626	683	804	98.3	23475
B - Aluminum Conductors									
PM-AT14-X7-03-WP	50	0.6410	0.8252	0.2209	0.3648	162	169	53.6	4375
PM-AT15-X7-03-WP	70	0.4430	0.5705	0.2465	0.3467	198	210	57.3	4960
PM-AT16-X7-03-WP	95	0.3200	0.4125	0.2736	0.3313	236	253	60.9	5475
PM-AT17-X7-03-WP	120	0.2530	0.3265	0.2955	0.3184	269	290	64.1	6065
PM-AT18-X7-03-WP	150	0.2060	0.2662	0.3241	0.3086	301	331	70.1	7695
PM-AT19-X7-03-WP	185	0.1640	0.2126	0.3543	0.2986	339	376	74.0	8470
PM-AT20-X7-03-WP	240	0.1250	0.1630	0.3877	0.2866	392	441	78.3	9405
PM-AT21-X7-03-WP	300	0.1000	0.1314	0.4245	0.2783	440	501	83.5	10565
PM-AT22-X7-03-WP	400	0.0778	0.1038	0.4695	0.2710	498	574	90.3	12275
PM-AT23-X7-03-WP	500	0.0605	0.0828	0.5244	0.2626	562	659	98.3	14295

The above data is approximate and subject to manufacturing tolerances

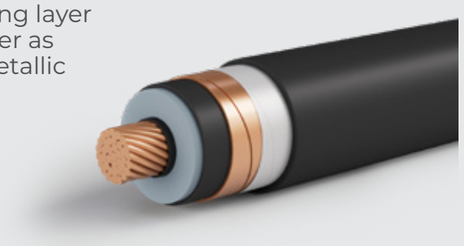
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

Longitudinal or radial Water tightness layers are also available according to customer request

Single core Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed



Voltage Grade

12 / 20 (24) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

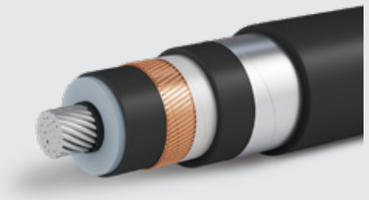
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 12.7/22 (24) KV

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating					Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground			Laid in Free Air			
			Flat	Trefoil		Flat	Trefoil	Flat	Trefoil	Duct	Flat Touched	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	A	mm	kg/km
A - Copper Conductors														
PM-CT14-X8-01-UP	50	0.3870	0.4937	0.4937	0.1836	0.4775	0.4313	226	218	189	246	241	26.2	1040
PM-CT15-X8-01-UP	70	0.2680	0.3420	0.3421	0.2087	0.4527	0.4064	278	267	232	308	301	28.2	1285
PM-CT16-X8-01-UP	95	0.1930	0.2466	0.2466	0.2294	0.4335	0.3873	331	316	277	373	365	29.7	1550
PM-CT17-X8-01-UP	120	0.1530	0.1957	0.1958	0.2486	0.4168	0.3706	375	362	317	429	420	31.1	1800
PM-CT18-X8-01-UP	150	0.1240	0.1589	0.1590	0.2692	0.4039	0.3576	415	404	353	484	474	32.6	2165
PM-CT19-X8-01-UP	185	0.0991	0.1274	0.1277	0.2937	0.9190	0.3457	466	456	402	556	545	34.6	2555
PM-CT20-X8-01-UP	240	0.0754	0.0975	0.0979	0.3429	0.3765	0.3303	535	528	468	655	642	36.9	3115
PM-CT21-X8-01-UP	300	0.0601	0.0784	0.0789	0.3547	0.3664	0.3202	594	591	527	748	735	39.3	3745
PM-CT22-X8-01-UP	400	0.0470	0.0623	0.0629	0.3912	0.3559	0.3097	663	665	600	852	842	42.2	4685
PM-CT23-X8-01-UP	500	0.0366	0.0498	0.0507	0.4357	0.3452	0.2990	742	749	682	979	969	45.7	5785
PM-CT24-X8-01-UP	630	0.0283	0.0401	0.0412	0.4909	0.3369	0.2907	833	842	755	1115	1108	49.8	7125
PM-CT25-X8-01-UP	800	0.0221	0.0331	0.0345	0.5500	0.3281	0.2818	910	931	863	1262	1257	54.6	8995
PM-CM26-X8-01-UP	1000	0.0176	0.0251	0.0254	0.6814	0.3296	0.2834	1071	1095	1026	1524	1529	65.4	11955
B - Aluminum Conductors														
PM-AT14-X8-01-UP	50	0.6410	0.8219	0.8219	0.1892	0.4708	0.4246	175	169	146	191	188	26.6	765
PM-AT15-X8-01-UP	70	0.4430	0.5682	0.5682	0.2101	0.4503	0.4041	214	207	179	239	234	28.3	875
PM-AT16-X8-01-UP	95	0.3200	0.4106	0.4106	0.2322	0.4314	0.3851	256	247	216	290	284	29.9	990
PM-AT17-X8-01-UP	120	0.2530	0.3248	0.3248	0.2500	0.4158	0.3696	291	281	246	334	326	31.2	1095
PM-AT18-X8-01-UP	150	0.2060	0.2646	0.2647	0.2733	0.4015	0.3553	323	315	276	377	370	32.9	1290
PM-AT19-X8-01-UP	185	0.1640	0.2109	0.2111	0.2978	0.3899	0.3437	365	358	316	435	428	34.9	1460
PM-AT20-X8-01-UP	240	0.1250	0.1612	0.1614	0.3249	0.3765	0.3303	421	414	366	514	503	36.9	1660
PM-AT21-X8-01-UP	300	0.1000	0.1293	0.1296	0.3547	0.3664	0.3202	466	465	414	590	577	39.3	1895
PM-AT22-X8-01-UP	400	0.0778	0.1012	0.1016	0.3912	0.3559	0.3097	533	530	477	682	670	42.2	2320
PM-AT23-X8-01-UP	500	0.0605	0.0796	0.0802	0.4357	0.3452	0.2990	602	605	550	779	781	45.7	2730
PM-AT24-X8-01-UP	630	0.0469	0.0627	0.0635	0.4922	0.3367	0.2905	686	686	621	920	907	49.9	3255
PM-AT25-X8-01-UP	800	0.0367	0.0505	0.0515	0.5500	0.3281	0.2818	775	775	719	1055	1042	54.6	3930
PM-AM26-X8-01-UP	1000	0.0291	0.0390	0.0392	0.6814	0.3296	0.2834	911	920	862	1290	1282	65.4	5325

The above data is approximate and subject to manufacturing tolerances

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Tape armored and PVC Sheathed

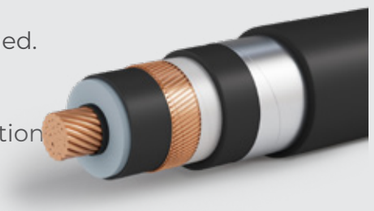


Voltage Grade

12 / 20 (24) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum tape and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Double Aluminum Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X8-01-DP	50	0.3870	0.4937	0.4937	0.1836	0.5073	0.4610	224	217	245	241	30.4	1340
PM-CT15-X8-01-DP	70	0.2680	0.3420	0.3420	0.2087	0.4792	0.4330	276	266	303	301	32.2	1595
PM-CT16-X8-01-DP	95	0.1930	0.2465	0.2466	0.2294	0.4600	0.4138	328	315	366	365	33.9	1890
PM-CT17-X8-01-DP	120	0.1530	0.1957	0.1958	0.2486	0.4421	0.3959	372	360	424	420	35.3	2155
PM-CT18-X8-01-DP	150	0.1240	0.1588	0.1590	0.2692	0.4292	0.3830	410	402	481	474	37.0	2555
PM-CT19-X8-01-DP	185	0.0991	0.1273	0.1275	0.2937	0.4148	0.3686	461	454	551	545	38.8	2945
PM-CT20-X8-01-DP	240	0.0754	0.0974	0.0977	0.3429	0.4000	0.3538	530	528	649	642	41.5	3570
PM-CT21-X8-01-DP	300	0.0601	0.0783	0.0786	0.3547	0.3885	0.3423	588	588	742	735	43.9	4230
PM-CT22-X8-01-DP	400	0.0470	0.0621	0.0626	0.3912	0.3766	0.3304	657	658	844	838	46.8	5205
PM-CT23-X8-01-DP	500	0.0366	0.0496	0.0503	0.4357	0.3644	0.3182	735	734	973	954	50.3	6345
PM-CT24-X8-01-DP	630	0.0283	0.0398	0.0407	0.4909	0.3554	0.3091	810	829	1090	1097	54.6	7755
PM-CT25-X8-01-DP	800	0.0221	0.0328	0.0339	0.5500	0.3442	0.2980	884	912	1222	1234	59.2	9655
PM-CM26-X8-01-DP	1000	0.0176	0.0250	0.0253	0.6814	0.3138	0.2976	1062	1093	1507	1519	70.2	12775
B - Aluminum Conductors													
PM-AT14-X8-01-DP	50	0.6410	0.8219	0.8219	0.1892	0.5001	0.4539	173	169	191	188	30.8	1075
PM-AT15-X8-01-DP	70	0.4430	0.5682	0.5682	0.2101	0.4768	0.4305	212	207	236	234	32.3	1185
PM-AT16-X8-01-DP	95	0.3200	0.4106	0.4106	0.2322	0.4576	0.4114	254	247	287	284	34.1	1335
PM-AT17-X8-01-DP	120	0.2530	0.3247	0.3248	0.2500	0.4411	0.3949	288	281	332	326	35.4	1450
PM-AT18-X8-01-DP	150	0.2060	0.2645	0.2646	0.2733	0.4266	0.3804	320	315	375	370	37.3	1685
PM-AT19-X8-01-DP	185	0.1640	0.2109	0.2110	0.2978	0.4126	0.3664	361	358	432	428	39.1	1855
PM-AT20-X8-01-DP	240	0.1250	0.1611	0.1612	0.3249	0.4000	0.3538	417	414	509	503	41.5	2115
PM-AT21-X8-01-DP	300	0.1000	0.1292	0.1294	0.3547	0.3885	0.3423	461	465	585	577	43.9	2380
PM-AT22-X8-01-DP	400	0.0778	0.1011	0.1014	0.3912	0.3766	0.3304	528	530	679	673	46.8	2840
PM-AT23-X8-01-DP	500	0.0605	0.0794	0.0799	0.4357	0.3644	0.3182	596	602	779	776	50.3	3290
PM-AT24-X8-01-DP	630	0.0469	0.0625	0.0631	0.4922	0.3551	0.3088	672	683	908	900	54.7	2890
PM-AT25-X8-01-DP	800	0.0367	0.0502	0.0511	0.5500	0.3442	0.2980	751	765	1030	1032	59.2	4590
PM-AM26-X8-01-DP	1000	0.0291	0.0389	0.0391	0.6814	0.3138	0.2976	905	919	1277	1274	70.2	6145

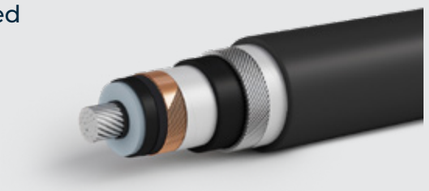
The above data is approximate and subject to manufacturing tolerances

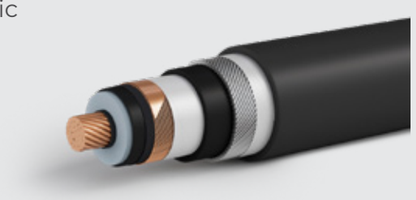
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 12.7/22 (24) KV

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Wire armored and PVC Sheathed





Voltage Grade

12 / 20 (24) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum wire and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum Wires applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X8-01-RP	50	0.3870	0.4937	0.4937	0.1836	0.5218	0.4756	228	220	244	241	32.7	1540
PM-CT15-X8-01-RP	70	0.2680	0.3420	0.3420	0.2087	0.4941	0.4479	275	268	303	301	34.7	1825
PM-CT16-X8-01-RP	95	0.1930	0.2465	0.2466	0.2294	0.4731	0.4269	323	318	366	365	36.2	2110
PM-CT17-X8-01-RP	120	0.1530	0.1957	0.1957	0.2486	0.4558	0.4096	360	358	419	418	37.8	2405
PM-CT18-X8-01-RP	150	0.1240	0.1588	0.1589	0.2692	0.4412	0.3950	394	398	473	468	39.3	2805
PM-CT19-X8-01-RP	185	0.0991	0.1273	0.1275	0.2937	0.4273	0.3811	443	445	539	530	41.3	3220
PM-CT20-X8-01-RP	240	0.0754	0.0973	0.0976	0.3429	0.4162	0.3700	501	503	628	623	45.0	4000
PM-CT21-X8-01-RP	300	0.0601	0.0782	0.0785	0.3547	0.4030	0.3568	545	556	712	689	47.2	4655
PM-CT22-X8-01-RP	400	0.0470	0.0620	0.0624	0.3912	0.3910	0.3448	592	614	808	768	50.3	5690
PM-CT23-X8-01-RP	500	0.0366	0.0494	0.0500	0.4357	0.3779	0.3317	646	675	914	851	53.8	6865
PM-CT24-X8-01-RP	630	0.0283	0.0396	0.0404	0.4909	0.3678	0.3216	700	735	975	995	58.1	8320
PM-CT25-X8-01-RP	800	0.0221	0.0326	0.0336	0.5500	0.3557	0.3095	743	791	1065	1106	62.7	10270
PM-CM26-X8-01-RP	1000	0.0176	0.0250	0.0252	0.6814	0.3535	0.3073	818	874	1216	1264	73.7	13500
B - Aluminum Conductors													
PM-AT14-X8-01-RP	50	0.6410	0.8219	0.8219	0.1892	0.5145	0.4683	180	171	191	188	33.1	1280
PM-AT15-X8-01-RP	70	0.4430	0.5682	0.5682	0.2101	0.4917	0.4454	218	209	236	234	34.8	1415
PM-AT16-X8-01-RP	95	0.3200	0.4106	0.4106	0.2322	0.4707	0.4245	258	249	285	284	36.4	1565
PM-AT17-X8-01-RP	120	0.2530	0.3247	0.3248	0.2500	0.4548	0.4085	289	282	331	326	37.9	1700
PM-AT18-X8-01-RP	150	0.2060	0.2645	0.2646	0.2733	0.4386	0.3924	320	313	374	370	39.6	1930
PM-AT19-X8-01-RP	185	0.1640	0.2109	0.2110	0.2978	0.4250	0.3788	357	353	428	424	41.6	2135
PM-AT20-X8-01-RP	240	0.1250	0.1610	0.1612	0.3249	0.4162	0.3700	402	404	503	500	45.0	2545
PM-AT21-X8-01-RP	300	0.1000	0.1292	0.1294	0.3547	0.4030	0.3568	442	450	574	561	47.2	2805
PM-AT22-X8-01-RP	400	0.0778	0.1010	0.1013	0.3912	0.3910	0.3448	489	505	661	639	50.3	3320
PM-AT23-X8-01-RP	500	0.0605	0.0793	0.0797	0.4357	0.3779	0.3317	539	565	760	722	53.8	3810
PM-AT24-X8-01-RP	630	0.0469	0.0624	0.0629	0.4922	0.3675	0.3212	605	625	833	840	58.2	4455
PM-AT25-X8-01-RP	800	0.0367	0.0501	0.0508	0.5500	0.3557	0.3095	663	691	942	956	62.7	5200
PM-AM26-X8-01-RP	1000	0.0291	0.3890	0.0391	0.6814	0.3535	0.3073	740	778	1087	1114	73.7	6890

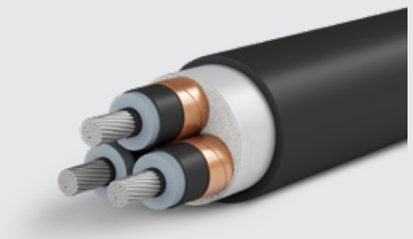
The above data is approximate and subject to manufacturing tolerances

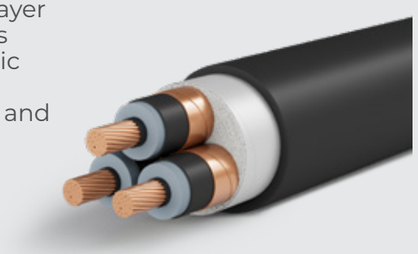
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 12.7/22 (24) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed





Voltage Grade

12 / 20 (24) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating			Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Duct	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	A	mm	kg/km
A - Copper Conductors										
PM-CT14-X8-03-UP	50	0.3870	0.4957	0.1836	0.3904	208	175	223	50.7	3235
PM-CT15-X8-03-UP	70	0.2680	0.3434	0.2087	0.3671	256	215	278	54.8	4055
PM-CT16-X8-03-UP	95	0.1930	0.2476	0.2294	0.3501	304	258	333	58.2	4940
PM-CT17-X8-03-UP	120	0.1530	0.1968	0.2486	0.3353	344	295	379	61.4	5780
PM-CT18-X8-03-UP	150	0.1240	0.1598	0.2692	0.3256	386	333	430	65.3	6915
PM-CT19-X8-03-UP	185	0.0991	0.1284	0.2937	0.3143	434	379	488	69.4	8165
PM-CT20-X8-03-UP	240	0.0754	0.0986	0.3249	0.2998	501	443	573	74.1	9950
PM-CT21-X8-03-UP	300	0.0601	0.0796	0.3547	0.2906	563	499	652	79.1	11950
PM-CT22-X8-03-UP	400	0.0470	0.0638	0.3912	0.2823	641	563	740	85.8	10865
PM-CT23-X8-03-UP	500	0.0366	0.0516	0.4357	0.2730	717	642	843	93.1	18370
B - Aluminum Conductors										
PM-AT14-X8-03-UP	50	0.6410	0.8251	0.1892	0.3844	162	135	173	51.6	2420
PM-AT15-X8-03-UP	70	0.4430	0.5705	0.2101	0.3649	198	167	215	55.0	2825
PM-AT16-X8-03-UP	95	0.3200	0.4123	0.2322	0.3483	236	200	259	58.7	3265
PM-AT17-X8-03-UP	120	0.2530	0.3262	0.2500	0.3344	268	230	296	61.7	3660
PM-AT18-X8-03-UP	150	0.2060	0.2658	0.2733	0.3236	301	258	335	66.0	4290
PM-AT19-X8-03-UP	185	0.1640	0.2120	0.2978	0.3113	340	295	382	69.6	4860
PM-AT20-X8-03-UP	240	0.1250	0.1622	0.3249	0.2998	394	346	450	74.1	5580
PM-AT21-X8-03-UP	300	0.1000	0.1304	0.3547	0.2906	445	390	514	79.1	6400
PM-AT22-X8-03-UP	400	0.0778	0.1024	0.3912	0.2823	508	450	588	85.8	7750
PM-AT23-X8-03-UP	500	0.0605	0.0809	0.4357	0.2730	578	525	680	93.1	9190

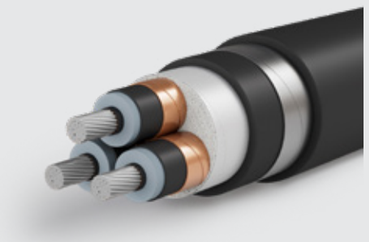
The above data is approximate and subject to manufacturing tolerances

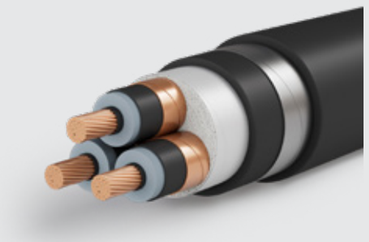
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 12.7/22 (24) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Tape armored and PVC Sheathed





Voltage Grade

12 / 20 (24) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compactedAluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape, armored with steel tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X8-03-TP	50	0.3870	0.4958	0.1836	0.3904	207	216	53.7	4240
PM-CT15-X8-03-TP	70	0.2680	0.3436	0.2087	0.3671	255	269	57.6	5105
PM-CT16-X8-03-TP	95	0.1930	0.2480	0.2294	0.3501	302	321	61.2	6080
PM-CT17-X8-03-TP	120	0.1530	0.1972	0.2486	0.3353	342	367	64.8	7040
PM-CT18-X8-03-TP	150	0.1240	0.1604	0.2692	0.3256	384	416	68.7	8245
PM-CT19-X8-03-TP	185	0.0991	0.1291	0.2937	0.3143	432	471	72.8	9575
PM-CT20-X8-03-TP	240	0.0754	0.0996	0.3249	0.2998	498	554	78.8	12140
PM-CT21-X8-03-TP	300	0.0601	0.0810	0.3547	0.2906	560	630	84.0	14320
PM-CT22-X8-03-TP	400	0.0470	0.0656	0.3912	0.2823	629	715	90.9	17455
PM-CT23-X8-03-TP	500	0.0366	0.0540	0.4357	0.2730	703	814	98.6	21265
B - Aluminum Conductors									
PM-AT14-X8-03-TP	50	0.6410	0.8251	0.1892	0.3844	161	168	54.6	3440
PM-AT15-X8-03-TP	70	0.4430	0.5706	0.2101	0.3649	197	208	57.8	3880
PM-AT16-X8-03-TP	95	0.3200	0.4125	0.2322	0.3483	235	250	61.7	4415
PM-AT17-X8-03-TP	120	0.2530	0.3265	0.2500	0.3344	267	286	65.1	4925
PM-AT18-X8-03-TP	150	0.2060	0.2658	0.2733	0.3236	299	323	69.4	5635
PM-AT19-X8-03-TP	185	0.1640	0.2125	0.2978	0.3113	339	369	73.0	6275
PM-AT20-X8-03-TP	240	0.1250	0.1628	0.3249	0.2998	392	435	78.8	7765
PM-AT21-X8-03-TP	300	0.1000	0.1312	0.3547	0.2906	443	497	84.0	8770
PM-AT22-X8-03-TP	400	0.0778	0.1035	0.3912	0.2823	503	571	90.9	10345
PM-AT23-X8-03-TP	500	0.0605	0.0825	0.4357	0.2730	572	661	98.6	12085

The above data is approximate and subject to manufacturing tolerances

Note:-

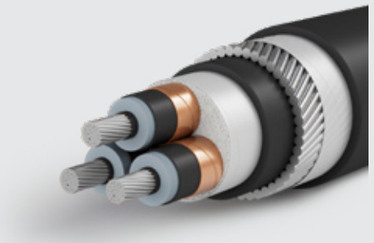
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

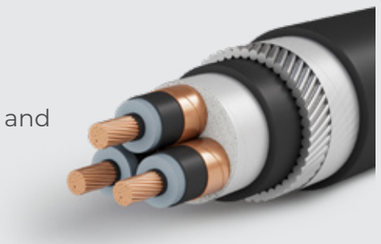
Longitudinal or radial Water tightness layers are also available according to customer request

Galvanzied Steel Tapes is available according to customer request

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Wires armored and PVC Sheathed





Voltage Grade

12 / 20 (24) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape, armored with Galvanized steel wires, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanzied Steel Wires over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X8-03-WP	50	0.3870	0.4958	0.1836	0.3904	209	221	57.5	5760
PM-CT15-X8-03-WP	70	0.2680	0.3436	0.2087	0.3671	256	274	61.6	6750
PM-CT16-X8-03-WP	95	0.1930	0.2480	0.2294	0.3501	303	328	65.2	7835
PM-CT17-X8-03-WP	120	0.1530	0.1972	0.2486	0.3353	344	376	70.1	9625
PM-CT18-X8-03-WP	150	0.1240	0.1604	0.2692	0.3256	383	425	73.8	10925
PM-CT19-X8-03-WP	185	0.0991	0.1291	0.2937	0.3143	430	481	78.1	12475
PM-CT20-X8-03-WP	240	0.0754	0.0996	0.3249	0.2998	492	559	83.0	14565
PM-CT21-X8-03-WP	300	0.0601	0.0810	0.3547	0.2906	550	633	88.2	16940
PM-CT22-X8-03-WP	400	0.0470	0.0656	0.3912	0.2823	614	714	95.1	20300
PM-CT23-X8-03-WP	500	0.0366	0.0540	0.4357	0.2730	681	806	102.8	24380
B - Aluminum Conductors									
PM-AT14-X8-03-WP	50	0.6410	0.8251	0.1892	0.3844	162	171	58.4	4985
PM-AT15-X8-03-WP	70	0.4430	0.5706	0.2101	0.3649	198	212	61.8	5520
PM-AT16-X8-03-WP	95	0.3200	0.4125	0.2322	0.3483	236	255	65.7	6200
PM-AT17-X8-03-WP	120	0.2530	0.3265	0.2500	0.3344	268	294	70.4	7510
PM-AT18-X8-03-WP	150	0.2060	0.2658	0.2733	0.3236	299	332	74.5	8365
PM-AT19-X8-03-WP	185	0.1640	0.2125	0.2978	0.3113	338	377	78.3	9175
PM-AT20-X8-03-WP	240	0.1250	0.1628	0.3249	0.2998	390	442	83.0	10195
PM-AT21-X8-03-WP	300	0.1000	0.1312	0.3547	0.2906	438	502	88.2	11390
PM-AT22-X8-03-WP	400	0.0778	0.1035	0.3912	0.2823	496	575	95.1	13190
PM-AT23-X8-03-WP	500	0.0605	0.0825	0.4357	0.2730	560	660	102.8	15195

The above data is approximate and subject to manufacturing tolerances

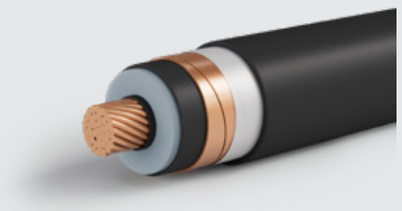
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request

Longitudinal or radial Water tightness layers are also available according to customer request

Single core Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed



Voltage Grade

18 / 30 (36) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Note:-

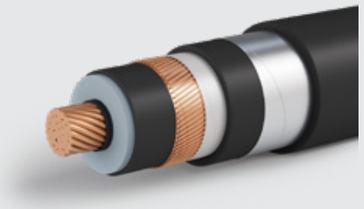
Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 19/33 (36) KV

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating					Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground			Laid in Free Air			
			Flat	Trefoil		Flat	Trefoil	Flat	Trefoil	Duct	Flat Touched	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	A	mm	kg/km
A - Copper Conductors														
PM-CT14-X9-01-UP	50	0.3870	0.4937	0.4937	0.1436	0.5112	0.4649	226	218	189	246	241	31.0	1250
PM-CT15-X9-01-UP	70	0.2680	0.3420	0.3420	0.1615	0.4929	0.4367	278	267	232	308	301	32.8	1495
PM-CT16-X9-01-UP	95	0.1930	0.2465	0.2466	0.1762	0.4635	0.4173	331	316	277	373	365	34.5	1785
PM-CT17-X9-01-UP	120	0.1530	0.1957	0.1958	0.1898	0.4455	0.3993	375	362	317	429	420	35.9	2045
PM-CT18-X9-01-UP	150	0.1240	0.1588	0.1589	0.2042	0.4324	0.3862	415	404	353	484	474	37.6	2440
PM-CT19-X9-01-UP	185	0.0991	0.1273	0.1275	0.2215	0.4179	0.3717	466	456	402	556	545	39.4	2825
PM-CT20-X9-01-UP	240	0.0754	0.0974	0.0976	0.2434	0.4019	0.3557	535	528	468	655	642	41.9	3425
PM-CT21-X9-01-UP	300	0.0601	0.0783	0.0786	0.2643	0.3904	0.3441	594	591	527	748	735	44.3	4070
PM-CT22-X9-01-UP	400	0.0470	0.0621	0.0626	0.2898	0.3775	0.3312	663	665	600	852	842	47.0	5015
PM-CT23-X9-01-UP	500	0.0366	0.0496	0.0503	0.3209	0.3652	0.3190	742	749	682	979	969	50.5	6140
PM-CT24-X9-01-UP	630	0.0283	0.0398	0.0407	0.3594	0.3561	0.3099	833	842	755	1115	1108	54.8	7535
PM-CT25-X9-01-UP	800	0.0221	0.0328	0.0339	0.4006	0.3449	0.2987	910	931	863	1262	1257	59.4	9415
PM-CM26-X9-01-UP	1000	0.0176	0.0250	0.0253	0.4921	0.3438	0.2976	1071	1095	1026	1524	1529	70.2	12450
B - Aluminum Conductors														
PM-AT14-X9-01-UP	50	0.6410	0.8219	0.8219	0.1476	0.5040	0.4577	175	169	146	191	188	31.4	980
PM-AT15-X9-01-UP	70	0.4430	0.5682	0.5682	0.1624	0.4804	0.4342	214	207	179	239	234	32.9	1085
PM-AT16-X9-01-UP	95	0.3200	0.4106	0.4106	0.1781	0.4611	0.4149	256	247	216	290	284	34.7	1230
PM-AT17-X9-01-UP	120	0.2530	0.3247	0.3248	0.1907	0.4445	0.3982	291	281	246	334	326	36.0	1330
PM-AT18-X9-01-UP	150	0.2060	0.2645	0.2646	0.2071	0.4298	0.3836	323	315	276	377	370	37.9	1570
PM-AT19-X9-01-UP	185	0.1640	0.2109	0.2110	0.2244	0.4157	0.3695	365	358	316	435	428	39.7	1735
PM-AT20-X9-01-UP	240	0.1250	0.1611	0.1612	0.2434	0.4019	0.3557	421	414	366	514	503	41.9	1970
PM-AT21-X9-01-UP	300	0.1000	0.1292	0.1294	0.2643	0.3904	0.3441	466	465	414	590	577	44.3	2225
PM-AT22-X9-01-UP	400	0.0778	0.1010	0.1014	0.2898	0.3775	0.3312	533	530	477	682	670	47.0	2650
PM-AT23-X9-01-UP	500	0.0605	0.0794	0.0799	0.3209	0.3652	0.3190	602	605	550	779	781	50.5	3090
PM-AT24-X9-01-UP	630	0.0469	0.0625	0.0631	0.3604	0.3558	0.3096	686	686	621	920	907	54.9	3665
PM-AT25-X9-01-UP	800	0.0367	0.0502	0.0511	0.4006	0.3449	0.2987	775	775	719	1055	1042	59.4	4340
PM-AM26-X9-01-UP	1000	0.0291	0.0389	0.0391	0.4921	0.3438	0.2976	911	920	862	1290	1282	70.2	5820

The above data is approximate and subject to manufacturing tolerances

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Tape armored and PVC Sheathed

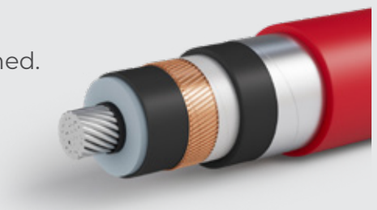


Voltage Grade

18 / 30 (36) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum tape and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Double Aluminum Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	μF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X9-01-DP	50	0.3870	0.4937	0.4937	0.1436	0.5366	0.4904	224	217	245	241	35.2	1600
PM-CT15-X9-01-DP	70	0.2680	0.3420	0.3420	0.1615	0.5081	0.4618	276	266	303	301	37.2	1885
PM-CT16-X9-01-DP	95	0.1930	0.2465	0.2466	0.1762	0.4865	0.4402	328	315	366	365	38.7	2175
PM-CT17-X9-01-DP	120	0.1530	0.1956	0.1957	0.1898	0.4696	0.4234	372	360	424	420	40.5	2490
PM-CT18-X9-01-DP	150	0.1240	0.1588	0.1589	0.2042	0.4555	0.4093	410	402	481	474	42.2	2905
PM-CT19-X9-01-DP	185	0.0991	0.1273	0.1274	0.2215	0.4400	0.3937	461	454	551	545	44.0	3310
PM-CT20-X9-01-DP	240	0.0754	0.0973	0.0975	0.2434	0.4228	0.3765	530	528	649	642	46.5	3940
PM-CT21-X9-01-DP	300	0.0601	0.0782	0.0784	0.2643	0.4101	0.3639	588	588	742	735	48.9	4610
PM-CT22-X9-01-DP	400	0.0470	0.0619	0.0624	0.2898	0.3969	0.3507	657	658	844	838	51.8	5615
PM-CT23-X9-01-DP	500	0.0366	0.0494	0.0499	0.3209	0.3834	0.3372	735	734	973	954	55.3	6780
PM-CT24-X9-01-DP	630	0.0283	0.0395	0.0403	0.3594	0.3735	0.3273	810	829	1090	1097	59.8	8255
PM-CT25-X9-01-DP	800	0.0221	0.0325	0.0335	0.4006	0.3605	0.3142	884	912	1222	1234	64.2	10165
PM-CM26-X9-01-DP	1000	0.0176	0.0249	0.0252	0.4921	0.3581	0.3119	1062	1093	1507	1519	75.4	13405
B - Aluminum Conductors													
PM-AT14-X9-01-DP	50	0.6410	0.8219	0.8219	0.1476	0.5291	0.4829	173	169	191	188	35.6	1340
PM-AT15-X9-01-DP	70	0.4430	0.5682	0.5682	0.1624	0.5055	0.4593	212	207	236	234	37.3	1480
PM-AT16-X9-01-DP	95	0.3200	0.4105	0.4106	0.1781	0.4840	0.4378	254	247	287	284	38.9	1620
PM-AT17-X9-01-DP	120	0.2530	0.3247	0.3248	0.1907	0.4685	0.4223	288	281	332	326	40.6	1785
PM-AT18-X9-01-DP	150	0.2060	0.2645	0.2646	0.2071	0.4527	0.4065	320	315	375	370	42.5	2035
PM-AT19-X9-01-DP	185	0.1640	0.2108	0.2109	0.2244	0.4376	0.3914	361	358	432	428	44.3	2220
PM-AT20-X9-01-DP	240	0.1250	0.1610	0.1612	0.2434	0.4228	0.3765	417	414	509	503	46.5	2485
PM-AT21-X9-01-DP	300	0.1000	0.1291	0.1293	0.2643	0.4101	0.3639	461	465	585	577	48.9	2765
PM-AT22-X9-01-DP	400	0.0778	0.1010	0.1012	0.2898	0.3969	0.3507	528	530	679	673	51.8	3250
PM-AT23-X9-01-DP	500	0.0605	0.0793	0.0797	0.3209	0.3834	0.3372	596	602	779	776	55.3	3730
PM-AT24-X9-01-DP	630	0.0469	0.0623	0.0628	0.3604	0.3732	0.3270	672	683	908	900	59.9	4390
PM-AT25-X9-01-DP	800	0.0367	0.0500	0.0507	0.4006	0.3605	0.3142	751	767	1030	1033	64.2	5100
PM-AM26-X9-01-DP	1000	0.0291	0.0389	0.0391	0.4921	0.3581	0.3119	905	919	1277	1274	75.4	6775

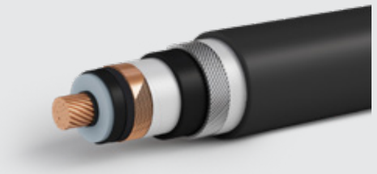
The above data is approximate and subject to manufacturing tolerances

Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 19/33 (36) KV

Single core Copper & Aluminum Conductors

XLPE Insulated, Aluminum Wire armored and PVC Sheathed

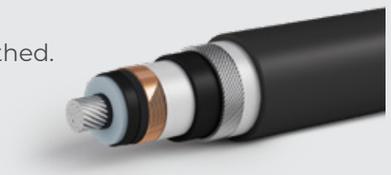


Voltage Grade

18 / 30 (36) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, armored with aluminum tape and PVC sheathed.



Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and banded with a Copper tape to achieve electrical contact • Overlapped Copper Tape then Copper Wires are also available (in single core only) Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Inner Sheath	Extruded PVC Compound
Armoring	Aluminum Wires applied over the inner sheath.
Outer Sheath	Extruded PVC Compound
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance			Operating Capacitance	Inductance		Current Rating				Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C					Laid in Ground		Laid in Free Air			
			Flat ⊙⊙⊙	Trefoil		Flat ⊙⊙⊙	Trefoil	Flat ⊙⊙⊙	Trefoil	Flat Touched ⊙⊙⊙	Trefoil		
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	A	A	A	A	mm	kg/km
A - Copper Conductors													
PM-CT14-X9-01-RP	50	0.3870	0.4937	0.4937	0.1436	0.5503	0.5041	228	220	244	241	37.7	1855
PM-CT15-X9-01-RP	70	0.2680	0.3420	0.3420	0.1615	0.5201	0.4738	275	268	303	301	39.5	2135
PM-CT16-X9-01-RP	95	0.1930	0.2465	0.2465	0.1762	0.4990	0.4528	323	318	366	365	41.2	2450
PM-CT17-X9-01-RP	120	0.1530	0.1956	0.1957	0.1898	0.4862	0.4399	360	358	419	418	44.0	2915
PM-CT18-X9-01-RP	150	0.1240	0.1588	0.1588	0.2042	0.4705	0.4243	394	398	473	468	45.5	3315
PM-CT19-X9-01-RP	185	0.0991	0.1272	0.1274	0.2215	0.4544	0.4082	443	445	539	530	47.3	3745
PM-CT20-X9-01-RP	240	0.0754	0.0973	0.0974	0.2434	0.4373	0.3911	492	503	628	623	50.0	4425
PM-CT21-X9-01-RP	300	0.0601	0.0781	0.0783	0.2643	0.4239	0.3777	545	556	712	689	52.4	5115
PM-CT22-X9-01-RP	400	0.0470	0.0619	0.0622	0.2898	0.4100	0.3638	592	614	808	768	55.3	6140
PM-CT23-X9-01-RP	500	0.0366	0.0493	0.0498	0.3209	0.3957	0.3494	646	675	914	851	58.8	7350
PM-CT24-X9-01-RP	630	0.0283	0.0394	0.0401	0.3594	0.3843	0.3381	700	735	975	995	63.1	8835
PM-CT25-X9-01-RP	800	0.0221	0.0323	0.0332	0.4006	0.3711	0.3249	743	791	1065	1106	67.7	10815
PM-CM26-X9-01-RP	1000	0.0176	0.0249	0.0251	0.4921	0.3672	0.3210	818	874	1216	1264	78.9	14175
B - Aluminum Conductors													
PM-AT14-X9-01-RP	50	0.6410	0.8219	0.8219	0.1476	0.5426	0.4964	180	171	191	188	38.1	1595
PM-AT15-X9-01-RP	70	0.4430	0.5682	0.5682	0.1624	0.5175	0.4713	218	209	236	234	39.6	1725
PM-AT16-X9-01-RP	95	0.3200	0.4105	0.4106	0.1781	0.4964	0.4502	258	249	285	284	41.4	1900
PM-AT17-X9-01-RP	120	0.2530	0.3247	0.3247	0.1907	0.4851	0.4388	289	282	331	326	44.1	2210
PM-AT18-X9-01-RP	150	0.2060	0.2645	0.2645	0.2071	0.4677	0.4215	320	313	374	370	45.8	2455
PM-AT19-X9-01-RP	185	0.1640	0.2108	0.2109	0.2244	0.4520	0.4058	357	353	428	424	47.6	2655
PM-AT20-X9-01-RP	240	0.1250	0.1610	0.1611	0.2434	0.4373	0.3911	402	404	503	500	50.0	2970
PM-AT21-X9-01-RP	300	0.1000	0.1291	0.1293	0.2643	0.4239	0.3777	442	450	574	561	52.4	3270
PM-AT22-X9-01-RP	400	0.0778	0.1009	0.1011	0.2898	0.4100	0.3638	489	505	661	639	55.3	3775
PM-AT23-X9-01-RP	500	0.0605	0.0792	0.0795	0.3209	0.3957	0.3494	539	565	760	722	58.8	4295
PM-AT24-X9-01-RP	630	0.0469	0.0622	0.0627	0.3604	0.3839	0.3377	605	625	833	840	63.2	4970
PM-AT25-X9-01-RP	800	0.0367	0.0499	0.0505	0.4006	0.3711	0.3249	663	691	942	956	67.7	5750
PM-AM26-X9-01-RP	1000	0.0291	0.0389	0.0390	0.4921	0.3672	0.3210	740	778	1087	1114	78.9	7545

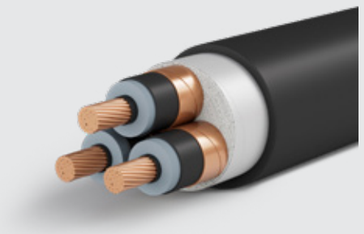
The above data is approximate and subject to manufacturing tolerances

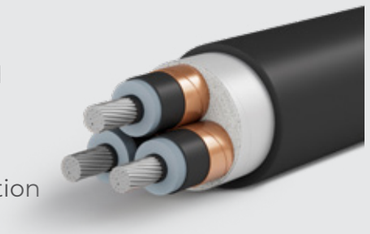
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 19/33 (36) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated and PVC Sheathed





Voltage Grade

18 / 30 (36) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request
Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating			Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Duct	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	A	mm	kg/km
A - Copper Conductors										
PM-CT14-X9-03-UP	50	0.3870	0.4956	0.1436	0.4299	209	175	227	61.2	4155
PM-CT15-X9-03-UP	70	0.2680	0.3434	0.1615	0.4037	256	215	281	65.3	5005
PM-CT16-X9-03-UP	95	0.1930	0.2477	0.1762	0.3847	305	258	336	68.8	5990
PM-CT17-X9-03-UP	120	0.1530	0.1966	0.1898	0.3681	346	295	383	72.0	6830
PM-CT18-X9-03-UP	150	0.1240	0.1597	0.2042	0.3553	388	333	434	75.2	7870
PM-CT19-X9-03-UP	185	0.0991	0.1282	0.2215	0.3424	436	379	493	79.5	9205
PM-CT20-X9-03-UP	240	0.0754	0.0983	0.2434	0.3272	502	443	578	84.7	11160
PM-CT21-X9-03-UP	300	0.0601	0.0793	0.2643	0.3163	564	499	656	89.6	13135
PM-CT22-X9-03-UP	400	0.0470	0.0633	0.2898	0.3051	641	563	746	95.9	16310
PM-CT23-X9-03-UP	500	0.0366	0.0510	0.3209	0.2940	718	642	848	103.4	19875
B - Aluminum Conductors										
PM-AT14-X9-03-UP	50	0.6410	0.8251	0.1476	0.4232	162	135	177	62.1	3360
PM-AT15-X9-03-UP	70	0.4430	0.5704	0.1624	0.4014	199	167	218	65.5	3780
PM-AT16-X9-03-UP	95	0.3200	0.4122	0.1781	0.3826	237	200	262	69.2	4320
PM-AT17-X9-03-UP	120	0.2530	0.3261	0.1907	0.3672	270	230	299	72.2	4715
PM-AT18-X9-03-UP	150	0.2060	0.2657	0.2071	0.3530	302	258	338	75.9	5245
PM-AT19-X9-03-UP	185	0.1640	0.2119	0.2244	0.3404	341	295	386	80.2	5920
PM-AT20-X9-03-UP	240	0.1250	0.1620	0.2434	0.3272	394	346	454	84.7	6785
PM-AT21-X9-03-UP	300	0.1000	0.1301	0.2643	0.3163	445	390	516	89.6	7585
PM-AT22-X9-03-UP	400	0.0778	0.1021	0.2898	0.3051	508	450	594	95.9	9195
PM-AT23-X9-03-UP	500	0.0605	0.0806	0.3209	0.2940	578	525	686	103.4	10690

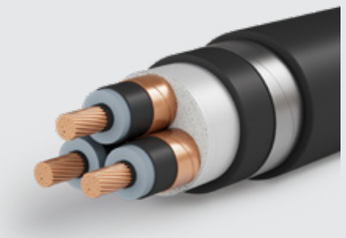
The above data is approximate and subject to manufacturing tolerances

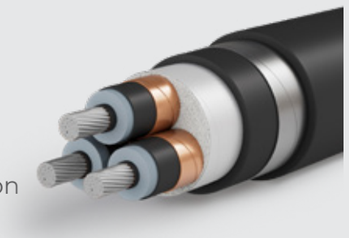
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 19/33 (36) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Tape armored and PVC Sheathed





Voltage Grade

18 / 30 (36) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape armored with steel tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Double Steel Tapes applied helically over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	µF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X9-03-TP	50	0.3870	0.4958	0.1436	0.4299	207	220	64.6	5415
PM-CT15-X9-03-TP	70	0.2680	0.3436	0.1615	0.4037	254	271	68.9	6375
PM-CT16-X9-03-TP	95	0.1930	0.2479	0.1762	0.3847	302	324	73.5	8030
PM-CT17-X9-03-TP	120	0.1530	0.1970	0.1898	0.3681	343	370	76.7	8955
PM-CT18-X9-03-TP	150	0.1240	0.1601	0.2042	0.3553	385	419	80.3	10170
PM-CT19-X9-03-TP	185	0.0991	0.1288	0.2215	0.3424	432	476	84.4	11570
PM-CT20-X9-03-TP	240	0.0754	0.0992	0.2434	0.3272	498	559	89.8	13720
PM-CT21-X9-03-TP	300	0.0601	0.0804	0.2643	0.3163	560	634	94.9	15880
PM-CT22-X9-03-TP	400	0.0470	0.0649	0.2898	0.3051	629	720	101.4	19270
PM-CT23-X9-03-TP	500	0.0366	0.0531	0.3209	0.2940	704	819	108.9	23035
B - Aluminum Conductors									
PM-AT14-X9-03-TP	50	0.6410	0.8252	0.1476	0.4232	161	171	65.5	4635
PM-AT15-X9-03-TP	70	0.4430	0.5705	0.1624	0.4014	197	211	69.1	5155
PM-AT16-X9-03-TP	95	0.3200	0.4124	0.1781	0.3826	235	253	73.9	6370
PM-AT17-X9-03-TP	120	0.2530	0.3264	0.1907	0.3672	268	289	76.9	6845
PM-AT18-X9-03-TP	150	0.2060	0.2661	0.2071	0.3530	299	326	81.0	7565
PM-AT19-X9-03-TP	185	0.1640	0.2123	0.2244	0.3404	339	372	85.1	8310
PM-AT20-X9-03-TP	240	0.1250	0.1625	0.2434	0.3272	392	438	89.8	9345
PM-AT21-X9-03-TP	300	0.1000	0.1309	0.2643	0.3163	442	499	94.9	10330
PM-AT22-X9-03-TP	400	0.0778	0.1030	0.2898	0.3051	503	574	101.4	12155
PM-AT23-X9-03-TP	500	0.0605	0.0819	0.3209	0.2940	572	662	108.9	13855

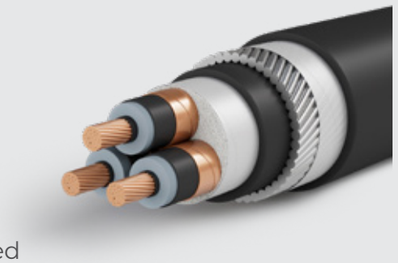
The above data is approximate and subject to manufacturing tolerances

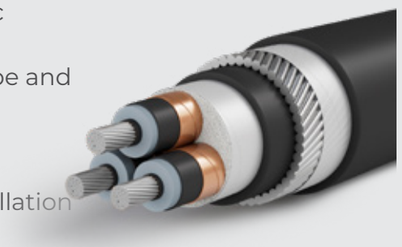
Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
Galvanzied Steel Tapes is available according to customer request
the below data are applicable for cables with rated voltage 19/33 (36) KV

Multicores Copper & Aluminum Conductors

XLPE Insulated, Steel Wires armored and PVC Sheathed





Voltage Grade

18 / 30 (36) KV

Description

Soft annealed Stranded circular compacted Copper or Stranded circular compacted Aluminum conductor, semiconducting layer as conductor screen, XLPE insulated, semiconducting layer as non metallic insulation screen, Copper tape or wire as metallic insulation screen, three cores assembled together with non hygroscopic Polypropylene fillers, banded with suitable tape armored with Galvanized steel wires, banded with suitable tape and PVC sheathed.

Application

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

Technical Data

Relevant Standard	IEC 60502 or BS 6622
Conductor	Plain copper conductor class 2 or Aluminum conductor class 2
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded or Strippable) to the insulation **Metallic part: (by one of the following)** • Copper tape is applied helically with a suitable overlap. • Copper Wires helically applied and binded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Assembly	The insulated Cores are assembled together using nonhygroscopic polypropylene filler (if needed), then banded with suitable tape
Inner Sheath	Extruded PVC Compound
Armoring	Galvanized Steel Wires over the inner sheath.
Outer Sheath	Extruded PVC Compound
Cores Indentification	by inserting Red, Yellow, Blue narrow plastic tapes between the non metallic & the metallic insulation screen, or any other color according to customer request
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	12 x outer diameter
Packing Condition	Our standard length on Wooden Drum / or according to customer request

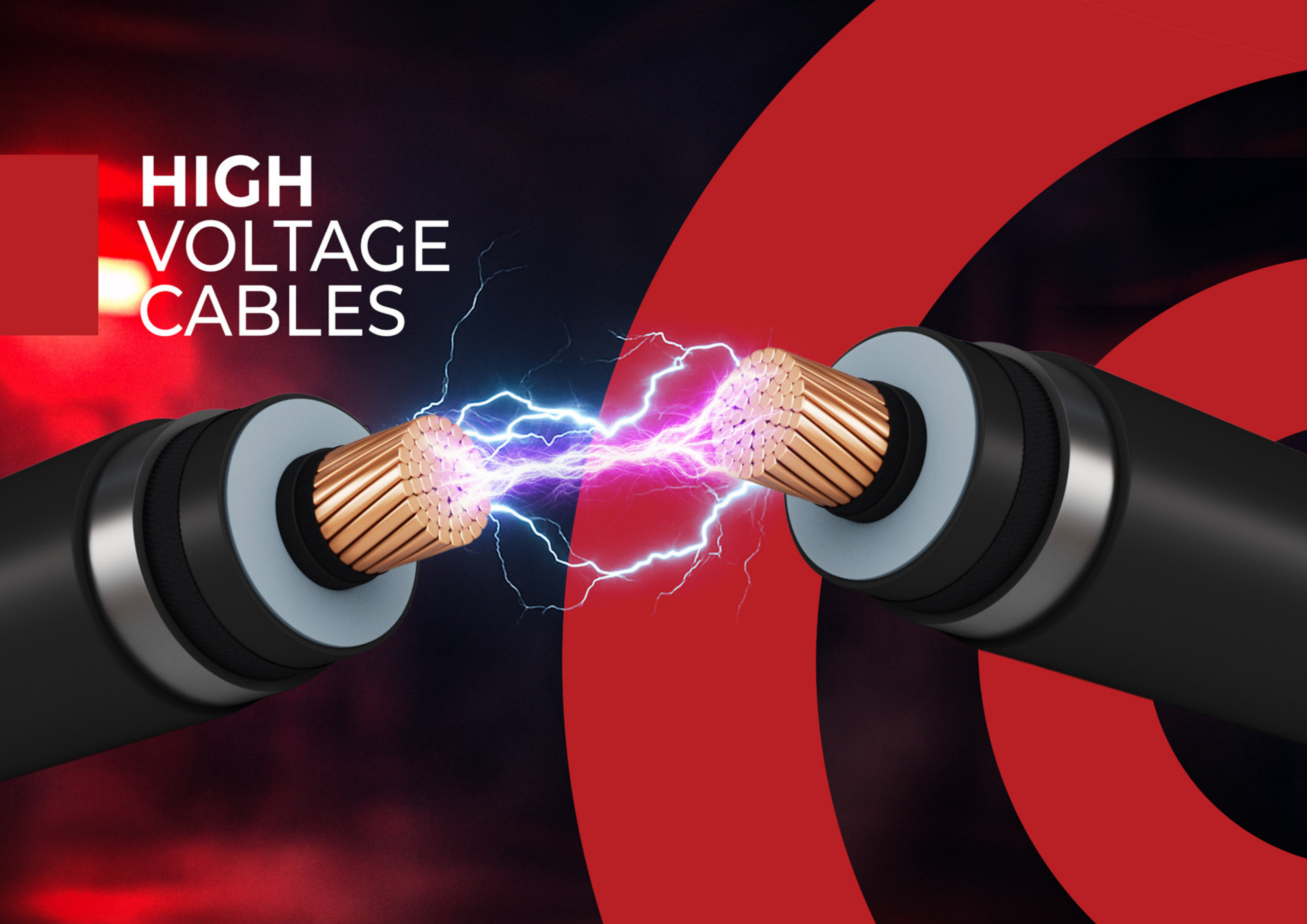
Product Code	Nominal Cross Sectional Area	Max. Conductor Resistance		Operating Capacitance	Inductance	Current Rating		Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90° C			Laid in Ground	Laid in Free Air		
	mm²	Ω/km	Ω/km	μF/km	mH/km	A	A	mm	kg/km
A - Copper Conductors									
PM-CT14-X9-03-WP	50	0.3870	0.4958	0.1436	0.4299	209	223	69.9	8000
PM-CT15-X9-03-WP	70	0.2680	0.3436	0.1615	0.4037	256	277	74.2	9150
PM-CT16-X9-03-WP	95	0.1930	0.2479	0.1762	0.3847	303	331	77.7	10335
PM-CT17-X9-03-WP	120	0.1530	0.1970	0.1898	0.3681	344	379	80.9	11310
PM-CT18-X9-03-WP	150	0.1240	0.1601	0.2042	0.3553	383	428	84.5	12695
PM-CT19-X9-03-WP	185	0.0991	0.1288	0.2215	0.3424	430	484	88.4	14150
PM-CT20-X9-03-WP	240	0.0754	0.0992	0.2434	0.3272	492	561	94.0	16530
PM-CT21-X9-03-WP	300	0.0601	0.0804	0.2643	0.3163	550	635	99.1	18885
PM-CT22-X9-03-WP	400	0.0470	0.0649	0.2898	0.3051	614	717	105.6	22455
PM-CT23-X9-03-WP	500	0.0366	0.0531	0.3209	0.2940	681	809	113.1	26480
B - Aluminum Conductors									
PM-AT14-X9-03-WP	50	0.6410	0.8252	0.1476	0.4232	163	174	70.8	7265
PM-AT15-X9-03-WP	70	0.4430	0.5705	0.1624	0.4014	198	215	74.4	7925
PM-AT16-X9-03-WP	95	0.3200	0.4124	0.1781	0.3826	236	259	78.1	8665
PM-AT17-X9-03-WP	120	0.2530	0.3264	0.1907	0.3672	268	296	81.1	9255
PM-AT18-X9-03-WP	150	0.2060	0.2661	0.2071	0.3530	299	334	85.2	10080
PM-AT19-X9-03-WP	185	0.1640	0.2123	0.2244	0.3404	338	380	89.1	10930
PM-AT20-X9-03-WP	240	0.1250	0.1625	0.2434	0.3272	390	443	94.0	12155
PM-AT21-X9-03-WP	300	0.1000	0.1309	0.2643	0.3163	438	503	99.1	13335
PM-AT22-X9-03-WP	400	0.0778	0.1030	0.2898	0.3051	496	576	105.6	15340
PM-AT23-X9-03-WP	500	0.0605	0.0819	0.3209	0.2940	560	661	113.1	17300

The above data is approximate and subject to manufacturing tolerances

Note:-

Flame retardant PVC sheathed or Polyethylene Sheathed are available according to customer request
Longitudinal or radial Water tightness layers are also available according to customer request
the below data are applicable for cables with rated voltage 19/33 (36) KV

HIGH VOLTAGE CABLES



Single Core Copper Conductor, XLPE insulated

Copper Wire Screen and HDPE Sheath
(Cu/XLPE/CW/HDPE)

Voltage Grade

26 / 45 (52) KV

Description

Stranded circular or segmantal compacted copper conductor Filled with swelling powder between conductor layers, Semi-conductive water blocking tape over conductor to protect the conductor from longitudinal water penetration, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metallic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, copper wire as metallic insulation screen to withstand the required earth fault current, water blocking tape to protect the screen area from longitudinal water penetration, copolymer aluminum tape to protect the cable from radial water penetration and HDPE sheathed with graphite coating or extruded semi-conducting layer for the D.C Sheath test.

Application

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

Technical Data

Relevant Standard	IEC 60228, 60840, IEC 60229 and 60811
Conductor	Plain copper conductor class 2 Circular Comnpacted (applied for C.S.A up to 800 mm2) or Segmental Compacted (Applied from C.S.A = 1000 mm2 and above) Five segments of compacted conductor in sector shape of 72° are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac.
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded) to the insulation **Metallic part:** Copper Wires helically applied and banded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	An extruded layer of HDPE shall be applied over the metallic layers for protection against chemical reaction & mechanical protection. Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose
Water Pentration layers	**i) Longitudinal Water Penetration:** **1) the conductor:** the conductor layers filled with swelling powder and overlaped semiconductive water blocking tape over the conductor **2) The Metallic part of the insulation screen:** An overlaped semiconductive water blocking tape before the metallic screen & an overlaped water blocking tape after the metallic screen **ii) Radial Water Penetration:** Copolymer aluminum tape applied Longitudinally before the PE outer Sheath
Outer Sheath Color	Black (default color), or any other color according to customer request

Note:-

Flame retardant PVC sheathed or MDPE, LLDPE Sheathed are available according to customer request

The Metallic Screen is designed to carry an earth fault cureent = 25 KA per one seond per three pahses as default, any other design is also available as per customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	(16-18) x outer diameter
Packing Condition	Our standard length on Steel Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Conductor			Operating Capacitance	Inductance		Thickness of Conductor Screen	Thickness of Insulation	Thickness of Conductor Screen	Thickness of Insulation	Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C										
			Flat seperated ⊙⊙⊙	Trefoil ⊙⊙		Flat seperated ⊙⊙⊙	Trefoil ⊙⊙						
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	mm	mm	mm	mm	mm	kg/km
Electrical & Constructional data (Nominal Values)													
PH-CG15-XA-01-BH	70 R	0.2680	0.3419	0.3420	0.1516	0.6657	0.4808	0.6	9.0	0.8	2.1	40.9	2180
PH-CG16-XA-01-BH	95 R	0.1930	0.2464	0.2465	0.1639	0.6443	0.4594	0.6	9.0	0.8	2.2	42.6	2485
PH-CG17-XA-01-BH	120 R	0.1530	0.1955	0.1957	0.1753	0.6274	0.4425	0.6	9.0	0.8	2.2	44.0	2755
PH-CG18-XA-01-BH	150 R	0.1240	0.1587	0.1588	0.1859	0.6146	0.4298	0.6	9.0	0.8	2.3	45.5	3075
PH-CG19-XA-01-BH	185 R	0.0991	0.1271	0.1274	0.2012	0.5947	0.4099	0.6	9.0	0.8	2.3	47.4	3485
PH-CG20-XA-01-BH	240 R	0.0754	0.0970	0.0974	0.2204	0.5773	0.3925	0.6	9.0	0.8	2.4	50.0	4110
PH-CG21-XA-01-BH	300 R	0.0601	0.0778	0.0783	0.2379	0.5640	0.3791	0.6	9.0	0.8	2.5	52.4	4770
PH-CG22-XA-01-BH	400 R	0.0470	0.0614	0.0622	0.2593	0.5486	0.3638	0.6	9.0	0.8	2.6	55.3	5675
PH-CG23-XA-01-BH	500 R	0.0366	0.0486	0.0498	0.2853	0.5343	0.3494	0.6	9.0	0.8	2.7	58.8	6830
PH-CG24-XA-01-BH	630 R	0.0283	0.0386	0.0401	0.3136	0.5213	0.3365	0.6	9.0	0.8	2.8	62.6	8215
PH-CG25-XA-01-BH	800 R	0.0221	0.0313	0.0332	0.3511	0.5108	0.3260	0.8	9.0	0.8	2.9	67.6	10165
PH-CM26-XA-01-BH	1000 S	0.0176	0.0247	0.0252	0.4128	0.4991	0.3142	1	9.0	1	3.1	76.3	12910
PH-CM27-XA-01-BH	1200 S	0.0151	0.0219	0.0224	0.4330	0.4940	0.3092	1	9.0	1	3.2	79.1	14330

Product Code	Nominal Cross Sectional Area	Laying conditions: Trefoil formation			Laying conditions: Flat formation		
		Type of Earthing Bonding System	Direct burial	in Air (Shaded)	Type of Earthing Bonding System	Direct burial	in Air (Shaded)
			pt=120 T = 35 oC	T = 40 oC		pt=120 T = 35 oC	T = 40 oC
Continuous current ratings (load factor = 100%) for one circuit in operation (Amperes)							
PH-CG15-XA-01-BH	70 R	Double End Bonded	223	279	Single End Bonded or Cross Bonding	235	321
PH-CG16-XA-01-BH	95 R		265	337		281	390
PH-CG17-XA-01-BH	120 R		299	387		319	449
PH-CG18-XA-01-BH	150 R		334	436		358	509
PH-CG19-XA-01-BH	185 R		376	499		405	586
PH-CG20-XA-01-BH	240 R		432	582		471	693
PH-CG21-XA-01-BH	300 R		484	666		532	796
PH-CG22-XA-01-BH	400 R		544	765		607	924
PH-CG23-XA-01-BH	500 R		610	877		692	1076
PH-CG24-XA-01-BH	630 R		680	1000		788	1251
PH-CG25-XA-01-BH	800 R		735	1130		889	1442
PH-CM26-XA-01-BH	1000 S		858	1338		1024	1700
PH-CM27-XA-01-BH	1200 S		906	1431		1098	1842

The above data is approximate and subject to manufacturing tolerances

Single Core Copper Conductor, XLPE insulated

Copper Wire Screen and HDPE Sheath
(Cu/XLPE/CW/HDPE).

Voltage Grade

38 / 66 (72.5) KV

Description

Stranded circular or segmantal compacted copper conductor Filled with swelling powder between conductor layers, Semi-conductive water blocking tape over conductor to protect the conductor from longitudinal water penetration, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metallic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, copper wire as metallic insulation screen to withstand the required earth fault current, water blocking tape to protect the screen area from longitudinal water penetration, copolymer aluminum tape to protect the cable from radial water penetration and HDPE sheathed with graphite coating or extruded semi-conducting layer for the D.C Sheath test. Sheath test.

Application

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

Technical Data

Relevant Standard	IEC 60228, 60840, IEC 60229 and 60811.
Conductor	Plain copper conductor class 2 Circular Comnpacted (applied for C.S.A up to 800 mm2) or Segmental Compacted (Applied from C.S.A = 1000 mm2 and above) Five segments of compacted conductor in sector shape of 72° are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac.
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded) to the insulation **Metallic part:** Copper Wires helically applied and banded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	An extruded layer of HDPE shall be applied over the metallic layers for protection against chemical reaction & mechanical protection. Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose
Water Pentration layers	**i) Longitudinal Water Penetration:** **1) the conductor:** the conductor layers filled with swelling powder and overlaped semiconductive water blocking tape over the conductor **2) The Metallic part of the insulation screen:** An overlaped semiconductive water blocking tape before the metallic screen & an overlaped water blocking tape after the metallic screen **ii) Radial Water Penetration:** Copolymer aluminum tape applied Longitudinally before the PE outer Sheath
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	(16-18) x outer diameter
Packing Condition	Our standard length on Steel Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Conductor			Operating Capacitance	Inductance		Thickness of Conductor Screen	Thickness of Insulation	Thickness of Conductor Screen	Thickness of Insulation	Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C			Flat seperated	Trefoil						
			Flat seperated	Trefoil		Flat seperated	Trefoil						
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	mm	mm	mm	mm	mm	kg/km
Electrical & Constructional data (Nominal Values)													
PH-CG20-XB-01-BH	240 R	0.0754	0.0970	0.0973	0.1741	0.6197	0.4348	1.0	13.0	1.0	3.5	61.8	5170
PH-CG21-XB-01-BH	300 R	0.0601	0.0777	0.0781	0.1864	0.6040	0.4191	1.0	13.0	1.0	3.5	64.0	5860
PH-CG22-XB-01-BH	400 R	0.0470	0.0614	0.0619	0.2015	0.5861	0.4012	1.0	13.0	1.0	3.5	66.7	6775
PH-CG23-XB-01-BH	500 R	0.0366	0.0486	0.0494	0.2198	0.5692	0.3843	1.0	13.0	1.0	3.5	70.0	7970
PH-CG24-XB-01-BH	630 R	0.0283	0.0385	0.0396	0.2396	0.5537	0.3689	1.0	13.0	1.0	3.5	73.6	9390
PH-CG25-XB-01-BH	800 R	0.0221	0.0312	0.0326	0.2637	0.5394	0.3546	1.0	13.0	1.0	3.5	78.0	11365
PH-CM26-XB-01-BH	1000 S	0.0176	0.0246	0.0250	0.3100	0.5251	0.3403	1.5	13.0	1.2	3.5	86.9	14270
PH-CM27-XB-01-BH	1200 S	0.0151	0.0218	0.0223	0.3241	0.5187	0.3339	1.5	13.0	1.2	3.5	89.5	15710

Product Code	Nominal Cross Sectional Area	Laying conditions: Trefoil formation			Laying conditions: Flat formation		
		Type of Earthing Bonding System	Direct burial	in Air (Shaded)	Type of Earthing Bonding System	Direct burial	in Air (Shaded)
			ρt=120 T = 35 oC	T = 40 oC		ρt=120 T = 35 oC	T = 40 oC
Continuous current ratings (load factor = 100%) for one circuit in operation (Amperes)							
PH-CG20-XB-01-BH	240 R	Double End Bonded	430	586	Single End Bonded or Cross Bonding	470	678
PH-CG21-XB-01-BH	300 R		481	666		532	778
PH-CG22-XB-01-BH	400 R		541	763		607	902
PH-CG23-XB-01-BH	500 R		606	874		693	1049
PH-CG24-XB-01-BH	630 R		676	996		789	1219
PH-CG25-XB-01-BH	800 R		744	1123		891	1406
PH-CM26-XB-01-BH	1000 S		845	1318		1025	1652
PH-CM27-XB-01-BH	1200 S		892	1378		1099	1790

The above data is approximate and subject to manufacturing tolerances

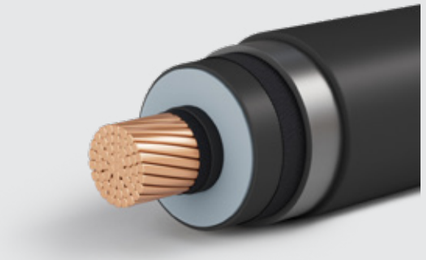
Note:-

Flame retardant PVC sheathed or MDPE, LLDPE Sheathed are available according to customer request

The Metallic Screen is designed to carry an earth fault current = 31.5 KA per one second per three phases as default, any other design is also available as per customer request

Single Core Copper Conductor, XLPE insulated

Lead Sheathed and HDPE Sheath
(Cu/XLPE/LEAD/HDPE)



Voltage Grade

38 / 66 (72.5) KV

Description

Stranded circular or segmantal compacted copper conductor filled with swelling powder between conductor layers, Semi-conductive water blocking tape over conductor to protect the Conductor from longitudinal water penetration, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metallic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, extruded lead sheathed with a suitable thickness to withstand the required earth fault current, and also act as a radial water pentration protection for the cable and HDPE sheathed with graphite coating or extruded semi-conducting layer for the D.C Sheath test.

Application

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

Technical Data

Relevant Standard	IEC 60228, 60840, IEC 60229 and 60811.
Conductor	Plain copper conductor class 2 Circular Comnpacted (applied for C.S.A up to 800 mm2) or Segmental Compacted (Applied from C.S.A = 1000 mm2 and above) Five segments of compacted conductor in sector shape of 72° are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac.
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded) to the insulation **Metallic part:** Extruded Lead Sheath with a suitable thickness Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	An extruded layer of HDPE shall be applied over the metallic layers for protection against chemical reaction & mechanical protection. Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose
Water Pentration layers	**i) Longitudinal Water Penetration:** **1) the conductor:** the conductor layers filled with swelling powder and overlaped semiconductive water blocking tape over the conductor **2) The Metallic part of the insulation screen:** An overlaped semiconductive water blocking tape before the metallic screen **ii) Radial Water Penetration:** Extruded lead sheath applied before the PE outer Sheath
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	(16-18) x outer diameter
Packing Condition	Our standard length on Steel Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Conductor			Operating Capacitance	Inductance		Thickness of Conductor Screen	Thickness of Insulation	Thickness of Conductor Screen	Thickness of Insulation	Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C			Flat seperated	Trefoil						
			Flat seperated	Trefoil		Flat seperated	Trefoil						
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	mm	mm	mm	mm	mm	kg/km
Electrical & Constructional data (Nominal Values)													
PH-CG20-XB-01-AH	240 R	0.0754	0.0970	0.0973	0.1741	0.6226	0.4377	1.0	13.0	1.0	3.5	62.7	9440
PH-CG21-XB-01-AH	300 R	0.0601	0.0777	0.0781	0.1864	0.6061	0.4213	1.0	13.0	1.0	3.5	64.7	10120
PH-CG22-XB-01-AH	400 R	0.0470	0.0614	0.0619	0.2015	0.5870	0.4021	1.0	13.0	1.0	3.5	67.0	10860
PH-CG23-XB-01-AH	500 R	0.0366	0.0486	0.0494	0.2198	0.5694	0.3846	1.0	13.0	1.0	3.5	70.1	12095
PH-CG24-XB-01-AH	630 R	0.0283	0.0385	0.0396	0.2396	0.5540	0.3691	1.0	13.0	1.0	3.5	73.7	13800
PH-CG25-XB-01-AH	800 R	0.0221	0.0312	0.0326	0.2637	0.5397	0.3548	1.0	13.0	1.2	3.5	78.1	16115
PH-CM26-XB-01-AH	1000 S	0.0176	0.0246	0.0250	0.3100	0.5230	0.3405	1.5	13.0	1.2	3.5	87.0	19725
PH-CM27-XB-01-AH	1200 S	0.0151	0.0218	0.0223	0.3241	0.5189	0.3341	1.5	13.0	1.2	3.5	89.6	21370

Product Code	Nominal Cross Sectional Area	Laying conditions: Trefoil formation			Laying conditions: Flat formation		
		Type of Earthing Bonding System	Direct burial	in Air (Shaded)	Type of Earthing Bonding System	Direct burial	in Air (Shaded)
			ρt=120 T = 35 oC	T = 40 oC		ρt=120 T = 35 oC	T = 40 oC
Continuous current ratings (load factor = 100%) for one circuit in operation (Amperes)							
PH-CG20-XB-01-AH	240 R	Double End Bonded	439	599	Single End Bonded or Cross Bonding	472	684
PH-CG21-XB-01-AH	300 R		493	683		534	784
PH-CG22-XB-01-AH	400 R		558	785		608	908
PH-CG23-XB-01-AH	500 R		629	902		693	1055
PH-CG24-XB-01-AH	630 R		704	1031		789	1225
PH-CG25-XB-01-AH	800 R		777	1166		890	1411
PH-CM26-XB-01-AH	1000 S		865	1348		1021	1654
PH-CM27-XB-01-AH	1200 S		911	1440		1094	1790

The above data is approximate and subject to manufacturing tolerances

Note:-

Flame retardant PVC sheathed or MDPE, LLDPE Sheathed are available according to customer request

The Metallic Screen is designed to carry an earth fault current = 31.5 KA per one second per three phases as default, any other design is also available as per customer request

Single Core Copper Conductor, XLPE insulated

Copper Wire Screen and HDPE Sheath
(CU/XLPE/CW/HDPE)

Voltage Grade

76 / 132 (145) KV

Description

Stranded circular or segmental compacted copper conductor Filled with swelling powder between conductor layers, Semi-conductive water blocking tape over conductor to protect the Conductor from longitudinal water penetration, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metallic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, copper wire as metallic insulation screen to withstand the required earth fault current, water blocking tape to protect the screen area from longitudinal water penetration, copolymer aluminum tape to protect the cable from radial water penetration and HDPE sheathed with graphite coating or extruded semi-conducting layer for the D.C Sheath test.

Application

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

Technical Data

Relevant Standard	IEC 60228, 60840, IEC 60229 and 60811
Conductor	Plain copper conductor class 2 Circular Comnpacted (applied for C.S.A up to 800 mm2) or Segmental Compacted (Applied from C.S.A = 1000 mm2 and above) Five segments of compacted conductor in sector shape of 72° are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac.
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded) to the insulation **Metallic part:** Copper Wires helically applied and banded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	An extruded layer of HDPE shall be applied over the metallic layers for protection against chemical reaction & mechanical protection. Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose
Water Pentration layers	**i) Longitudinal Water Penetration:** **1) the conductor:** the conductor layers filled with swelling powder and overlaped semiconductive water blocking tape over the conductor **2) The Metallic part of the insulation screen:** An overlaped semiconductive water blocking tape before the metallic screen & an overlaped water blocking tape after the metallic screen **ii) Radial Water Penetration:** Copolymer aluminum tape applied Longitudinally before the PE outer Sheath
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	(16-18) x outer diameter
Packing Condition	Our standard length on Steel Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Conductor			Operating Capacitance	Inductance		Thickness of Conductor Screen	Thickness of Insulation	Thickness of Conductor Screen	Thickness of Insulation	Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C			Flat seperated	Trefoil						
			Flat seperated	Trefoil		Flat seperated	Trefoil						
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	mm	mm	mm	mm	mm	kg/km
Electrical & Constructional data (Nominal Values)													
PH-CG20-XD-01-BH	240 R	0.0754	0.0970	0.0972	0.1420	0.6573	0.4725	1.2	18.0	1.2	4.5	74.6	6585
PH-CG21-XD-01-BH	300 R	0.0601	0.0777	0.1512	0.1512	0.6404	0.4556	1.2	18.0	1.2	4.5	76.8	7310
PH-CG22-XD-01-BH	400 R	0.0470	0.0613	0.0617	0.1623	0.6212	0.4364	1.2	18.0	1.2	4.5	79.5	8295
PH-CG23-XD-01-BH	500 R	0.0366	0.0485	0.0491	0.1757	0.6027	0.4179	1.2	18.0	1.2	4.5	82.8	9555
PH-CG24-XD-01-BH	630 R	0.0283	0.0384	0.0932	0.1903	0.5858	0.4009	1.2	18.0	1.2	4.5	86.4	11045
PH-CG25-XD-01-BH	800 R	0.0221	0.0311	0.0322	0.2080	0.5698	0.3850	1.2	18.0	1.2	4.5	90.8	13095
PH-CM26-XD-01-BH	1000 S	0.0176	0.0246	0.0249	0.2403	0.5510	0.3661	1.5	18.0	1.2	4.5	98.9	16045
PH-CM27-XD-01-BH	1200 S	0.0151	0.0218	0.0222	0.2506	0.5439	0.3590	1.5	18.0	1.2	4.5	101.5	17530

Product Code	Nominal Cross Sectional Area	Laying conditions: Trefoil formation			Laying conditions: Flat formation		
		Type of Earthing Bonding System	Direct burial	in Air (Shaded)	Type of Earthing Bonding System	Direct burial	in Air (Shaded)
			ρt=120 T = 35 oC	T = 40 oC		ρt=120 T = 35 oC	T = 40 oC
Continuous current ratings (load factor = 100%) for one circuit in operation (Amperes)							
PH-CG20-XD-01-BH	240 R	Double End Bonded	425	580	Single End Bonded or Cross Bonding	468	660
PH-CG21-XD-01-BH	300 R		475	569		530	757
PH-CG22-XD-01-BH	400 R		533	753		604	877
PH-CG23-XD-01-BH	500 R		597	861		690	1019
PH-CG24-XD-01-BH	630 R		664	980		786	1182
PH-CG25-XD-01-BH	800 R		729	1103		888	1361
PH-CM26-XD-01-BH	1000 S		820	1282		1020	1599
PH-CM27-XD-01-BH	1200 S		863	1368		1093	1731

The above data is approximate and subject to manufacturing tolerances

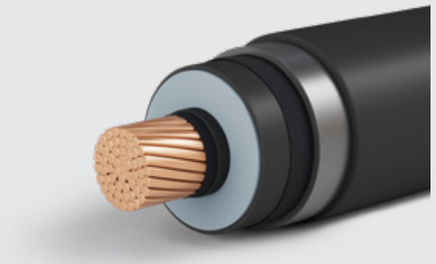
Note:-

Flame retardant PVC sheathed or MDPE, LLDPE Sheathed are available according to customer request

The Metallic Screen is designed to carry an earth fault cureent =40 KA per one seond per three pahses, any other design is also available as per customer request

Single Core Copper Conductor, XLPE insulated

Lead Sheathed and HDPE Sheath
(CU/XLPE/LEAD/HDPE)



Voltage Grade

76 / 132 (145) KV

Description

Stranded circular or segmantal compacted copper conductor Filled with swelling powder between conductor layers, Semi-conductive water blocking tape over conductor to protect the Conductor from longitudinal water penetration, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metallic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, extruded lead sheathed with a suitable thickness to withstand the required earth fault current, and also act as a radial water pentration protection for the cable and HDPE sheathed with graphite coating or extruded semi-conducting layer for the D.C Sheath test.

Application

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

Technical Data

Relevant Standard	IEC 60228, 60840, IEC 60229 and 60811
Conductor	Plain copper conductor class 2 Circular Compacted (applied for C.S.A up to 800 mm2) or Segmental Compacted (Applied from C.S.A = 1000 mm2 and above) Five segments of compacted conductor in sector shape of 72° are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac.
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded) to the insulation **Metallic part:** Extruded Lead Sheath with a suitable thickness Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	An extruded layer of HDPE shall be applied over the metallic layers for protection against chemical reaction & mechanical protection. Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose
Water Pentration layers	**i) Longitudinal Water Penetration:** **1) the conductor:** the conductor layers filled with swelling powder and overlaped semiconductive water blocking tape over the conductor **2) The Metallic part of the insulation screen:** An overlaped semiconductive water blocking tape before the metallic screen **ii) Radial Water Penetration:** Extruded lead sheath applied before the PE outer Sheath
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	(16-18) x outer diameter
Packing Condition	Our standard length on Steel Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Conductor			Operating Capacitance	Inductance		Thickness of Conductor Screen	Thickness of Insulation	Thickness of Conductor Screen	Thickness of Insulation	Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C			Flat seperated	Trefoil						
			Flat seperated	Trefoil		Flat seperated	Trefoil						
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	mm	mm	mm	mm	mm	kg/km
Electrical & Constructional data (Nominal Values)													
PH-CG20-XD-01-AH	240 R	0.0754	0.0970	0.0972	0.1420	0.6603	0.4754	1.2	18.0	1.2	4.5	75.7	11940
PH-CG21-XD-01-AH	300 R	0.0601	0.0777	0.0780	0.1512	0.6428	0.4579	1.2	18.0	1.2	4.5	77.7	12630
PH-CG22-XD-01-AH	400 R	0.0470	0.0613	0.0617	0.1623	0.6230	0.4381	1.2	18.0	1.2	4.5	80.2	13605
PH-CG23-XD-01-AH	500 R	0.0366	0.0485	0.0491	0.1757	0.6039	0.4191	1.2	18.0	1.2	4.5	83.3	14890
PH-CG24-XD-01-AH	630 R	0.0283	0.0384	0.0392	0.1903	0.5865	0.4016	1.2	18.0	1.2	4.5	86.7	16410
PH-CG25-XD-01-AH	800 R	0.0221	0.0311	0.0322	0.2080	0.5700	0.3852	1.2	18.0	1.2	4.5	90.9	18530
PH-CM26-XD-01-AH	1000 S	0.0176	0.0246	0.0249	0.2403	0.5512	0.3663	1.5	18.0	1.2	4.5	99.0	22120
PH-CM27-XD-01-AH	1200 S	0.0151	0.0218	0.0222	0.2506	0.5441	0.3592	1.5	18.0	1.2	4.5	101.6	23805

Product Code	Nominal Cross Sectional Area	Laying conditions: Trefoil formation			Laying conditions: Flat formation		
		Type of Earthing Bonding System	Direct burial	in Air (Shaded)	Type of Earthing Bonding System	Direct burial	in Air (Shaded)
			ρt=120 T = 35 oC	T = 40 oC		ρt=120 T = 35 oC	T = 40 oC
Continuous current ratings (load factor = 100%) for one circuit in operation (Amperes)							
PH-CG20-XD-01-AH	240 R	Double End Bonded	436	593	Single End Bonded or Cross Bonding	470	665
PH-CG21-XD-01-AH	300 R		489	675		531	762
PH-CG22-XD-01-AH	400 R		552	775		606	882
PH-CG23-XD-01-AH	500 R		622	891		691	1024
PH-CG24-XD-01-AH	630 R		697	1018		786	1186
PH-CG25-XD-01-AH	800 R		771	1153		886	1364
PH-CM26-XD-01-AH	1000 S		853	1324		1015	1599
PH-CM27-XD-01-AH	1200 S		898	1414		1088	1729

The above data is approximate and subject to manufacturing tolerances

Note:-

Flame retardant PVC sheathed or MDPE, LLDPE Sheathed are available according to customer request

The Metallic Screen is designed to carry an earth fault cureent =40 KA per one seond per three pahses, any other design is also available as per customer request

Single Core Copper Conductor, XLPE insulated

Copper Wire Screen and HDPE Sheath
(CU/XLPE/CW/HDPE)

Voltage Grade

127 / 220 (245) KV

Description

Stranded circular or segmantal compacted copper conductor Filled with swelling powder between conductor layers, Semi-conductive water blocking tape over conductor to protect the Conductor from longitudinal water penetration, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metallic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, copper wire as metallic insulation screen to withstand the required earth fault current, water blocking tape to protect the screen area from longitudinal water penetration, copolymer aluminum tape to protect the cable from radial water penetration and HDPE sheathed with graphite coating or extruded semi-conducting layer for the D.C Sheath test.

Application

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

Technical Data

Relevant Standard	EC 60228, 62067, IEC 60229 and 60811
Conductor	Plain copper conductor class 2 Circular Comnpacted (applied for C.S.A up to 800 mm2) or Segmental Compacted (Applied from C.S.A = 1000 mm2 and above) Five segments of compacted conductor in sector shape of 72° are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac.
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded) to the insulation **Metallic part:** Copper Wires helically applied and banded with a Copper tape to achieve electrical contact Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	An extruded layer of HDPE shall be applied over the metallic layers for protection against chemical reaction & mechanical protection. Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose
Water Pentration layers	**i) Longitudinal Water Penetration:** **1) the conductor:** the conductor layers filled with swelling powder and overlaped semiconductive water blocking tape over the conductor **2) The Metallic part of the insulation screen:** An overlaped semiconductive water blocking tape before the metallic screen & an overlaped water blocking tape after the metallic screen **ii) Radial Water Penetration:** Copolymer aluminum tape applied Longitudinally before the PE outer Sheath
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	(16-18) x outer diameter
Packing Condition	Our standard length on Steel Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Conductor			Operating Capacitance	Inductance		Thickness of Conductor Screen	Thickness of Insulation	Thickness of Conductor Screen	Thickness of Insulation	Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C			Flat seperated	Trefoil						
			Flat seperated	Trefoil		Flat seperated	Trefoil						
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	mm	mm	mm	mm	mm	kg/km
Electrical & Constructional data (Nominal Values)													
PE-CM26-XF-01-BH	1000 S	0.0176	0.0246	0.0248	0.1888	0.5799	0.3951	1.5	25.0	1.5	4.5	114.3	16045
PE-CM27-XF-01-BH	1200 S	0.0151	0.0218	0.0221	0.1963	0.5721	0.3873	1.5	25.0	1.5	4.5	116.9	20295

Product Code	Nominal Cross Sectional Area	Laying conditions: Flat formationa		
		Type of Earthing Bonding System	Direct burial	in Air (Shaded)
				
			ρt=120 T = 35 oC	T = 40 oC
Continuous current ratings (load factor = 100%) for one circuit in operation (Amperes)				
PE-CM26-XF-01-BH	1000 S	Single End Bonded or Cross Bonding	1012	1545
PE-CM27-XF-01-BH	1200 S		1085	1672

The above data is approximate and subject to manufacturing tolerances

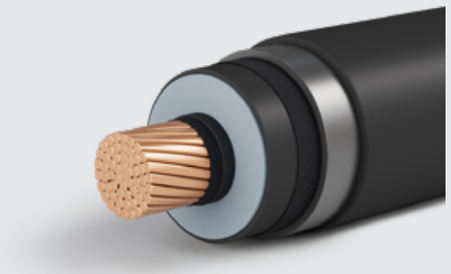
Note:-

Flame retardant PVC sheathed or MDPE, LLDPE Sheathed are available according to customer request

The Metallic Screen is designed to carry an earth fault cureent = 63 KA per one seond per three pahses, any other design is also available as per customer request

Single Core Copper Conductor, XLPE insulated

Lead Sheathed and HDPE Sheath
(CU/XLPE/LEAD/HDPE)



Voltage Grade

127 / 220 (245) KV

Description

Stranded circular or segmantal compacted copper conductor Filled with swelling powder between conductor layers, Semi-conductive water blocking tape over conductor to protect the Conductor from longitudinal water penetration, semi-conducting layer as conductor screen, XLPE insulated, semi-conducting layer as non metallic insulation screen, Semi-conductive water blocking tape to protect the screen area from longitudinal water penetration, extruded lead sheathed with a suitable thickness to withstand the required earth fault current, and also act as a radial water pentration protection for the cable and HDPE sheathed with graphite coating or extruded semi-conducting layer for the D.C Sheath test.

Application

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

Technical Data

Relevant Standard	EC 60228, 62067, IEC 60229 and 60811
Conductor	Plain copper conductor class 2 Circular Comnpacted (applied for C.S.A up to 800 mm2) or Segmental Compacted (Applied from C.S.A = 1000 mm2 and above) Five segments of compacted conductor in sector shape of 72° are assembled together with separation of non-metallic tapes to reduce the skin effect which reduce the Rac.
Conductor Screen	Extruded Semiconductive Compound
Insulation	Extruded XLPE Compound Rated 90° C
Insulation Screen	**Non Metallic part:** Extruded Semiconductive Compound (Bonded) to the insulation **Metallic part:** Extruded Lead Sheath with a suitable thickness Conductor screen, XLPE insulation and non metallic insulation screen are applied at the same time using triple head extruder.
Outer Sheath	An extruded layer of HDPE shall be applied over the metallic layers for protection against chemical reaction & mechanical protection. Extruded semi conductive layer or graphite coating shall be applied over the outer sheath for D.C testing purpose
Water Pentration layers	**i) Longitudinal Water Penetration:** **1) the conductor:** the conductor layers filled with swelling powder and overlaped semiconductive water blocking tape over the conductor **2) The Metallic part of the insulation screen:** An overlaped semiconductive water blocking tape before the metallic screen **ii) Radial Water Penetration:** Extruded lead sheath applied before the PE outer Sheath
Outer Sheath Color	Black (default color), or any other color according to customer request

Maximum Operating Temp.	90° C
Minimum bending Radius	(16-18) x outer diameter
Packing Condition	Our standard length on Steel Drum / or according to customer request

Product Code	Nominal Cross Sectional Area	Conductor			Operating Capacitance	Inductance		Thickness of Conductor Screen	Thickness of Insulation	Thickness of Conductor Screen	Thickness of Insulation	Approx. Overall Diameter	Approx. Weight
		DC at 20 °C	AC at 90 °C										
			Flat seperated	Trefoil		Flat seperated	Trefoil						
			⊙⊙⊙	⊙⊙		⊙⊙⊙	⊙⊙						
	mm²	Ω/km	Ω/km	Ω/km	µF/km	mH/km	mH/km	mm	mm	mm	mm	mm	kg/km
Electrical & Constructional data (Nominal Values)													
PE-CM26-XF-01-AH	1000 S	0.0176	0.0246	0.0248	0.1888	0.5863	0.4015	1.5	25.0	1.5	4.5	118.0	28560
PE-CM27-XF-01-AH	1200 S	0.0151	0.0218	0.0220	0.1963	0.5784	0.3935	1.5	25.0	1.5	4.5	120.6	30370

Product Code	Nominal Cross Sectional Area	Laying conditions: Flat formationa		
		Type of Earthing Bonding System	Direct burial	in Air (Shaded)
			 ρt=120 T = 35 oC	 T = 40 oC
Continuous current ratings (load factor = 100%) for one circuit in operation (Amperes)				
PE-CM26-XF-01-AH	1000 S	Single End Bonded or Cross Bonding	1005	1531
PE-CM27-XF-01-AH	1200 S		1075	1655

The above data is approximate and subject to manufacturing tolerances

Note:-

Flame retardant PVC sheathed or MDPE, LLDPE Sheathed are available according to customer request

The Metallic Screen is designed to carry an earth fault cureent = 63 KA per one seond per three pahses, any other design is also available as per customer request

LAYING, HANDLING & STORAGE INSTRUCTIONS

(A) LAYING INSTRUCTIONS

1) Preparation for the cable

1. The cable should, wherever, be de-coiled from the top of the drum. For this the drum must be positioned such that the arrow on the drum points opposite to the direction of rotation for de-coiling. The drum is lifted on its axle by the aid of winches such that the plank used for braking cannot become wedged beneath.

2. The cable must be inspected for external damage which. e.g. may have been incurred by incorrect rolling of the drum. Since the laying of cables is often carried out by unskilled labor it is necessary to emphasize that the cable is a high-value commodity and is very sensitive to damage and must be handled with the necessary care.

3. In order to avoid damage to the corrosion protection and the insulation. The cables must not be dragged over sharp objects and must not be bent too sharply (see Table 1).

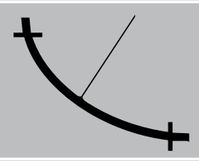
4. It must be possible to brake the drum at any time in order to avoid. in the event of a sudden stoppage, continuation of de-coiling which would result in sharp bending of the cable . Avoidance of kinking is especially critical under all circumstances.

5. Cables must be heated prior to laying where the cable temperature is below (- 5 C) for polymer insulated cables, otherwise the insulation and corrosion protection will be damage during bending. These values apply to the cables themselves and not to the ambient temperature. Either the drums must be stored for several days in a heated building or heaters or hot air blowers applied at a sufficient distance. During this warming process the drums should be rotated at intervals.

6. To avoid ingress of moisture it must be observed that the end capping of the cable is not damaged. Cut points of cables must be immediately capped.

Table 1

Minimum permissible bending radii (r) when laying cables

	800 R
Over Uo / U = 1.9 / 3.3 KV - PE or LSHF Jacket - Lead Sheathed - PVC Jacket	20 X D 20 X D 15 X D
<u>Up to Uo / U = 1.9 / 3.3 KV</u> - PE or LSHF Jacket - Lead Sheathed - PVC Jacket single core or multi core armored wire or unarmored - PVC Jacket single core or multi core armored tape or shield tape	20 X D 20 X D 12 X D 15 X D

2) Laying of Cables in the Ground

2.1 Cable Route

1. For the progression of a cable route in built-up areas it is most suitable to use a paved pedestrian area or in overland routes to follow a foot path. The depth of trench is dependent on the number of cable to be laid above one another in the same trench, furthermore in urban areas and on industrial sites it also depends on any gas or water pipes which exist or may be laid in the future.

2. The cable laying uppermost below a paved pedestrian area or foot path should be at a depth not less than 0.6m and below roads at a depth of not less than 0.8m. Where cable are laid at shallower depths they must be protected by e.g. concrete slabs of sufficient thickness.

3. The cables are normally covered with a layer of sand or stone-free (sieved) soil 10 cm thick and then, to protect against surface damage during subsequent earth workings, are covered with bricks, plastic plates or similar devices. If covers are not provided warning tapes of plastic are normally used to mark the cable route.

4. Where high-voltage and low-voltage cables are laid in the same trench, it is the practice to lay the high-voltage cable in the lowest position. The high-voltage cables are then embedded in sand and covered by protective slabs. Above these on an additional layer of sand the low-voltage cables are laid. In such a cable arrangement the current load capacity, because of the mutual heating effect and drying out of the soil, is reduced.

5. If control cables and high-voltage cables run on parallel routes for any great distance the magnitude of interference must be investigated. The same applies where the route is in close proximity to or crosses railway installations or communication networks of the post office.

2.2 Crossing of Roads

1. When the route crosses a roadway, the cables must be drawn into pipes or cable duct blocks which extend beyond and under the pavements.

2. It is advisable always to provide reserve space in pipes or pipe ducts to avoid the necessity to re-excavate when adding cable at a later date. Pipe cavities which are not occupied immediately should be sealed off.

3. The pipe bore should have a diameter of at least 1.5 times the outer diameter d of the cable. Pipe bends should, in respect of pulling the cable through.

3) Cable Laying Methods

The following methods may be employed for laying cables:

1. Paying out from a cable trailer
2. Laying by hand
3. Laying by motor driven rollers
4. Pulling off by winches
5. Ploughing in.

3.1 Paying out from a Cable Trailer

Providing there are no obstructions in the trench or its vicinity, cable may be paid out direct from the cable trailer. However it must be ensured that during the paying out the drum is manually rotated and braked in accordance with the laying speed to avoid high-tensile force or sharp bending of the cable.

3.2 Laying by Hand

Cable rollers placed at distances of between 3 to 4 m make laying easier. Corner rollers or similar devices should be provided at any bend in the route, always maintaining the minimum bending radii of the cable.

If the cable is not guided by rollers it must be guided by hand. The men supporting the cable should be spaced at between 4 to 6 m along the cable.

3.3 Laying by Motor Driven Rollers

Motorized rollers are used to pull the cable off the jacked up drum. It is advantageous to use rollers driven by electric motors installed in the cable trench at distances of 20 to 30 m. Where sharp bends occur it may be necessary to place such a roller at both the commencement and the end of the bend.

3.4 Pulling off by winches

Pulling off by winch is possible only if there are very few bends or other obstructions in the route.

After releasing the cable end from the drum a pulling stocking is placed over the end and tied in position. A rope is secured to the eye of the pulling stocking.

When laying unarmored cables or steel-tape armored cables with the aid of a winch, the rope can be secured to the cable via a pulling head which grips directly on to the conductors. All cables, in particular single-core cables should not be straightened after laying, but left slightly meandering, to allow for longitudinal expansion and contraction during thermal cycling (changes in current loading).

Table 2 : Minimum permissible bending radii (r) for pipes

Means of pulling	Type of cable	Formula	Factor
With pulling head attached to conductors	All type of cable	$P = \sigma.A$	σ =50 N/mm2 (Cu-conductor) σ =30 N/mm2 (Al- conductor) (but the maximum value = 20 KN)
With pulling stocking	Cable with metal sheath without pull resistant Armoring.	$P = K.d^2$	K = 3 N/mm2 (but the maximum value = 8.5 KN)

When laying 3 single-core cable simultaneously with a common pulling stocking the same maximum pulling force applies, whereas the pulling force for 3 laid-up single-core cables is 3 times that of a single-core and for 3 non-laid-up single-core cable is 2 time that of a single core.

P	Pull in N
A	Total cross-sectional area in mm of all conductors (but not screen or concentric conductor)
d	Outside diameter of cable in mm
σ	Permissible tensile stress of conductor in N/ mm2
K	Empirically derived factor in N/ mm2

3.5 Plough-laying of Cables

In open terrain the cables may be plough-laid directly into the ground where circumstances permit, no obstructions, e.g. pipe runs which cross the route, and where protection of the cable with plastic plates or similar is not acceptable. This type of cable laying is particularly cost effective. Cables with PE sheath are particularly suitable for this form of laying.

4) Laying of Single-Core Cables

For the laying of single-core cables under practical conditions, depending on local circumstances several methods have proved effective:

Pulling-off and laying individual lengths in sequence,

Simultaneously pulling-off three lengths from three cable drums.

laying of three pre-laid-up cables,

Plough laying of three bunched cables.

If the three lengths are laid in sequence care must be taken that the cable already laid is not damaged by the cables following (e.g. by chaffing or abrasive action).

If on site sufficient space is available the simultaneous pulling off of three single-core cables from three individual drums has advantages. In a bunching bench the three cables are brought together for bunching in triangular formation for bunching and can then be laid as a single cable. The system is also proven where the three drums are carried on a suitably adapted flat back lorry.

5) Cable Tunnels and Ducts

The main advantage of using cable tunnels or ducts is the ease of access for replacement or extension of the installation without extensive workings.

Especially, where there is great cable massing, the cables installed in ducts can normally be subjected to higher loading that when laid in the ground. A disadvantage is the high cost of supply and installation of the ducts. For this reason installation in ducts is normally restricted to buildings and around outdoor switch gear plant.

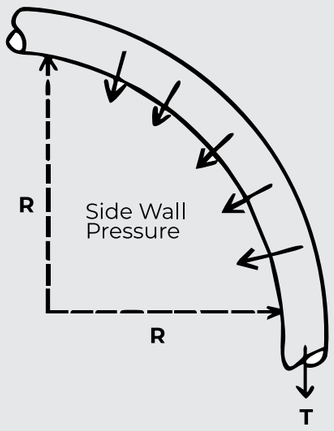
In walk through ducts (cable tunnels) the cables are for practical reasons laid on cable trays above one another. Multi-core cables which are laid horizontally on the duct floor or on the trays do not require fixing.

The cables should be laid in the duct with a space between each approximately equal to the cable diameter. The load capacity of the cable may be determined. Since this is dependent on ambient air temperature a good natural ventilation should be provided in the duct (openings for ingoing and outgoing air). Where necessary forced ventilation must be provided.

With due consideration of the possibility of spreading of fire the cable ducts must be with barriers at least at the point of entry into operation rooms, switching stations, etc.

6) Side Wall Pressure

To avoid damage to the cable from the dynamic radial pressure, Which develops when a cable is pulled around a bend under pulling tension, This pressure must be kept as low as possible. Permissible maximum side wall pressure to the cable at bending point during Installation is 1000 Kg/m.



$$\text{Side Wall Pressure to the cable} = \frac{\text{Pulling Tension (Kgf)}}{\text{Bending radius (R)}} = \frac{T}{R}$$

T: Pulling tension (Kgf)
R: Bending radius (m)

(B) HANDLING & STORAGE INSTRUCTIONS

Introduction:

1. Cables should be installed and stored according to International regulation by trained persons with good engineering practice to make the cable drum safe from damage & hazards due to improper handling

2. It is important that everyone involved with handling the cable keeps it in prime condition so that they perform as intended, which means that care needs to be taken with the drum's storage and handling

3. Cable are supplied on heavy drums & handling these drums can constitute a real hazardous.

4. Indicate some of the common mistakes can be committed during the handling, care Should be taken during loading and unloading

1) Rolling Direction

1. If the drum is required to be rolled, it should be rolled in the direction of the printed arrow on the outer flange. This direction will remain the cable safe and tight.

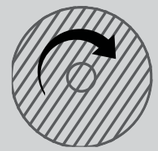
2. Drums should be rolled only for short distance over flat solid ground in the direction indicated by the arrow on the flange.

3. Suitable wedges in the heels of the flanges should be used to make sure that the drum is not able to move after being placed in its position.

4. Wooden lagging (if exist) of the drum should be kept safe without any stresses.

5. When moving the drums by hand, the operators should wear stout gloves and safety footwear

6. When rolling / moving reels do not "kick" the cables. Ensure that the route has no objects or uneven terrain that could damage the cable when the reel is being rolled.

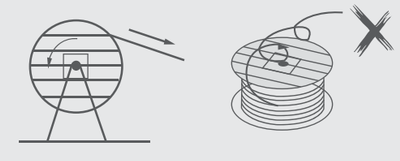


It should be rolled in the direction of the arrow.

2) Unwinding and Rewinding:

i) Unwinding and rewinding of cables should be performed as shown in the following figures.

UNWINDING:



Cable should be unwound as shown

Cable should not be unwound as shown

NOTE: *The arrow on the drum flange does not indicate direction of unwinding*

i) When cable rewinding is required on to another drum, the pulling force applied to the cable must be respected & the diameter of the new drum shall be compatible with the minimum bending radius of the cable and the original cable label details be copied to the new drum, the new drum shall be also in good condition so as not to cause damage to the cable sheath during the rewinding process.

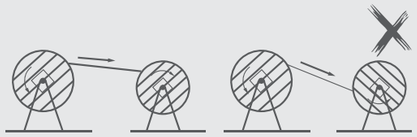
iii) During cable rewinding, avoid any sharp edges that may damage the cable.

iv) Maximum cable pulling force should be considered.

v) Drums have an arrow marked on their flanges indicate both, the direction that cables is to be wound on to them and also the direction in which the drum is to be rolled.

v) Repeated windings and excessive tension should be avoided as it might cause damage to the cable.

REWINDING:



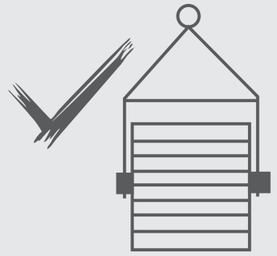
Cable should be rewound from drum to drum as shown

Cable should not be rewound in this way

NOTE: *The arrow on the drum flange not indicate direction of unwinding*

3) Lifting the drum

Only fork-lift trucks or cranes of sufficient size and weight limit for the drums to be lifted should be used.



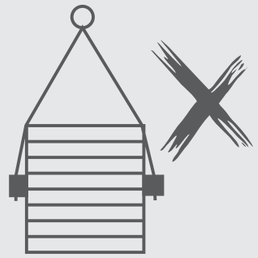
A) Crane Handling

1. When lifting drums by crane, spreader beam should be used, the spreader beam should be the weight capacity and length specified by the manufacturer for the weight & width of the drum

2. any slings or hooks should be of the correct capacity as specified by the manufacturer for the drum to be lifted.

3. On lowering the drum be sure that the drum moves as show as possible and prevent it from any hard impact with the ground.

4. The drum axe should be kept always in a horizontal position.



B) Fork lift handling

1. When lifting drums by fork lift trucks, the cable drum flanges should be at right angles to the forks, and the forks should be longer than the width of the drum (see below figure).

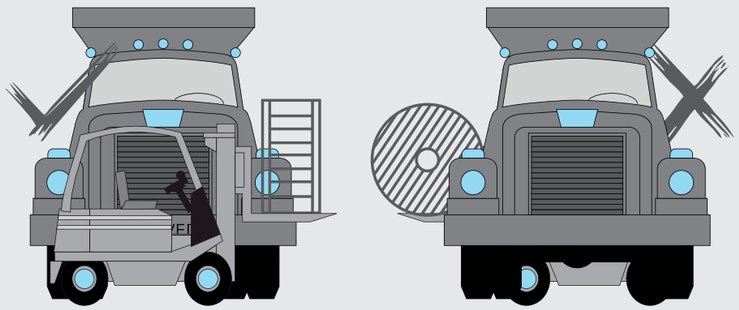
2. Before moving the lift. Be sure that the lift raised the drum to a sufficient space above the ground.

3. Be sure that the truck has stopped completely before releasing the drum.

4. Always refer to the relevant schedules for dimensions and weights of each cable drums.

5. Cable drums must be laid perpendicular to the direction of the moving vehicle.

6. Under no circumstances should the fork come in a contact with the cable.



Lift drums on fork trucks correctly

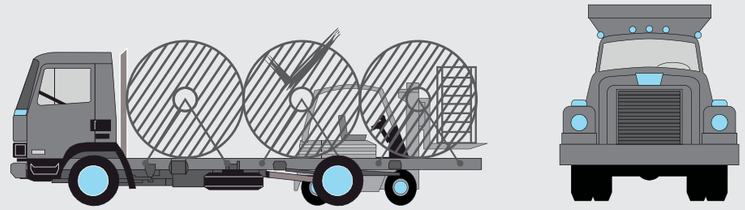
4) Transporting the drums:

1. Secure drums adequately before transportation by:

2. The drums should be secured by the suitable edges to safely park the drum.

3. Each drum should have a separate tight, suitable wires should be used to prevent the motion of the drums during transportation.

4. Longitudinal heavy gauge metal strips binding in two places on every drum. (If necessary)



secure drums adequately before moving

4) Storage Instructions:

1. The cable drums should be handled and stored on a flat, firm and well-drained surface to prevent any roughness (fig. 1)

2. Drums should be handled and stored upright with wedges in the heels of the flanges to prevent them from rolling. (fig. 1)

3. No drums should be handled and stored in flat position under any circumstances, this will lead to cable damage and may cause Problems during laying. (fig. 1)

4. Sufficient spaces should be kept between drums to avoid drum flanges to be interleaved during handling and storage so that the drum flanges do not touch cables on another drums (fig. 2)

5. Sufficient spaces should be rolled to an angle of 90 periodically every six months & Bolts must be checked.

6. If a cable is stored in a space which is at a lower temperature than the temperature recommended for its installation, then care should be taken to prevent the cable being damaged by bending, impact, shocks & torsion.

7. The cable ends should remain sealed to prevent the ingress of moisture (heat shrink end caps with a moisture seals are most suitable for this purpose).

8. Avoid storing the drums in direct sunlight for long periods to protect against excessive temperatures and ultraviolet sources

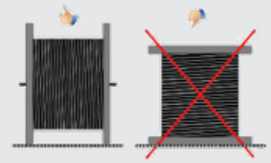
9. For lagged drums: The wooden drum battens should remain fixed to the drum to shield the cable sheath from. For this reason, damaged wooden battens should be replaced.

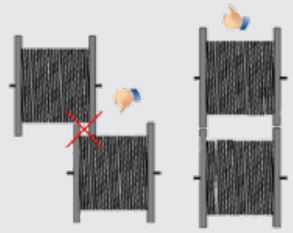
10. For un-lagged drums: Suitable covering shall be used if the drums must be stored in direct sunlight

11. Cable drums have to be stored whenever possible away from vehicular traffic in order to minimize the risk of being accidentally damaged.

12. Inspect the cable drums regularly, if a drum has been damaged than the cable should be rewound onto a replacement drum.

13. The identification label, which confirms its credentials should remain fixed to the drum





Storage and Handling at installation site:

1. Where reels are supplied with protective material fitted over the cable, the protection should remain in place until the cable is installed. If the protection is removed prior to installation (for inspection purposes for example) then it must be re-fitted as originally supplied before the reel is placed back in storage or onward shipped.

2. Storage temperature range is specified for each cable and must be respected.

3. Storing & handling the drum on its flat position under any circumstances may cause damage to the drum flange and/ or cause the cable layers to shift - This may cause cable to snag during de-reeling.

4. Tension limits, bending radius limits for different types of cables should be respected.

5. If the cables are to be installed in ducts, size of duct should correct.

General Recommendations

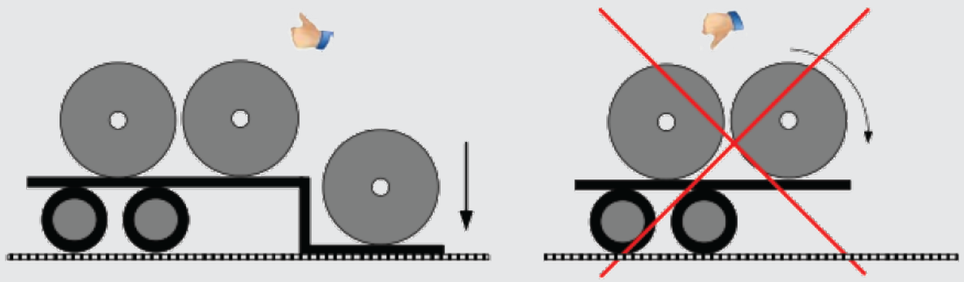
1. Avoid storage areas that are susceptible to flooding, or that could damage the cable, such as sharp, uneven terrain.

2. Never drop a cable reel from any height during transportation or use. Dropping a reel could affect its structural integrity and cause de-reeling issues – it may also damage the product. When unloading from a vehicle, use either the tail-lift / elevator (if fitted) or a suitable mechanical aid such as a forklift. Never let reels drop from the vehicle to the ground.

3. Before de-reeling cable, the reel should be visually inspected for possible damage caused during storage.

4. It is recommended to record the data provided on the labeling tags of all the drums/ reels/ boxes in case of any subsequent issues.

5. We recommend that cable reels should be stored in a safe, locked location.



Health & Safety

When manually handling a reel, ALWAYS make sure correct manual handling techniques are used and that consideration to mechanical lifting aids is given.

Note: cable handling and storage procedures is according to BS 8512

CERTIFICATES

DAS Egypt

Egypt

Quality Management System

Certificate of Approval

This is to certify that the QMS of

Giza Power Industry Co.

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

Has been assessed and found to meet the requirements of

ISO 9001:2015

This certificate is valid for the following scope of operations:

Manufacturing of overhead transmission line, low voltage, medium voltage,
High voltage and extra high voltage power cables till 200 Kv with all Aluminum
and copper cross section from 10 mm² to 2000 mm²

Authorised by: Eng. /Mahmoud Fouad
CEO

Date of Certificate Issue: 10 December 2025
Certificate Valid Until: 06 January 2029

Recertification audit before 07 December 2028. Certified since 07 January 2017.
This certificate is the property of DAS Egypt and remains valid
subject to satisfactory annual Surveillance audits

Certificate Number: 091156/Q Rev: 02
Accreditation Number: 012222

DAS Egypt :
Address: Sec 7, Block 34, 9th Zone,
Africa Str. (Extension of Mostafa El Nahass St,
Nasr City -Cairo –Egypt.
Mobile : (+2) 01223843665 & (+2) 01281050006
Tel: (+2) 0224734135

DAS Egypt

Egypt

Environmental Management System

Certificate of Approval

This is to certify that the EMS of

Giza Power Industry Co.

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

Has been assessed and found to meet the requirements of

ISO 14001:2015

This certificate is valid for the following scope of operations:

Manufacturing of overhead transmission line, low voltage, medium voltage
High voltage and extra high voltage power cables till 200 kv with all Aluminu
and copper cross section from 10 mm² to 2000 mm

Authorised by: Eng. /Mahmoud Fouad
CEO

Date of Certificate Issue: 10 December 2025
Certificate Valid Until: 06 January 2029

Recertification audit before 07 December 2028. Certified since 07 January 2017.
This certificate is the property of DAS Egypt and remains valid
subject to satisfactory annual Surveillance audits

Certificate Number: 142567/E Rev: 02
Accreditation Number: 012222

DAS Egypt :
Address: Sec 7, Block 34, 9th Zone,
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Nasr City -Cairo –Egypt.
Mobile : (+2) 01223843665 & (+2) 01281050006
Tel: (+2) 0224734135

DAS Egypt

DAS Egypt

Occupational Health & Safety Management System Certificate of Approval

This is to certify that the OHS of

Giza Power Industry Co.

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

Has been assessed and found to meet the requirements of

ISO 45001:2018

This certificate is valid for the following scope of operations:

Manufacturing of overhead transmission line, low voltage, medium voltage, High voltage and extra high voltage power cables till 200 kv with all Aluminum and copper cross section from 10 mm² to 2000 mm

Authorised by: Eng. /Mahmoud Fouad
CEO

Date of Certificate Issue: 10 December 2025
Certificate Valid Until: 06 January 2029

Recertification audit before 07 December 2028. Certified since 07 January 2017.
This certificate is the property of DAS Egypt and remains valid
subject to satisfactory annual Surveillance audits

Certificate Number: 453314/S Rev: 02
Accreditation Number: 012222

DAS Egypt :
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Nasr City -Cairo –Egypt.
Mobile : (+2) 01223843665 & (+2) 01281050006
Tel: (+2) 0224734135

DAS Egypt

DAS Egypt

Energy Management System Certificate of Approval

This is to certify that the EnMS of

Giza Power Industry Co.

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

Has been assessed and found to meet the requirements of

ISO 50001:2018

This certificate is valid for the following scope of operations:

Manufacturing of overhead transmission line, low voltage, medium voltage, High voltage and extra high voltage power cables till 200 Kv with all Aluminum and copper cross section from 10 mm² to 2000 mm²

Authorised by: Eng. /Mahmoud Fouad
CEO

Date of Certificate Issue: 13 January 2025
Certificate Valid Until: 12 January 2028

Recertification audit before 13 December 2027. Certified since 13 January 2025.
This certificate is the property of DAS Egypt and remains valid
subject to satisfactory annual Surveillance audits

Certificate Number: 72554/ En Rev: 01
Accreditation Number: 012222

DAS Egypt:
Address: Sec 7, Block 34, 9th Zone,
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Nasr City -Cairo –Egypt.
Mobile : (+2) 01223843665 & (+2) 0128105006
Tel: (+2) 0224734135
E-mail: dasukme@yahoo.com & dasukme@gmail.com

Accreditation Certificate No. (022003A)

Arab Republic of Egypt
Egyptian Accreditation Council (EGAC)

Certifies that

Giza Power Industry Laboratory
Giza Power Industry Company
Kilo (28) Cairo Alexandria Desert Road
Plot (690) - Industrial Area - Abo Rawash
Giza Governorate - Egypt

Has been accredited by EGAC in compliance with the requirements of

ISO/IEC 17025:2017

In Some Measurement Tests of Dimensions and Resistance For Cables Insulators and Electric Cables

The scope of accreditation is described in the attached schedule No. (022003B)
Scope Issue No. (02)

Issue No. (02): September 27, 2024 **Valid to: June 15, 2028**

Subject to continued compliance to the above standard and EGAC requirements

The Laboratory is accredited to issue reports / certificates under EGAC accreditation according to the attached scope of accreditation

EGAC is an ILAC MRA Signatory in the Field of Calibration, Testing, Medical Labs, Proficiency Testing Providers and Inspection Bodies Accreditation

1st Accreditation Date: June 16, 2020

Eng. Hanie El Desouki
Executive Director
Egyptian Accreditation Council

Lieutenant General \ Kamel Al Wazir
Deputy Prime Minister
For Industrial Development
Minister of Transportation and Industry
Chairman of EGAC

71376

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
PCR-147

Certificate of Conformity

BASEC hereby certifies that:

Giza Power Industry
Abo Rawash kilo 28 -alex road 690 industrial area
Al Omraneyah, Giza Governorate, Giza - Cairo, Egypt

Has implemented and maintains a Management System that fulfils the requirements of:

BASEC PCR*

In respect of the location listed above and for the following scope of activities:

Scope of Certification:

The design, manufacture, and supply of Al & Cu conductor, XLPE insulated and PVC, PE, HFFR sheathed, steel or Al Wire Armoured with Cross Sections of 70 to 800 sqmm Single Core and 70 to 400 sqmm Multi Core MV Cables up to 33kV for rated voltages from 3.8/6.6 kV to 19/33 kV.

Issue no: 1

Date of initial certification: 23/01/2024

Issue date: 23/01/2024

Signed for and on behalf of
BASEC Group Ltd

Date: 23/01/2024

If the conditions set out in the certification agreement are not fulfilled this Certificate may be rendered invalid. This Certificate is only valid when issued in conjunction with a valid BASEC product licence and is issued subject to ongoing surveillance for continued compliance, in accordance with BASEC's Regulations. *Auditing requirements as per current version of BASEC PCR.

BASEC PCR

Expiry date: 23/01/2027

BASEC Group Ltd, Presley House, Presley Way, Milton Keynes, MK8 0ES, UK
Registered in England No. 13950143, Tel: +44 (0)1908 267300
Email: mail@basec.org.uk Web: www.basec.org.uk

BSF121-Issue 7 (20-03-2023)

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
254/001/002
Issue No: 1

Certificate of Product Approval

Licensee:
Giza Power Industry

Abo Rawash kilo 28 -alex road 690 industrial area، Al Omraneyah, Giza Governorate, Giza -Cairo, Egypt

Factory:
Abo Rawash kilo 28 -alex road 690 industrial area، Al Omraneyah, Giza Governorate, Giza -Cairo, Egypt

Standard:
BS 7835:2007 Incorporating Corrigendum No.1

Description:
Medium voltage power cables up to 36 kV with LSHF sheathing

Details:
Circular stranded plain copper or aluminium conductors, extruded cross-linkable semi-conducting conductor screen, extruded cross-linkable polyethylene (XLPE/GP 8) insulation, extruded cross-linkable semi-conducting bonded or strippable insulation screen, copper tape and/or copper wire screened, extruded low smoke halogen free (LSHF) separation sheath, aluminium wire armour for single core cables and galvanized steel wire armour for multi-core cables, extruded low smoke halogen free (LSHF/LTS 1) oversheath. The cables' design, materials, and testing conform to BS 7835, BS EN 60332-1-2, BS EN 60332-3-24, BS EN 61034-2, and BS EN 60754-1 up to 19/33 (36) kV

Materials:
Insulation XLPE/GP 8, Sheath LSHF/LTS 1

Brand Name
N/A

Origin Mark:
GIZA POWER INDUSTRY

Permissible Approval Marks:

BASEC name | BASEC roundel

Signed for and on behalf of
BASEC Group Ltd

Date: 08/07/2024

Date of original issue: 08/07/2024

Check BASEC website to verify validity.

BASEC Group Ltd, Presley House, Presley Way, Milton Keynes, MK8 0ES, UK
Registered in England No. 13950143, Tel: +44 (0)1908 267300
Email: mail@basec.org.uk Web: www.basec.org.uk

UKAS PRODUCT CERTIFICATION 0004

Expiry date:
23/01/2027

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
254/001/001
Issue No: 1

Certificate of Product Approval

Licensee:
Giza Power Industry

Abo Rawash kilo 28 -alex road 690 industrial area، Al Omraneyah, Giza Governorate, Giza -Cairo, Egypt

Factory:
Abo Rawash kilo 28 -alex road 690 industrial area، Al Omraneyah, Giza Governorate, Giza -Cairo, Egypt

Standard:
BS 6622:2007 Incorporating Corrigenda Nos. 1 and 2

Description:
Medium voltage power cables up to 36 kV with PVC sheathing

Details:
Circular stranded plain copper or aluminium conductors, extruded cross-linkable semi-conducting conductor screen, extruded cross-linkable polyethylene (XLPE/GP 8) insulation, extruded cross-linkable semi-conducting bonded or strippable insulation screen, copper tape and/or copper wire screened, extruded polyvinyl chloride (PVC) separation sheath, aluminium wire armour for single core cables and galvanized steel wire armour for multi-core cables, extruded polyvinyl chloride (PVC/Type 9) oversheath. The cables' design, materials, and testing conform to BS 6622 up to 19/33 (36) kV

Materials:
Insulation XLPE/GP 8, Sheath PVC/Type 9

Brand Name
N/A

Origin Mark:
GIZA POWER INDUSTRY

Permissible Approval Marks:

BASEC name | BASEC roundel

Signed for and on behalf of
BASEC Group Ltd

Date: 08/07/2024

Date of original issue: 08/07/2024

Check BASEC website to verify validity.

BASEC Group Ltd, Presley House, Presley Way, Milton Keynes, MK8 0ES, UK
Registered in England No. 13950143, Tel: +44 (0)1908 267300
Email: mail@basec.org.uk Web: www.basec.org.uk

UKAS PRODUCT CERTIFICATION 0004

Expiry date:
23/01/2027

KEMA Labs

KEMA REPORT OF PERFORMANCE

1492-21

Object	Power cable with extruded insulation for fixed installations
Type	Cu/MICA/XLPE/SWA/LSHF 4 x 16 mm²
	0,6/1 (1,2) kV – Cu – XLPE
Client	Giza Power Industry (GPI), Kilo 28 Abo Rawash industrial Area, Giza, Egypt
Manufacturer	Giza Power Industry (GPI), Kilo 28 Abo Rawash industrial Area, Giza, Egypt *)
Tested by	KEMA B.V., Klingelbeekseweg 195, Arnhem, the Netherlands
Date of tests	1 September to 9 November 2021
Test specification	The tests have been carried out in accordance with BS 6387:2013 Category CWZ (modified by BS 7846:2015 Annex I for cables exceeding 20 mm diameter).
Summary and conclusion	The object has complied with the relevant requirements of the standard.

This report applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer.
*) as declared by the manufacturer

This report consists of 13 pages in total.

KEMA B.V.

Bas Verhoeven

DNV·GL

KEMA TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

was issued to
GIZA Power Industry
Abo Rawash Giza, Egypt

for the test object:
4-core power cable
Type: Cu/MICA/XLPE/SWA/LSHF
Rating: 0,6/1,0(1,2) kV – 4x300 mm² – Cu – XLPE

manufactured by
GIZA Power Industry
Abo Rawash Giza, Egypt

The test object has successfully passed the required type tests of
IEC 60502-1
subclauses 17 and 18

The test results are recorded in Certificate No.
1573-17

This Certificate was issued on 3 January 2018

DNV GL Netherlands B.V.

J.P. Ponteijne
Executive Vice President
KEMA Laboratories

KEMA Laboratories

DNV·GL

KEMA TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

was issued to

GIZA Power Industry

690 Industrial Area, Egypt

for the test object:

Single-core power cable

Type: 19/33 kV 1x1200 mm² Cu/XLPE/AWA/HDPE Cable
Rating: 19/33 (36) kV – 1x1200 mm² – Cu – XLPE

manufactured by

GIZA Power Industry

690 Industrial Area, Egypt

The test object has successfully passed the required type tests of

60502-2

The test results are recorded in Certificate No.

1523-18

This Certificate was issued on 2 January 2019.

KEMA B.V.

Shankar Subramany
Director, High-Power Laboratory

KEMA Laboratories

CENTRAL POWER RESEARCH INSTITUTE

TYPE TEST CERTIFICATE

CPRI

Type Test Certificate Number	:	**CPRIBLRCAB23T0041 Date: 15 February 2023**
Name and Address of the Customer	:	M/s. Giza Power Industry. Killo 28 Alexandria Desert Road, Abo Rawash Giza-690 Industrial area, Giza, Egypt
Name and Address of the Manufacturer	:	M/s. Giza Power Industry. Killo 28 Alexandria Desert Road, Abo Rawash Giza-690 Industrial area, Giza, Egypt
Particulars of sample tested	:	1C x 630 sq.mm CU/XLPE/HDPE 18/30 (36) kV Cable.
Type	:	XLPE Medium Voltage Cable
Description of test sample	:	Refer Sheet 2 of 11
Serial Number	:	Nil
Number of Samples tested	:	One
Date(s)of test(s)	:	16 January 2023 to 15 February 2023
CPRI sample Code Number(s)	:	CDDCAB23S0001
Particulars of tests conducted	:	Type tests (Refer Sheet 3 of 11 & 4 of 11)
Test in accordance with Standard / Specification	:	As per IEC 60502-2:2014
Sampling Plan	:	Nil
Customer's requirement	:	Nil
Deviation, if any	:	Nil

Name of the witnessing persons

Customer's representative	:	Nil
Other than Customer's representative	:	Nil
Test subcontracted with address of the laboratory	:	None

Document constituting this type test certificate (in words)

Number of Sheets	:	Eleven
Number of Oscillogram(s)	:	Four (One sheet)
Number of Graph(s)	:	Nil
Number of Photograph(s)	:	Nil
Number of Test Circuit Diagram(s)	:	Nil
Number of Drawing(s)	:	One

(Thirumurthy)
Test Engineer

(K. P. Meena)
Head of Division
Reviewed and Authorized by

COMPLIANCE DOCUMENT

This compliance Document is issued to:
Giza Power Industry
Abo Rawash Giza, Kilo 28 Alexandria Desert Road, 690 Industrial Area - Giza - Egypt
For

Product : Medium Voltage Cable

33KV1X500AL - 1X500 AL,XLPE(TR)CWS/35 WATER BLOCKING TAPES MDPE 33KV

Test Standards : BS 7870-4.10:20111+A1:2016
LV and MV polymeric insulated cables for use by distribution and generation utilities
Part 4: Specification for distribution cables with extruded insulation of rated voltages of 11 kV to 33 kV
Section 4.10: Single-core 11 kV to 33 kV cables
(Implementation of HD 620)
BS EN 60228:2005 Conductors of insulated cables

Test Report date : 23 May 2024

A sample of subject product was tested to the requirements of 2006/42/EC MD Machinery Directive – 2014/35/EU LVD Low Voltage Directive and the test results comply with the requirements. Based on declaration by manufacturer, multiple models are included under the same machine's name.
After preparation of the necessary technical documentation as well as the declaration of conformity CE marking can be affixed on the product.The document holder is responsible for the consistent manufacturing of the product in compliance with the test sample submitted to us

Certificate No: CE2100-25 **Unique ID: EG1024**
Issue Date: 12 Jan 2025
Expiry Date: 10 Jan 2026

This certificate verifies the original certificate issued and is valid as long as it is displayed as an electronic copy at www.iqs-ltd.com and surveillance audits are satisfactorily completed
(Subject to the company maintaining its system to the required standard)
(In case a surveillance audit is not allowed to be conducted: this certificate shall be suspended/withdrawn)
IQS International Accredited by IQMS Accreditation (IQMS).LLC www.iqms.org.uk
Following the requirements of (CE) European standards guidelines

President

IQSG CERTIFICATION SERVICES LTD European Union
This Certificate of Registration Remains The Property of IQS International and Shall be Returned Immediately Upon Request
Email: info@iqs-ltd.com / Website : www.iqs-ltd.com

COMPLIANCE DOCUMENT

This compliance Document is issued to:
Giza Power Industry
Abo Rawash Giza, Kilo 28 Alexandria Desert Road, 690 Industrial Area - Giza - Egypt
For

Product : Medium Voltage Cable

33KV1X185AL - 1X185 AL,XLPE(TR)CWS/35 WATER BLOCKING TAPES MDPE 33KV

Test Standards : BS 7870-4.10:20111+A1:2016
LV and MV polymeric insulated cables for use by distribution and generation utilities
Part 4: Specification for distribution cables with extruded insulation of rated voltages of 11 kV to 33 kV
Section 4.10: Single-core 11 kV to 33 kV cables
(Implementation of HD 620)
BS EN 60228:2005 Conductors of insulated cables

Test Report date : 23 May 2024

A sample of subject product was tested to the requirements of 2006/42/EC MD Machinery Directive – 2014/35/EU LVD Low Voltage Directive and the test results comply with the requirements. Based on declaration by manufacturer, multiple models are included under the same machine's name.
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(In case a surveillance audit is not allowed to be conducted: this certificate shall be suspended/withdrawn)
IQS International Accredited by IQMS Accreditation (IQMS).LLC www.iqms.org.uk
Following the requirements of (CE) European standards guidelines

President

IQSG CERTIFICATION SERVICES LTD European Union
This Certificate of Registration Remains The Property of IQS International and Shall be Returned Immediately Upon Request
Email: info@iqs-ltd.com / Website : www.iqs-ltd.com

COMPLIANCE DOCUMENT

This compliance Document is issued to:
Giza Power Industry
Abo Rawash Giza, Kilo 28 Alexandria Desert Road, 690 Industrial Area - Giza - Egypt
For

Product : Medium Voltage Cable

33KV1X300AL - 1X300 AL,XLPE(TR)CWS/35 WATER BLOCKING TAPES MDPE 33KV

Test Standards : BS 7870-4.10:20111+A1:2016
LV and MV polymeric insulated cables for use by distribution and generation utilities
Part 4: Specification for distribution cables with extruded insulation of rated voltages of 11 kV to 33 kV
Section 4.10: Single-core 11 kV to 33 kV cables
(Implementation of HD 620)
BS EN 60228:2005 Conductors of insulated cables

Test Report date : 23 May 2024

A sample of subject product was tested to the requirements of 2006/42/EC MD Machinery Directive – 2014/35/EU LVD Low Voltage Directive and the test results comply with the requirements. Based on declaration by manufacturer, multiple models are included under the same machine's name.
After preparation of the necessary technical documentation as well as the declaration of conformity CE marking can be affixed on the product.The document holder is responsible for the consistent manufacturing of the product in compliance with the test sample submitted to us

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President

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This Certificate of Registration Remains The Property of IQS International and Shall be Returned Immediately Upon Request
Email: info@iqs-ltd.com / Website : www.iqs-ltd.com

Ministry of Electricity and Renewable Energy
Egyptian Electricity Holding Company
Laboratories, research and testing sector
Extra High Voltage Research Center
Test Report No. (430/2023)

وزارة الكهرباء والطاقة المتجددة
الشركة القابضة لكهرباء مصر
قطاع المعامل والبحوث والاختبارات
مركز أبحاث الجهد الفائق
تقرير رقم (٢٠٢٣/٤٣٠)

TEST REPORT

REPORT No. (430/2023)

- **CLIENT : GIZA POWER INDUSTRY**
  Abo Rawash Giza , Kilo 28 Alexandria
- **Report Date**: 11/12/2023
- **Place:**
  - **Extra High Voltage Research Center Laboratories.**
  - Internal Code: TO - AC - 23 - 09 - 06 - 01
- **Requirements:**
  - Type tests according to IEC (60502-2).
- **Standard Specification:**
  - **IEC (60502-2) / (2014):** Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1.2 kV) up to 30 kV (U_m = 36 kV).
- **Description of Specimen:**
  - 18/30 (36) kV power cable with the following specifications:
    - Manufacturer : **GIZA POWER INDUSTRY.**
    - Type : GIZA POWER INDUSTRY 3×400 mm^2- 18/30 kV- AL/XLPE / STA/PVC
    - No. of Cores : 3.
    - Insulation : XLPE.
    - Conductor material : Aluminum
    - Conductor cross-section : 400 mm^2
    - Armoring material :Double Steel tape armoring.
    - Sheath material : PVC - ST2.
    - Sheath color : Black.
  - **Specimen Receipt Date: 6 / 9 / 2023**
- **Description of Equipment:**
  - High voltage reactor - (400) kV - (5000) kVA - Type: (KKF 4400-7/OT 257 AC) - Serial No.: (454321) - Calibration certificate No.: (4065/23 C001/8/20/2023)
  - AC Current probe -TRUE RMS MULTIMETER – Type : (A100/114) – Serial No.: (96610583) – Certificate No.: (1350/23 C010/9/267/2022)
  - PD calibrator – type: (KAL 9520) – Serial No.: (184060) - Calibration certificate No.: (4065/23C006/2/21/2023).
  - Impulse voltage generator (800) kV - (40) kJ - Type: (SMC 440/1800/H391-14/MIM 200-12/2B) - Calibration certificate No.: (4065/23 C0/4/2/13/2023).
  - Surface thermocouple Type : (k) with digital indicator resolution (0.1) - Calibration certificate No.: (3979/32C005/2/60/2023).
  - AC Current probe/TRUE RMS MULTIMETER - Type : (100/1143) - Serial No.: (96610583) with digital indicator resolution (0.1) - Calibration certificate No.: (1350/23C010/9/267/2022).
  - Capacitance and Dissipation Factor Measuring Bridge - Type: (dobel- M4000) - Serial No.: (029700917).
  - Oven up to 300 °C - Type: (BINDER) - Serial No.: (02-32772) - Calibration certificate No. (6059/32C010/249/1348/2023).
  - Tensile testing machine (100) kN - Type: (Lloyd) - Model: (LR 100K plus) - Serial No.: (108322) - Calibration certificate No.: (6059/14C002/60/597/2023).
  - Profile Projector - Type: (P-300) - Serial No.: (34034) - calibration certificate No.: (1712/63 C035/10/1302/2022).

M. Sabry M. Khairy

Ministry of Electricity and Renewable Energy
Egyptian Electricity Holding Company
Laboratories, research and testing sector
Extra High Voltage Research Center
Test Report No. (193/2023)

وزارة الكهرباء والطاقة المتجددة
الشركة القابضة لكهرباء مصر
قطاع المعامل والبحوث والاختبارات
مركز أبحاث الجهد الفائق
تقرير رقم (٢٠٢٣/١٩٣)

TEST REPORT

REPORT No. (193/2023)

- CLIENT: **GIZA POWER INDUSTRY**
  Abo Rawash-Kilo 28 - Alex Road industrial area (690), ALomraneyah, Giza.
- Report Date: 20/6/2023
- Place:
  - Extra High Voltage Research Center Laboratories.
  - Internal Code: TO - AC - 23 - 04 - 10 - 01
- Requirements:
  - Type tests according to IEC (60502-2).
- Standard Specification:
  - **IEC (60502-2) / (2014):** Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1.2 kV) up to 30 kV (U_m = 36 kV)".
- Description of Specimen:
  - 18/30 (36) kV power cable with the following specifications:
    - Manufacturer : **GIZA POWER INDUSTRY**
    - Type : GIZA POWER INDUSTRY 1×630 mm^2- 18/30 kV- AL/XLPE/ATA/PVC
    - No. of Cores : 1.
    - Insulation : XLPE.
    - Conductor material : Aluminum
    - Conductor cross-section : 630 mm^2
    - Armoring material : Double Aluminum tape.
    - Sheath material : PVC.
    - Sheath color : Black.
- Description of Equipment:
  - High voltage reactor - (400) kV - (5000) kVA - Type: (KKF 4400-7/OT 257 AC) - Serial No.: (454321) - Calibration certificate No.: (4065/23 C001/8/20/2023)
  - AC Current probe -TRUE RMS MULTIMETER – Type : (A100/114) – Serial No.: (96610583) – Certificate No.: (1350/23 C010/9/267/2022)
  - PD calibrator – type: (KAL 9520) – Serial No.: (184060) - Calibration certificate No.: (4065/23C006/2/21/2023).
  - PD detector - Type: (TE57) - Calibration certificate No.: (516/23/2021).
  - Impulse voltage generator (800) kV - (40) kJ - Type: (SMC 440/1800/H391-14/MIM 200-12/2B) - Calibration certificate No.: (4065/23 C0/4/2/13/2023).
  - Thermometer with digital indicator - Model: (Fluke) - Type: (52II) - Serial No. (75080027) - Calibration certificate No.: (3979/32 C005/2/60/2023).
  - Capacitance and Dissipation Factor Measuring Bridge - Type: (dobel- M4000) - Serial No. (029700917).
  - Oven up to 300 °C - Type: (BINDER) - Serial No.: (02-32772) - Calibration certificate No. (16/32/2022).
  - Tensile testing machine (100) kN - Model: (LR 100K plus) - Serial No.: (108322) - Calibration certificate No.: (123/14/2022).

Eldeeky M.Shawky M. sabry

Ministry of Electricity and Renewable Energy
Egyptian Electricity Holding Company
Laboratories, research and testing sector
Extra High Voltage Research Center
Test Report No. (498/2024)

وزارة الكهرباء والطاقة المتجددة
الشركة القابضة لكهرباء مصر
قطاع المعامل والبحوث والاختبارات
مركز أبحاث الجهد الفائق
تقرير رقم (٢٠٢٤/٤٩٨)

TEST REPORT

REPORT No. (498/2024)

- CLIENT: GIZA POWER INDUSTRY.
  Abu Rawash , Giza , 28 Km Alexandria Desert Road , 690 industrial Area.
- Report Date: 03/11/2024
- Place:
  - **Extra High Voltage Research Center Laboratories.**
  - Internal Code: TO - AC - 24 - 09 - 04 - 02
- Requirements:
  - Type tests according to IEC (60502-2).
- Standard Specification:
  - **IEC (60502-2) / (2024):** Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1.2 kV) up to 30 kV (U_m = 36 kV).
- Description of Specimen:
  - 18/30 (36) kV power cable with the following specifications:
    - Manufacturer : **ELECTRO CABLE EGYPT CO.**
    - Type : ELECTRO CABLE EGYPT Co. ELECTRIC CABLE 3×400mm² AL XLPE/DGSTA /MDPE 18/30(36) kV 2024
    - No. of Cores : 3.
    - Insulation : XLPE.
    - Conductor material : Aluminum
    - Conductor cross-section : 400 mm^2
    - Armoring material : DGSTA.
    - Sheath material : MDPE – STV_7.
    - Sheath color : Black.
    - Water penetration design: Barriers are included which prevent- longitudinal water penetration along the cable as the data sheet illustrated in page No. (17) of this report.
- Description of Equipment:
  - High voltage reactor - (400) kV - (5000) kVA - Type: (KKF 4400-7/OT 257 AC) - Serial No.: (454321) - Calibration certificate No.: (239/23C003/5/194/2024)
  - PD calibrator - type: (KAL 9520) - Serial No.: (184060) - Calibration certificate No.: (239/23C006/5/195/2024).
  - Impulse voltage generator (800) kV - (40) kJ - Type: (SMC 440/1800/H391-14/MIM 200-12/2B) - Calibration certificate No.: (239/23C015/2/245/2024).
  - Surface thermocouple Type : (k) with digital indicator resolution (0.1) - Serial No.: (75080020) - Calibration certificate No.: (1199/32C005/147/1574/2024).
  - AC Current probe/TRUE RMS MULTIMETER - Type: (EXTECH285)- Serial No.: (990801761) with digital indicator resolution (0.1) - Calibration certificate No.: (1002/23C010/36/437/2024).

M.Shawky M.Khairy

Egyptian Electricity Holding Company
Extra High Voltage Research Center
Laboratories, research and testing sector
km 27 Cairo- Alex. Desert road
Report No. (440/2020)
Page 1 of 6

TEST REPORT

REPORT No. (440/2020)

- **CLIENT:** **GIZA POWER INDUSTRIES**
  Address: Abo Rawash Giza, kilo 28 Alexandria Desert Road, 690 Industrial Area, Egypt
- **Report Date:** 9 / 3 / 2021
- **Place:**
  - **EXTRA HIGH VOLTAGE RESEARCH CENTER LABORATORIES**
  - Internal code : TO – AC - 20 – 10 – 06 - 01
- **Requirements:**
  - Type tests according to IEC 60502-1.
- **Description of Specimen:**
  - 600/1000 V overhead insulated Aluminum bundle conductor - AL/XLPE + 2.5%C. B. with the following specifications:
    - Manufacturer : **Giza Power Industries**
    - Type : GIZA POWER INDUSTRY 4×95 mm² AL/XLPE 2.5% C.B 0.6/1kV 2020.
    - No. of conductors : 4
    - Insulation :XLPE +2.5% C.B.
    - Conductor Material : Aluminum.
    - Conductor cross-section : 95 mm².
  - **Sample receipt date:** 6/10/2020.
- **Selection of test sample:**
  - Test sample was chosen under the responsibility of the client.
- **Standard Specification:**
  - IEC (60502-1, 2009): Power Cables with Extruded Insulation and their Accessories for rated Voltages from 1kV(Um = 1.2kV) up to 30kV (Um=36kV) Part 1: Cables for Rated Voltage of 1kV (Um=1.2kV) and 3kV (Um=3.6kV)
  - IEC (60811-201, 2012): Electric and optical fiber cables – Test methods for non-metallic materials – Part 201: General tests – Measurement of Insulation thickness.
  - IEC (60811-401, 2012): Electric and optical fiber cables – Test methods for non-metallic materials – Part 401: Miscellaneous tests – Thermal ageing methods – Ageing in an air oven.

F - 07 – 08 - 02

DIN EN ISO 9001:2008

LABORATORIES OF EXTRA HIGH
VOLTAGE RESEARCH CENTER SECTOR
KM 27 Cairo- Alex. Desert Road
Report No. (157 /2016)
Page 1 of 16

TEST REPORT

REPORT No. (157 /2016)

- ***CLIENT :*** **GIZA POWER INDUSTRY .**
- ***Report Date:*** 16 / 5 /2016.
- ***Place:***
  - *Laboratories of Extra High Voltage Research Center.*
  - Internal code : *TO - AC - 16 - 02 - 01 - 03*
- ***Requirements:***
  - Type tests according to IEC 60840.
- ***Standard Specification:***
  - *IEC 60840 "Power cables with extruded insulation and their accessories for rated voltages above 30 kV (Um= 36 kV) up to 150 kV (Um = 170 kV).*
- ***Description of the Specimen :***
  - 38/66 kV Power cable with the following specification:
    - Manufacturer : **GIZA POWER INDUSTRY .**
    - Type : 38/66 kV/CU/XLPE/LEAD/HDPE /1 x 1200 mm²- 2015.
    - No. of Phases : 1
    - Insulation : XLPE
    - Conductor Material : Copper
    - Conductor cross-section : 1200 mm²
    - Metallic sheath Material : Lead
    - Over sheath Material : HDPE (ST7)
    - Sheath Color : Black
    - Rated Frequency : 50 Hz
    - Water Penetration Design : A barriers are included which prevents longitudinal water penetration along the outer surface of the conductor (water blocking tape), the gap between the outer surface of the insulation screen and the metallic screen (water blocking tape)

Test		Requirement	Observations
Heat shock test			
- Oven temperature	(°C)	150 ± 3	No cracks
- Duration	(hour)	1	
- Visual examination		No cracks	

- The test results met the requirements.

▪ **Conclusion:**

- The 0.6/1 kV power cable - Type: (GIZA POWER INDUSTRY 4×35 mm² AL/XLPE /STA/PVC 0.6/1KV) - Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC(60502-1). The customer to check of carrying out the other remaining tests specified in the IEC standard and not included in this report.

▪ **Notes:**

- Tests were carried out on the above specimen only without any responsibility concerning other untested specimens.
- The tests were carried out without any obligation on Egyptian Electricity Holding Company
- This test report shall not be reproduced except in full, without written approval of EHVRC.
- This report and results are related only to the tested specimen.
- This report is valid for the tested specimen and for a maximum three years unless there is a change in the design or specifications mentioned in this report.
- According to the rules regulating the work in the EHVRC, the customer is not permissible to take the tested sample.
- This report to be stamped for use.
- This test report is forbidden to be reproduced without prior permission of the Extra High Voltage Research Centre.

▪ Test Engineers:

A.C Lab	A.C Lab	A.C Lab
Hala	M.Sabry	21/9/2023
Eng. Hala Fouad	Eng. Mohamed Sabry	Eng. Samar Fathey

General Manager

Eng. Ehab Fawzy Mahmoud

ORIGINAL — Laboratories Research and Testing Sector

Consultant of Research, Tasting and Environmental Studies

Dr. Eng. Salwa Ali Ahmed

NORA ...

Outer diameter of cable D (mm)	Diameter of conductor d (mm)	Requirement of bending diameter <15(D+d)+5% (mm)	Hub diameter of drum (mm)
125	23	2331	2250

2-Water penetration test

Testing Date: 15 - 18/09/2024 **Testing Engineer**: Mohamed Sabry

- The water penetration test was carried out in accordance with clause (19.24) of IEC (60502-2).
- The result of the heating cycle is shown in the following table:

No. of heating cycles	Required conductor temperature (°C)	Heating		Cooling time (h)
		Total heating time (h)	Duration of heating at 98 °C (h)	
10	95 ≤ t < 100	5	2	3

- The test results complied with the requirements.

▪ **Conclusion:**

- The Aluminum 18/30 (36) kV power cable - Type: (ELECTRO CABLE EGYPT CO. ELECTRIC CABLE 3×400mm² AL/XLPE/DGSTA/MDPE 18/30(36) KV 2024) - Manufactured by ELECTRO CABLE EGYPT CO., achieved the requirements of tests mentioned in this report according to IEC (60502-2) and the client's request. The customer to check of carrying out other remaining tests specified in IEC standard and not included in this report.

▪ Notes:

- Tests were carried out on the above specimen only without any responsibility concerning other untested specimens.
- The tests were carried out without any obligation on Egyptian Electricity Holding Company
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- This report to be stamped for use.
- This test report is forbidden to be reproduced without prior permission of the Extra High Voltage Research Centre.

▪ Test Engineers:

A.C Lab.	Reviewed by
M.Sabry	30/9/2024
Eng. Mohamed Sabry	Eng. Mohamed Anter

Head Sector

Eng. Ehab Fawzy Mahmoud

ORIGINAL — Laboratories Research and Testing Sector

Consultant of research, testing and environmental studies

Dr. Eng. Salwa Ali Ahmed

Sherif ....

3.9. Joints in Aluminum wires:

Testing Date: 26/12/2023 **Testing Engineer:** Samar Fathey

- The joints in Aluminum wires test is carried out according to clause (6.5.4) of IEC (61089).
- The manufacturer provided the joint in one stranded of the outer layer of the conductor by using cold pressure method.
- The conductor passes the test if its withstand a stress equal (130 MPa) without the fracture of the welded wire.
- **The conductor passed the test without failure of the welded wire occurs.**

▪ Conclusion:

- **The 0.6/1 kV overhead insulated Aluminum conductor - XLPE+2.5% C.B - Type: (GIZA POWER INDUSTRY 1×120 mm² AL /XLPE +2.5% C.B 0.6/1 KV 2023) - Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC (60502-1) , (EDMS 04-300-1) and BS EN (50182).**

▪ Notes:

- Tests were carried out on the above specimen only without any responsibility concerning other untested specimens.
- The tests were carried out without any obligation on Egyptian Electricity Holding Company
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▪ Test Engineers:

A.C Lab	A.C Lab	A.C Lab
Hala	M.Sabry	
Eng. Hala Fouad	Eng. Mohamed Sabry	Eng. Samar Fathey

Head Sector
24/1/18
Eng. Ehab Fawzy Mahmoud

Consultant of Research, Testing and Environmental Studies
2024/1/23
Dr. Eng. Salwa Ali Ahmed

NORA ...

Test		Requirement	Observations
Heat shock test			
- Oven temperature	(°C)	150 ± 3	No cracks
- Duration	(hour)	1	
- Visual examination		No cracks	

- The test results met the requirements.

▪ Conclusion:

- The 0.6/1 kV power cable - Type: (GIZA POWER INDUSTRY 4×25 mm² AL/XLPE /STA/PVC 0.6/1KV - Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC(60502-1). The customer to check of carrying out the other remaining tests specified in the IEC standard and not included in this report.

▪ Notes:

- Tests were carried out on the above specimen only without any responsibility concerning other untested specimens.
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- According to the rules regulating the work in the EHVRC, the customer is not permissible to take the tested sample.
- This report to be stamped for use.
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▪ Test Engineers:

A.C Lab	A.C Lab	A.C Lab
Hala	M.Sabry	21/9/2023
Eng. Hala Fouad	Eng. Mohamed Sabry	Eng. Samar Fathey

General Manager
23/8/21
Eng. Ehab Fawzy Mahmoud

Consultant of Research, Tasting and Environmental Studies
25
Dr. Eng. Salwa Ali Ahmed

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TEST REPORT

REPORT No. (625/2023)

- CLIENT : GIZA POWER INDUSTRY
  Abo Rawash Giza , Kilo 28 Alexandria
- Report Date: 23/01/2024
- Place:
  - Extra High Voltage Research Center Laboratories.
  - Internal Code: TO - AC - 23 - 11 - 27 - 02
- Requirements:
  - Type tests according to BS (7835:2000).
- Standard Specification:
  - BS (7835)/(2000) : Specification for armoured cables with extruded cross-linked polyethylene or ethylene propylene rubber insulation for rated voltages from 3.8/6.6 kV up to 19/33 kV having low emission of smoke and corrosive gases when affected by fire.
- Description of Specimen:
  - 19/33 (36) kV power cable with the following specifications:
    - Manufacturer : ELECTRIC CABLE - GIZA POWER INDUSTRY.
    - Type : ELECTRIC CABLE – 33000 VOLTS – BS7835 - GIZA POWER INDUSTRY 3×185 mm²
    - Cable construction : CU/XLPE/CWS/SWA/LSHF.
    - No. of Cores : 3.
    - Insulation : XLPE.
    - Conductor material : Cupper
    - Conductor cross-section : 185 mm²
    - Armoring material : SWA.
    - Sheath material : LSHF.
    - Sheath color : Black.
  - Specimen Receipt Date : 27/11/2023
- Description of Equipment:
  - High voltage reactor - (400) kV - (5000) kVA - Type: (KKF 4400-7/OT 257 AC) - Serial No.: (454321) - Calibration certificate No.: (4065/23 C001/8/20/2023)
  - AC Current probe -TRUE RMS MULTIMETER – Type : (A100/114) – Serial No.: (96610583) – Certificate No.: (1350/23 C010/9/267/2022)
  - PD calibrator – type: (KAL 9520) – Serial No.: (184060) - Calibration certificate No.: (4065/23C006/2/21/2023).
  - Impulse voltage generator (800) kV - (40) kJ - Type: (SMC 440/1800/H391-14/MIM 200-12/2B) - Calibration certificate No.: (4065/23 C0/4/2/13/2023).

M.Sabry M.Khais M.Shawbl

Test		Requirement	Observations
Heat shock test			
- Oven temperature	(°C)	150 ± 3	No cracks
- Duration	(hour)	1	
- Visual examination		No cracks	

- The test results met the requirements.

- **Conclusion:**
  - The 0.6/1 kV power cable - Type: (GIZA POWER INDUSTRY 3×185+95 mm² AL/XLPE /STA/PVC 0.6/1KV) - Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC(60502-1). The customer to check of carrying out the other remaining tests specified in the IEC standard and not included in this report.
- **Notes:**
  - Tests were carried out on the above specimen only without any responsibility concerning other untested specimens.
  - The tests were carried out without any obligation on Egyptian Electricity Holding Company
  - This test report shall not be reproduced except in full, without written approval of EHVRC.
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  - This report is valid for the tested specimen and for a maximum three years unless there is a change in the design or specifications mentioned in this report.
  - According to the rules regulating the work in the EHVRC, the customer is not permissible to take the tested sample.
  - This report to be stamped for use.
  - This test report is forbidden to be reproduced without prior permission of the Extra High Voltage Research Centre.
- Test Engineers:

A.C Lab	A.C Lab	A.C Lab
Hala	M. Sabry	21/9/2023
Eng. Hala Fouad	Eng. Mohamed Sabry	Eng. Samar Fathey

General Manager

23/9/21

Eng. Ehab Fawzy Mahmoud

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Consultant of Research, Testing and Environmental Studies

24/9/2023

Dr. Eng. Salwa Ali Ahmed

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3.9. Joints in Aluminum wires:

Testing Date: 27/11/2023 **Testing Engineer:** Samar Fathey

- The joints in Aluminum wires test is carried out according to clause (6.5.4) of IEC (61089).
- The manufacturer provided the joint in one stranded of the outer layer of the conductor by using cold pressure method.
- The conductor passes the test if its withstand a stress equal (130 MPa) without the fracture of the welded wire.
- The conductor passed the test without failure of the welded wire occurs.

▪ **Conclusion:**

- The 0.6/1 kV overhead insulated Aluminum conductor - XLPE+2.5% C.B - Type: (GIZA POWER INDUSTRY 1×35 mm² AL /XLPE +2.5% C.B 0.6/1 KV 2023) - Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC (60502-1) , (EDMS 04-300-1) IEC (61089) and IEC(60889). The customer to check of carrying out the other remaining tests specified in the IEC standard and not included in this report.

▪ **Notes:**

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▪ Test Engineers:

A.C Lab	A.C Lab	A.C Lab
Hala	H. Sabry	20/12/2023
Eng. Hala Fouad	Eng. Mohamed Sabry	Eng. Samar Fathey

Head Sector
23/12/20
Eng. Ehab Fawzy Mahmoud

Consultant of Research, Testing and Environmental Studies
12/24
Dr. Eng. Salwa Ali Ahmed

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Test		Requirement	Observations
Heat shock test			
- Oven temperature	(°C)	150 ± 3	No cracks
- Duration	(hour)	1	
- Visual examination		No cracks	

- The test results met the requirements.

▪ **Conclusion:**

- The 0.6/1 kV power cable - Type: (GIZA POWER INDUSTRY 3×120+70 mm² AL /XLPE /STA/ PVC 0.6/1 KV) - Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC(60502-1). The customer to check of carrying out the other remaining tests specified in the IEC standard and not included in this report.

▪ **Notes:**

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▪ Test Engineers:

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Hala	H. Sabry	21/12/2023
Eng. Hala Fouad	Eng. Mohamed Sabry	Eng. Samar Fathey

General Manager
22/12/21
Eng. Ehab Fawzy Mahmoud

Consultant of Research, Tasting and Environmental Studies
23/9/24
Dr. Eng. Salwa Ali Ahmed

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الشركة القابضة لكهرباء مصر
قطاع معامل مركز ابحاث الجهد الفائق
الكيلو٢٧ طريق القاهرة /الاسكندرية الصحراوى
رقم التقرير : (٢٠٢٠/٢١١)
صفحة ٦ من ٦

٢-٢ *اختبار مقاومة الغلاف PVC للتشقق (اختبار الصدمة الحرارية):*

تاريخ الاختبار : ٨ /٩/ ٢٠٢٠ — المهندس المسئول : محمد سعيد

- تم اجراء الاختبار طبقا للبند رقم (18.9) من المواصفة القياسية العالمية IEC (60502-1) وطبقا للطريقة الموضحة بالمواصفة القياسية العالمية IEC(60811-509) والنتيجة موضحة بالجدول التالى:

الاختبـــار	المطلوب بالمواصفات القياسية العالمية	نتيجة الاختبار
اختبار الصدمة الحرارية للغلاف :		
- درجة حرارة الفرن (°م)	١٥٠ ± ٢	اجتـــاز
- زمن الاختبار (ساعة)	١	

- *احتازت العينة الاختبار .*

■ *الخلاصـــة :*

- *احتازت عينة كابل الومنيوم معزول جهد ٠,٦/١ ك٠ف – قطاع (٣×١٥٠+٧٠ مم٢) – عزل XLPE وغلاف PVC انتاج شركة (GIZA POWER INDUSTRY ((3×150+70mm²) AL/XLPE/STA/PVC 0.6/1 kV 2020)*

الجهزة باور للصناعة - الاختبارات المذكورة بهذا التقرير طبقا للمواصفات القياسية العالمية (IEC (60502-1 وعلى الجهة المستخدمة التأكد من اجراء باقى الاختبارات المنصوص عليها التى لم يرد ذكرها بهذا التقرير .

■ ملحوظة :

- اجراء الاختبارات على العينات التى تم ارسالها فقط بمعرفة العميل دون اى مسئولية بخصوص العينات التى يتم توريدها.
- أجريت الاختبارات بناء على طلب الجهة طالبة الاختبارات دون أدنى مسئولية على الشركة القابضة لكهرباء مصر (مركز ابحاث الجهد الفائق) فيما يتعلق بحقوق الغير .
- لايمكن اعادة استصدار نسخة مطبوعة من هذا التقرير مرة أخرى إلا بموافقة كتابية من مركز ابحاث الجهد الفائق وبشرط إستدارها كاملة غير منقوصة .
- المركز غير مسئول عن عينات الاختبار بعد استلام العميل لتقرير الاختبار الخاص بالعينة الواردة والتى تم اجراء الاختبارات عليها وذلك فى فترة لا تتجاوز شهرين من تاريخ استلام التقرير.
- هذا التقرير صالح للعينة المختبره وبعد اقصى ثلاث سنوات مالم يحدث تغيير فى التصميم او المواصفات المذكورة بالتقرير .
- التقرير غير قابل للتداول خارج الجهه الطالبة والمركز غير مسئول عن اى حقوق للغير من جراء هذا التقرير .
- لايعتد بهذا التقرير بدون الختم او فى حالة وجود اشطب او تعديل .

■ مهندسو الاختبارات :

- م/ محمد سعيد - معمل التيار المتردد .

مديـــر عام
المعامل ومركز الجهد الفائق
م/ جمال السيد محمود

مديـــر عام الادارة العامه
للمعايـــرة والجـــودة الشامله
م/ ايهاب فوزى محمود

رئيس قطاع
المعامل والبحوث والاختبارات
المهندس الاستشارى / محمد سليم سالمان

خريطة ....

F - 07 – 08 - 02

Egyptian Electricity Holding Company
Laboratories, research and testing sector
Extra High Voltage Research Center
km 27 Cairo- Alex. Desert road
Report No. (545/2022)

الشركة القابضة لكهرباء مصر
قطاع المعامل والبحوث والاختبارات
مركز أبحاث الجهد الفائق
الكيلو٢٧ طريق القاهرة /الاسكندرية الصحراوى
رقم التقرير: (٢٠٢٢/٥٤٥)

2.7. Test for resistance of PVC sheath to cracking (heat shock test).

Testing Date: 6/11/2022 — **Testing Engineer:** Mohamed Sabry

- The test for resistance of PVC sheath to cracking (heat shock test) was carried out in accordance with clause (18.10) of IEC (60502-1).
- The result of the heat shock test for the PVC sheath is shown in the following table:

Test	Requirement	Observations
Heat shock test		
- Oven temperature (°C)	150 ± 3	No crack
- Duration (hour)	1	

- The test results met the requirements.

■ **CONCLUSION:**

- The 0.6/1kV power cables - Type : (GIZA POWER INDUSTRY - 3×70+35 mm²- AL/XLPE/STA/PVC - 0.6/1kV – 2022) – Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC(60502-1). The customer to check of carrying out the other remaining tests specified in the IEC standard and not included in this report.

■ **Notes:**

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- Test Engineers:

A.C Lab. Eng. Hala Fouad — A.C Lab. Eng. Mohamed Sabry — A.C Lab. Eng. Samar Fathey

General Manager
Eng. Ehab Fawzy Mahmoud

Head Sector
Dr. Eng. Salwa Ali Ahmed

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Page 6 of 6

Egyptian Electricity Holding Company
Laboratories, research and testing sector
Extra High Voltage Research Center
km 27 Cairo- Alex. Desert road
Report No. (544/2022)

الشركة القابضة لكهرباء مصر
قطاع المعامل والبحوث والاختبارات
مركز أبحاث الجهد الفائق
الكيلو٢٧ طريق القاهرة /الاسكندرية الصحراوى
رقم التقرير: (٢٠٢٢/٥٤٤)

2.7. Test for resistance of PVC sheath to cracking (heat shock test).

Testing Date: 7/11/2022 **Testing Engineer:** Mohamed Sabry

- The test for resistance of PVC sheath to cracking (heat shock test) was carried out in accordance with clause (18.10) of IEC (60502-1).
- The result of the heat shock test for the PVC sheath is shown in the following table:

Test		Requirement	Observations
Heat shock test			
- Oven temperature	(°C)	150 ± 3	No crack
- Duration	(hour)	1	

- The test results met the requirements.

▪ CONCLUSION:

- The 0.6/1kV power cables - Type : (GIZA POWER INDUSTRY - 3×95+50 mm²- AL/XLPE/STA/PVC - 0.6/1kV - 2022) - Manufactured by GIZA POWER INDUSTRY, fulfilled the results of tests mentioned in this report according to IEC(60502-1). The customer to check of carrying out the other remaining tests specified in the IEC standard and not included in this report.

▪ Notes:

- Tests were carried out on the above specimen only without any responsibility concerning other untested specimens.
- The tests were carried out without any obligation on Egyptian Electricity Holding Company
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- Test Engineers:

A.C Lab.	A.C Lab.	A.C Lab.
Eng. Hala Fouad	Eng. Mohamed Sabry	Eng. Samar Fathey

General Manager

Eng. Ehab Fawzy Mahmoud

Head Sector

Dr. Eng. Salwa Ali Ahmed

ORIGINAL

NORA ...

TÜV CERT
DIN EN ISO 9001:2008
Zertifikat: 01 100 032614

قطاع معامل مركز ابحاث الجهد الفائق
الكيلو ٢٧ طريق القاهرة /الاسكندرية الصحراوى
رقم التقرير : (٢٠١٧/٢١٣)
صفحة ٢ من ٣

▪ الخلاصـــة :

- احتوت عينة كابل الومنيوم معزول مجدول مسلح جهد ١/٠,٦ ك.ف - قطاع (٣*٤٠٠+١٨٥ مم٢) – عزل XLPE وغلاف PVC (GIZA POWER INDUSTRY (3*400+185 mm2AL/XLPE/STA/PVC)0.6/1 k.v) تصنيع شركة الجيزه باور للصناعه الاختبارات النوعيه الكهربيه المذكورة بهذا التقرير وعلى الجهة المستخدمة التأكد من احراء باقى الاختبارات النوعية الغير كهربائية وكذلك باقى الاختبارات المنصوص عليها بالمواصفات القياسية العالمية والتى لم يرد ذكرها بهذا التقرير .

▪ ملحوظة :

- اجريت الاختبارات بناء على طلب الجهة طالبة الاختبار دون أدنى مسئولية على الشركة القابضة لكهرباء مصر (مركز أبحاث الجهد الفائق) .
- لا يمكن إعادة استصدار نسخة مطبوعة من هذا التقرير مرة أخرى إلا بموافقة كتابية من مركز أبحاث الجهد الفائق وبشرط إصدارها كاملة غير منقوصة .
- هذا التقرير والنتائج خاصة بالعينة المختبرة فقط.

- مهندسو الاختبارات :

م/ محمد سعيد حلمي

مدير عام الجودة
بمركز ابحاث الجهد الفائق
م/ محمد عبد العزيز قمر

وحدة منح علامة

"بكل فخر صنع في مصر"

مركز تحديث الصناعة

تشهد بأن - شركة الجيزة باور للصناعة

ومقرها القطعة ٦٩٠ من ٢٩٢ – بالكيلو ٢٨ طريق مصر اسكندرية الصحراوي – المنطقة الصناعية بأبو رواش – طريق المحولات

محافظة الجيزة

سجل صناعي رقم ٠٦١٨٠٤٢٧٠١٠٢٠٦٦١ (١٩٨٨)

قد حصلت على علامة

بكل فخر صنع في مصر

والتي تم تقييمها طبقا للمواصفة الخاصة بمنح العلامة
واستحقت الحصول على علامة رقم G-1027-E-01-25
لاستخدامها على المنتجات طبقا لما جاء بالبيان المرفق رقم (B-1-G-1027)

إصدار رقم (١)

بتاريخ: ١٣ يناير ٢٠٢٥

حتى: ٢٥ يناير ٢٠٢٧

شرط الحفاظ على التوافق مع المتطلبات الخاصة بمنح العلامة

أ. محمد حامد
مدير وحدة الإعتماد
مركز تحديث الصناعة

أ. دعاء سليمة
الرئيس التنفيذي
مركز تحديث الصناعة

شهادة إعتماد
رقم (A-1-G-1027)

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